



NIKOLAOS GIANNOPOULOS

INTERNATIONAL
LAW AND
OFFSHORE
ENERGY
PRODUCTION

MARINE ENVIRONMENTAL PROTECTION
THROUGH NORMATIVE INTERACTIONS

International Law and Offshore Energy Production:
Marine Environmental Protection through Normative Interactions

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**International Law and Offshore Energy Production:
Marine Environmental Protection through Normative Interactions**

Internationaal recht en offshore energieproductie:
Bescherming van het mariene milieu door middel van normatieve interacties
(met een samenvatting in het Nederlands)

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ABBREVIATIONS

ABNJ	Areas Beyond National Jurisdiction
ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and Contiguous Atlantic Area
AEPS	Arctic Environmental Protection Strategy
AG	Advocate General
AMAP	Arctic Monitoring and Assessment (working group)
ASCOBANS	Agreement on the Conservation of Cetaceans of the Baltic and North Seas
ASEAN	Association of Southeast Asian Nations
BAT	Best Available Techniques
BEP	Best Environmental Practices
BIT	Bilateral Investment Treaty
CAFF	Conservation of Arctic Flora and Fauna (working group)
CBD	Convention on Biological Diversity
CETA	Comprehensive Economic and Trade Agreement between Canada and the EU
CITES	Convention on International Trade in Endangered Species
CLCS	Commission on the Limits of the Continental Shelf
COLREGS	Convention on the International Regulations for Preventing Collisions at Sea
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CoP	Conference of the Parties
DOALOS	Division for Ocean Affairs and Law of the Sea
ECJ	European Court of Justice
EC	European Community
ECHR	European Convention/Court of Human Rights
ECT	Energy Charter Treaty
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMSA	European Maritime Safety Agency
EPPR	Emergency Prevention, Preparedness and Response (working group)
EU	European Union
EuroBATS	Agreement on the Conservation of Populations of European Bats
EUCFR	European Union Charter of Fundamental Rights

FAO	Food and Agriculture Organization
FCTC	Framework Convention on Tobacco Control
FET	Fair and Equitable Treatment (standard)
FPS	Full Protection and Security (standard)
FPSO	Floating, Production and Offloading Facility
FSU	Floating Storage Unit
GEF	Global Environmental Facility
GESAMP	Group of Experts on Scientific Aspects of Marine Pollution
HAPO	Pan American Health Organization
HELCOM	Baltic Marine Environmental Protection Commission
ICJ	International Court of Justice
IIA	International Investment Agreement
ILA	International Law Association
ILC	International Law Commission
IMO	International Maritime Organization
IMP	Integrated Maritime Policy
ITLOS	International Tribunal for the Law of the Sea
IACHR	Inter-American Court of Human Rights
IAEA	International Atomic Energy Agency
ICSID	International Centre for Settlement of Investment Disputes
ICZM	Integrated Coastal Zone Management
IEA	International Energy Agency
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
IPIECA	International Petroleum Industry Environmental Conservation Association
IRENA	International Renewable Energy Agency
IRF	International Regulators Forum
ISA	International Seabed Authority
IUU	Illegal, Unreported and Unregulated
MARPOL	International Convention for the Prevention of Pollution from Ships
MEPC	IMO's Marine Environment Protection Committee
MoP	Meeting of the States Parties
MOSPA	Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic
MoU	Memorandum of Understanding
MPA	Marine Protected Area

MFN	Most-Favoured Nation (treatment)
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning
NAFTA	North American Free Trade Agreement
NSOAF	North Sea Offshore Authorities Forum
OECD	Organization for Economic Cooperation and Development
OIC	Offshore Industry Committee
OFOG	Barcelona Convention's Offshore Oil and Gas Group
OGP	International Association of Oil and Gas Producers
OPEC	Organization of the Petroleum Exporting Countries
OPRC	International Convention on Oil Pollution, Preparedness and Response
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PAME	Protection of the Arctic Marine Environment (working group)
PCA	Permanent Court of Arbitration
PPA	Power Producing Agreement
PSSA	Particularly Sensitive Sea Area
RACs	Regional Activity Centers
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
RSP	UN Environment Regional Seas Programme
RPGRA	United Nations Regular Process for Global Reporting and Assessment
SAC	Special Area of Conservation
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SPA	Special Protection Area
SRFC	Sub-Regional Fisheries Commission
SOLAS	International Convention for the Safety of Life at Sea
SPA-BD	Protocol for Specially Protected Areas and Biological Diversity in the Mediterranean
SPLOS	Meeting of the Parties to UNCLOS
TEU	Treaty on the European Union
TFEU	Treaty on the Functioning of the European Union
TPP	Trans-Pacific Partnership Agreement
TTIP	US-EU Transatlantic Trade and Investment Partnership
USMCA	United States-Mexico-Canada Agreement
UNCITRAL	United Nations Commission on International Trade Law

UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNICPOLOS	United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea
UNGA	United Nations General Assembly
VASAB	Vision and Strategies Around the Baltic Sea (intergovernmental multilateral co-operation)
VCLT	Vienna Convention on the Law of Treaties
WHC/WHL	World Heritage Convention/List
WHO	World Health Organization
WTO	World Trade Organization

CHAPTER 1

Introduction: normative interactions in international law and the environmental regulation of offshore energy production

1. Setting the scene: the factual and legal background of the study

As the global demand for energy soars and public concern about the irreversible effects of climate change increases,¹ the oceans are attracting unprecedented attention as a rich source of both traditional and renewable forms of energy.² Besides the extraction of oil and gas from the sea, strong winds off the coasts, waves, tides, and water salinity difference, if captured effectively, can all provide reliable sources of renewable electricity.³ Due to recent technological advancements, the offshore energy sector is flourishing, as operations related to energy exploitation at sea are multiplying.⁴ However, bearing in mind the interconnected nature of the oceans, a unique characteristic of energy projects at sea compared with their onshore counterparts is the risk for widespread social, economic, and environmental consequences in the event of major accidents.⁵

The present introductory chapter defines the research question against the backdrop of its legal context and explains the methodology and key concepts used in the thesis. To that end, the first section discusses the factual and normative background to the research problem. After explaining the concept of normative interactions as understood in this study and highlighting their relevance within the fragmented international legal framework governing offshore energy production activities, the chapter briefly examines the legal mechanisms which govern normative interactions in international law. Then, the second section spells out the research problem, the methodological choices and approach of the study. Rounding off this chapter, the last section maps the outline of the thesis.

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- 1 The UN has been supporting the promotion of renewable energy as a means for the achieving worldwide access to clean energy. Among other policy instruments, it is worth mentioning the “Sustainable Energy for All” initiative launched by the Secretary-General Ban Ki-Moon in November 2011.
 - 2 For the purposes of the present research, offshore energy production covers the generation of all sources of energy in marine areas, including exploitation of offshore oil and gas but also renewable ocean energy.
 - 3 House of Commons Energy and Climate Change Committee (2012) *The Future of Marine Renewables in the UK*, Eleventh Report of Session 2010-12, Volume I, 3, available online at: <https://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/1624/1624.pdf>.
 - 4 N Liu, ‘Protection of the Marine Environment from Offshore Oil and Gas Activities’ in R Rayfuse (ed), *Research Handbook on International Marine Environmental Law* (Edward Elgar, 2015), 190.
 - 5 S Trevisanut, ‘Foreign Investments in the Offshore Energy Industry: Investment Protection v. Energy Security v. Protection of the Marine Environment’ in T Treves, F Seatzu, S Trevisanut (eds) *Foreign Investment, International Law and Common Concerns* (Routledge, 2013) 247-248.

1.1. Offshore energy production and the ensuing challenges for international law

Without underestimating the risks from the accumulative day-to-day operational pollution,⁶ the potential for devastating ecological implications following accidents related to offshore energy installations has jostled for public and scholarly attention.⁷ In April 2010, a gas leak and a subsequent explosion occurred on the Deepwater Horizon oil rig in the Gulf of Mexico (Macondo well), resulting in the world's most massive accidental oil release into the marine environment. The blowout had devastating implications not only for the marine environment but also for the offshore industry and other activities in the area.⁸ It “*stopped all drilling in the Gulf for a period of time and cost virtually all oil and gas companies involved in the region a great deal of money*”.⁹ The accident served as another dramatic reminder of the need for improved international regulation of offshore energy operations.¹⁰

Along the same lines, it appears that several marine oil pollution accidents have catalysed the development of a comprehensive emergency response system both at the global and regional levels.¹¹ Currently, there is no comprehensive globally applicable agreement laying down uniform construction, design, equipment, and manning standards or other environmental standards concerning the operational discharges from offshore oil and gas installations,¹² even though some globally applicable agreements regulate a few of these aspects.¹³ That normative gap is not due to a failure of the United Nations Convention on the Law of the Sea (UNCLOS) but the failure of States to aptly use the framework provided in the Convention and establish

6 S Vinogradov, and J Wagner, ‘International Legal Regime for the Protection of the Marine Environment against Operational Pollution from Offshore Petroleum Activities’ in Z Gao (ed) *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998) 93.

7 W Amos (2011) ‘Development of Canadian Arctic Offshore Oil and Gas Drilling: Lessons from the Gulf of Mexico’, *Review of European Community and International Environmental Law*, 39, K Noussia (2011) ‘The BP Oil Spill: Environmental Pollution Liability and Other Legal Ramifications’, *European Energy and Environmental Law Review*, 98, T Scovazzi (2012) ‘Maritime Accidents with Particular Emphasis on Liability and Compensation for Damage from the Exploitation of Mineral Resources of the Seabed’ in A de Guttry, M Gestri, and G Venturini (eds) *International Disaster Response Law* (Springer, 2012) 287. The EU also reacted to the Gulf of Mexico accident by issuing a Communication on Offshore Safety in October 2010, see Communication from the Commission to the European Parliament and the Council, Facing the Challenge of the Safety of Offshore Oil and Gas Activities, COM (2010) 560 final, 12.10.2010.

8 Researchers have recently discovered that the environmental implications from the accident are ongoing, see I Berensthein et al (2020) ‘Invisible Oil Beyond the Deepwater Horizon Satellite Footprint’, *Science Advances*, available online at: https://advances-sciencemag-org.proxy.library.uu.nl/content/6/7/eaaw8863.full?_ga=2.26969853.192195102.1584613929-1220662502.1533667595.

9 National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, ‘Industry’s Role in Supporting Health, Safety, and Environmental Standards: Options and Models for the Offshore Oil and Gas Sector’, *Staff Working Paper No. 9*, available online at: <https://permanent.access.gpo.gov/gpo8589/Staff%20Working%20Paper%20Industry%20Role.pdf>, 13.

10 S Vinogradov (2013) ‘The Impact of the Deepwater Horizon: The Evolving International Regime for Offshore Accidental Pollution Prevention, Preparedness and Response’, *Ocean Development & International Law*, 351.

11 See chapter 5, section 2 and chapter 6, sub-section 3.2.

12 Vinogradov *supra* n. 10, 351-352, N Liu (2015) ‘The European Union’s Potential Contribution to Enhanced Governance of Offshore Oil and Gas Operations in the Arctic’, *Review of European Community & International Environmental Law*, 229.

13 See chapter 3, section 1.3.

the relevant international rules and standards at the global level.¹⁴ Nevertheless, the adoption of a global agreement on offshore energy activities would not necessarily result in improving environmental protection, in the case where the establishment of enhanced environmental obligations comes at the expense of limiting the broad participation in and compliance of the higher standards by States.¹⁵ Therefore, the assumption that creating global rules relating to the offshore energy sector equates with better environmental protection, in the best case, is an oversimplification.¹⁶ As suggested in this study, normative interactions among existing instruments might offer a better solution for the regulation of offshore energy production than the (unlikely) adoption of such a global agreement.¹⁷

By comparison, the generation of marine renewable energy has been regarded as environmentally friendly.¹⁸ In a report by the Secretary-General of the UN, marine renewable energy has been categorised in four different types: “*ocean energy; wind energy from turbines located in offshore areas; geothermal energy derived from submarine geothermal resources; and bioenergy derived from marine biomass, particularly ocean-derived algae*”.¹⁹ In addition, researchers are exploring the feasibility of harnessing solar energy by installing solar panels on offshore platforms.²⁰ Despite its currently nascent stage of development,²¹ the marine renewable energy sector is expected to expand significantly, due to its foreseen vital role in the mitigation of

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- 14 S Jayakumar, ‘The Continental Shelf Regime under the UN Convention on the Law of the Sea: Reflections after Thirty Years’, in M Nordquist, J Norton Moore, A Chircop, and R Long (eds) *The Regulation of the Continental Shelf Development: Rethinking International Standards* (Brill, 2013), 9.
- 15 D Bodansky, J Brunnée, and L Rajamani, *International Climate Change Law* (Oxford University Press, 2017) 24-26.
- 16 On a relevant discussion regarding the normative value of the Global Pact for the Environment, see L Kotze, and D French (2018) ‘A Critique of the Global Pact for the Environment: A Stillborn Initiative or the Foundation for Lex Anthropocena?’, *International Environmental Agreements*, 816-817, 833-834.
- 17 See further discussion on the feasibility of a global agreement, chapter 9, section 4. See also a discussion about the need for a new binding implementing agreement on the protection of biodiversity beyond national jurisdiction, A Oude Elferink (2012) ‘Governance Principles for Areas beyond National Jurisdiction’, *International Journal of Marine and Coastal Law*, 251-257.
- 18 D Leary, and M Esteban (2011) ‘Recent Developments in Offshore Renewable Energy in the Asia-Pacific Region’, *Ocean Development & International Law*, 19.
- 19 *Ibid.* Article 56 of UNCLOS also refers to the production of energy from the water, currents and winds in the EEZ. The provision is not exhaustive, in the sense that it also covers other types of marine renewables, such as oceanic thermal energy, see Z Zedalis, *International Energy Law* (Routledge, 2016), 29. Furthermore, Article 3 of the Statute of the International Renewable Energy Agency providing the definition of renewable energy includes ocean energy “including inter alia tidal, wave and ocean thermal energy”.
- 20 Mechanical engineers at Delft University are currently preparing a multidisciplinary research project (Solar energy to fuel at sea: Marinization of Energy Transition –Sol2Fas), which purports to explore the feasibility of harvesting solar energy on the high seas and bringing clean fuel to shore. The project has not been yet launched, but a short presentation about its aims and challenges can be found online at: https://www.kivi.nl/uploads/media/58ff66f0216a6/Sol2FaS_KIVI_Presentation_20170420_public.pdf.
- 21 The various technologies for harnessing renewable energy from the sea do not share the same stage of commercial maturity. While offshore wind energy is “market-ready”, other types of ocean energy devices will be available in the long term. N Boillet, and G Gueguen-Hallouet, ‘Marine Renewable Energies: Main Legal Issues’ in A Monaco, and P Prouzet (eds) *Governance of Seas and Oceans* (ISTE, 2015) 159-160.

climate change.²² Although there is no specific international obligation to develop marine renewable energy,²³ the duty to reduce greenhouse gas emissions under the United Nations Framework Convention on Climate Change regime necessitates the promotion of low carbon energy sources. State parties to the Paris Agreement are under the obligation to “prepare, communicate and maintain successive nationally determined contributions”²⁴ (NDCs) to meet the long-term temperature goal set in the agreement.²⁵ Although it is not unequivocally mentioned in the Paris Agreement, marine renewable energy could eventually cover the future global energy needs, enhance energy security through the diversification of energy sources and act as a catalyst for the mitigation of climate change.²⁶

Nevertheless, marine renewable energy introduces a new use of the oceans, which can alter the current balance of interests at sea. Compared with the spatial requirements for offshore oil and gas platforms, which usually consist of standalone rigs, offshore renewable energy generation is liable to be contingent upon the presence of a considerable number of installations in more extensive marine areas.²⁷ Presumably, such development has the potential to conflict with other, traditional, uses of the sea.²⁸ Besides the safety concerns for the multiple users of the sea, the potential deployment of a vast number of marine renewable devices raises concerns about their environmental effects. Research has illustrated that such devices have significant effects, including the alteration of electromagnetic fields, the introduction

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- 22 According to the IPCC, it is estimated that the amount of zero emission renewable energy produced needs to be tripled or quadrupled by 2050. IPCC, *Summary for Policymakers in Climate Change 2014: Mitigation of Climate Change: Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2014) 13, IPCC, *Special Report on Renewable Energy Sources and Climate Change Mitigation* (Cambridge University Press, 2011) 87-103.
- 23 Within the EU, the Renewable Energy Directive has set mandatory individual renewable energy targets for all EU member states. Moreover, the EU 2030 Framework for Climate and Energy imposed new binding targets for member states to be achieved in the period 2020-2030. See Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 3 and A policy framework for climate and energy in the period from 2020 to 2030, COM/2014/015 final.
- 24 UNFCCC, Decision 1/CP.21 ‘Adoption of the Paris Agreement’ (29 January 2016) UN Doc FCCC/CP/2015/10/Add.1, Annex (Paris Agreement), article 4(2).
- 25 *Ibid*, Article 2(1) states that: “[t]his Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development...”. Even though these contributions are determined individually by the parties (bottom-up approach), the agreement sets a requirement for incremental progression and highest possible ambition regarding the NDCs coupled with an international compliance mechanism (top-down approach) to limit the margin of discretion of the parties and increase oversight and accountability.
- 26 EU Commission (2014) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Blue Energy – Action needed to deliver on the potential of ocean energy in European seas and oceans by 2020 and beyond, COM (2014) 8 final, 2.
- 27 M Gavouneli, ‘Offshore Energy: Troubled Waters in the Eastern Mediterranean Sea’ in H Scheiber, J Kraska, and M-S Kwon (eds) *Science, Technology and New Challenges to Ocean Law* (Brill/Nijhoff, 2015) 254.
- 28 For instance, marine renewable installations situated close to fishing grounds or near shipping lanes could interfere with both grounds and lanes. H Esmaili (2002) ‘The Conflict Between the Establishment and operation of offshore oil installations, navigation and other uses of the sea in international law’, *International Energy Law and Taxation Review*, 286-290.

of noise, changes in water salinity, the disturbance of the habitat structure of fish, mammals and birds or even some species' mortality.²⁹ The appropriate siting of offshore energy devices is essential for limiting their environmental impact. Given the rising competition for marine space, the idea of creating multi-use offshore platforms has stimulated considerable interest in the offshore energy sector.³⁰ Besides, notwithstanding the scientific uncertainty of their impact on fisheries, such installations could be combined with MPAs, which are closed to fishing.³¹

In light of the expansion of oil and gas activities in ultra-deep waters, and the projected proliferation of renewable energy devices at sea, the law of the sea and, more broadly, the international law dealing with the protection of the marine environment face considerable challenges. Specifically, new uses of the ocean, such as the development of marine renewable energy, “require a careful balance [to be struck] between the interests of various users of ocean space and resources and the rights and obligations of States under a number of instruments.”³²

1.2. Normative interactions within the fragmented international regulation of offshore energy production

At the international level, the regulation of offshore energy production does not fall neatly into a single, globally applicable agreement; far from it. The United Nations Convention on the Law of the Sea (UNCLOS), serving as the “Constitution of the Oceans,”³³ sets out the jurisdictional framework and provides the general environmental duties of States in the oceans. UNCLOS establishes the duty to exercise due diligence in preventing, reducing, or controlling marine environmental pollution from offshore energy activities in areas within national jurisdiction.³⁴ However, UNCLOS was not drafted as a “one-stop-shop” for the comprehensive regulation of all offshore activities.³⁵ Since the adoption of UNCLOS, various normative developments in international environmental³⁶ and international economic law have taken place, complementing the provisions of the Convention on the regulation of

29 C Soria-Rodriguez (2016) ‘Marine Renewable Energies and the European Regional Seas Conventions’, *Climate Law*, 318.

30 EU Commission (2016) Final Report Summary – MERMAID (Innovative Multi-Purpose Offshore Platforms: Planning, Designing and Operation), available online at: http://cordis.europa.eu/result/rcn/183781_en.html, S, M Soma, et al (2016) ‘The Governance of multi-use platforms at sea for energy production and aquaculture: challenges for policy makers in European seas’, *Sustainability*, 2.

31 N Lund (2010) ‘Renewable Energy as A Catalyst for Changes on the High Seas Regime’, *Ocean and Coastal Law Review*, 121. On the co-location of offshore activities, see also N Christie, K Smyth, R Barnes, and M Elliot (2014) ‘The Co-Location of Activities and Designations: A Means of Solving or Creating Problems in Marine Spatial Planning?’, *Marine Policy*, 254-261, M Young (2015) ‘Building the Blue Economy: The Role of Marine Spatial Planning in Facilitating Offshore Renewable Energy Development’, *International Journal of Marine and Coastal Law*, 148.

32 UN Secretary-General Report on Oceans and Law of the Sea (2012) A/67/69, 9.

33 Tommy Koh, president of the third UN Conference on the law of the sea, characterised the convention as a constitution for the oceans, see Nordquist et al (ed), *United Nations Convention on the Law of the Sea 1982: A Commentary*, Volume I (Martinus Nijhoff, 1985) 11-16.

34 Articles 192, 194(3)(c) and (d) and 208 of UNCLOS.

35 C Redgwell (2014) ‘Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Sector’, *International Journal of Marine and Coastal Law*, 620.

36 S Trevisanut, ‘La convention des Nations Unies sur le droit de la mer et le droit de l’environnement : développement intrasystémique et renvoi intersystémique’, in H Ruiz Fabri, and L Gradoni (eds) *La Circulation des Concepts Juridiques* (Société de Législation Comparée, 2009) 397-426.

offshore energy production activities.³⁷ For instance, various regional sea conventions that implement (and possibly complement) the global international legal framework for offshore energy appear to be much more advanced, in terms of both specificity and addressing regional needs.

In addition, the role of non-State actors in supplementing and complementing the traditionally State-centred creation and application of international law concerning offshore energy activities appears to be crucial.³⁸ Specifically, non-State actors have notably contributed to the elaborate normative jigsaw puzzle that applies to offshore energy production activities.³⁹ Apart from international organisations and treaty bodies to environmental agreements, the private energy industry has also managed to carve out a place for itself, contributing to the further development and implementation of the relevant legal framework.⁴⁰ Transnational economic actors, such as multinational oil and gas companies and their professional associations, have become more forceful and play a crucial role in the regulation of offshore energy activities.⁴¹

Also, the dependence of offshore energy production upon long-term and capital-intensive investments in infrastructure illustrates the significance of foreign investment protection, adding the rules of international investment law to the already complicated legal equation.⁴² Even though foreign investment protection is equally essential for energy projects on land, the construction and operation of offshore energy devices are much more complicated and expensive, making them contingent upon international legal standards on investment protection, which are enforceable through independent arbitral proceedings.⁴³

Although arbitral tribunals in early investment awards had interpreted international investment agreements (IIAs) as self-contained regimes,⁴⁴ the international legal framework for the protection of offshore energy investments does not operate in a legal vacuum.⁴⁵ Due to the physical location of such investments, the law of the sea and complementary environmental agreements introduce a

37 The ICJ in the *Gabčíkovo-Nagymaros* case stressed that “*new norms have to be taken into consideration and ... new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past*”, Judgment of 25 September 1997, para 140.

38 A Boyle, and C Chinkin, *The Making of International Law* (Oxford University Press, 2007) 41.

39 A Bonfanti, and F Romanin-Jacur (2014) ‘Energy from the Sea and the Protection of the Marine Environment: Treaty-Based Regimes and Ocean Corporate Social Responsibility’, *International Journal of Marine and Coastal Law*, 632. C Ryngaert (2016) Non-State Actors: Carving out a Space in a State-Centred International Legal System, *Netherlands International Law Review*, 192-193.

40 S Trevisanut (2014) ‘The Role of Private Actors in Offshore Energy: Shifting Models of Participation’, *International Journal of Marine and Coastal Law*, 651-660.

41 E Merino-Blanco, and J Razzaque (2011) *Globalisation and Natural Resources Law: Challenges, Key Issues and Perspectives* (Edward Elgar, 2011), 3.

42 International Energy Agency (2014) Special Report: World Energy Investment Outlook, available online at: <https://www.iea.org/publications/freepublications/publication/WEIO2014.pdf>.

43 Compared with onshore energy production, the cost of the installation and exploitation of offshore energy can be a real hurdle for the marine energy industry, see A Cudennec (2016) ‘The European Legal Framework for Marine Renewable Energies’, *Ocean Yearbook*, 496.

44 V Prislán, ‘Non-Investment Obligations in Investment Treaty Arbitration: Towards a Greater Role for States?’, in F Baetens (ed) *Investment Law within International Law: Integrationist Perspectives* (Cambridge University Press, 2013) 454.

45 See, for instance, *AAPL v Democratic Socialist Republic of Sri Lanka*, ICSID Case No ARB/97/3, Award of 27 June 1990, 21.

dense normative environment in which offshore energy production activities are functioning. In that context, the law of the sea serves as the general legal (both jurisdictional and substantial) framework and the essential “common link” between the applicable international regimes.

Consequently, the legal framework governing offshore energy production activities is a patchwork of international agreements, non-binding instruments, and self-regulation by the industry. The co-existence of applicable rules at different levels of international cooperation has also been described as the “Russian doll effect” to depict the interplay among the different normative layers.⁴⁶ Due to the increasing specialisation⁴⁷ of international law, normative interactions at different phases of legal development and application (law-making, implementation, dispute settlement) appear to be an inherent feature of contemporary international law.⁴⁸ For instance, international courts and tribunals have recognised the importance of integrating subsequent norms of environmental law into the measures taken to implement a treaty obligation.⁴⁹

The need for normative interactions is closely connected with the observation that international law provisions often do not offer all the information which the interpreter needs to identify their normative content.⁵⁰ To apply an international rule in a specific situation, we need further information, which is usually provided by its normative context. For instance, article 208(3) of UNCLOS refers to international rules, standards, and recommended practices and procedures. To determine its normative contours, the interpreter of the provision needs not only to take into account article 208(3) of UNCLOS but also needs to have recourse to several other provisions. Therefore, the interpreter’s understanding of the meaning of article 208(3) of UNCLOS profits from understanding its relationship with other legal rules both within and outside the Convention, which can assist in clarifying the normative content of article 208(3).

Normative interactions can sometimes manifest themselves in the form of conflicts between two simultaneously applicable international rules. The ILC Report on Fragmentation adopted a rather broad but somewhat vague definition of such conflicts, according to which a normative conflict reflects a situation where “two rules or principles suggest different ways of dealing with a problem”.⁵¹ Early

46 A Boyle, ‘Globalism and Regionalism in the Protection of the Marine Environment’, in D Vidas (ed) *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention* (Cambridge University Press, 2000) 19.

47 The word “specialisation” is used to connote the proliferation of a multiplicity of specialised international regimes which, in contrast to the negatively loaded word “fragmentation”, concentrates on the positive contribution of regime interaction. See A Peters, ‘The Refinement of International Law: From Fragmentation to Regime Interaction and Politicization’, *Max Planck Institute for Comparative Public Law and International Law, MPIL Research Paper Series*, N. 2016-19, available online at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2823512.

48 For instance, during the law-making process, the inclusion of perspectives from a range of relevant instruments is essential for the drafting of new rules.

49 See ICJ *Case Concerning the Gacikovo-Nagymaros project*, para 196. See also, *South China Sea Arbitration*, para 941.

50 U Linderfalk (2015) ‘Cross-fertilisation in International Law’, *Nordic Journal of International Law*, 432.

51 ILC, Report of the Study Group of the ILC on “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law”, A/CN.4/L.702, 18 July 2006, para 25.

international law scholars often adopted stricter notions of normative conflict, based on their understanding of the presumption against genuine normative conflicts in international law.⁵² However, more recent legal scholarship has advocated a broader definition of normative conflicts.⁵³ Characteristically, Pauwelyn argues that “[t]wo norms are, therefore, in a relationship of conflict when one constitutes, has led to, or may lead to, a breach of the other”.⁵⁴ Such normative conflicts can be “intra-systemic”, resulting from the interaction of multiple rules within one branch of international law.⁵⁵ For instance, scholars have referred to the potential conflicts between rules established under the auspices of the World Trade Organisation (WTO) system.⁵⁶ Nonetheless, “inter-systemic” conflicts between rules belonging to different branches of international law have primarily attracted the interest of international lawyers.⁵⁷

However, normative interactions in international law do not necessarily result in conflict.⁵⁸ They can also take the form of mutual supportiveness⁵⁹ or cross-fertilisation.⁶⁰ The concept of cross-fertilisation features prominently in the legal discussions on the interaction among rules of international law.⁶¹ However, the use of the term cross-fertilisation remains diffuse in international law literature. Some scholars have used the term as referring to the mention by one court of the jurisprudence of another.⁶² Helfer, referring to judicial dialogues among human rights courts, has regarded the cross-fertilisation of legal norms as “one of the interpretative tools that are commonplace in the case of regional and sub-regional

52 W Jenks (1953) ‘The Conflict of Law-Making Treaties’, *British Yearbook of International Law*, 435. According to Jenks, a conflict exists only “where a party to two treaties cannot simultaneously comply with its obligations under both treaties”, 426.

53 L Bartels (2001) ‘The Relationship between Treaties’, *Policy Paper for the Centre of International Environmental Law*, who argues that “a treaty which defeated the object and purpose of the earlier treaty should be seen as conflicting with the earlier treaty”. Similarly, Borgen has advocated that a normative conflict arises whenever “the mere existence of, or the actual performance under, one treaty will frustrate the purpose of another treaty”, C Borgen (2005) ‘Resolving Treaty Conflicts’, *George Washington International Law Review*, 575.

54 See J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to other Rules of International Law* (Cambridge University Press, 2003) 175-176. For a broad definition of normative conflicts, see E Vranes (2006) ‘The Definition of Norm Conflict in International Law and Theory’, *European Journal of International Law*, 395.

55 R Michaels, and J Pauwelyn (2012) ‘Conflict of Norms or Conflict of Laws? Different Techniques in the Fragmentation of International Law’, *Duke Journal of Comparative and International Law*, 356.

56 H Kim, *Regime Accommodation in International Law: Human Rights in International Economic Law and Policy* (Brill, 2016) 31.

57 Michaels and Pauwelyn (2012) *supra* n. 55, 365.

58 Even normative conflicts can be considered as an opportunity for taking into account different instruments and thus considering a wider array of interests, which would not be normally accommodated within a single special regime, see further discussion in chapter 4, sub-section 1.3.

59 Mutual supportiveness can also be manifested in the interactions between the institutional arrangements under relevant international agreements, such as treaty Commissions, Secretariats or scientific bodies, see further chapter 8, sub-section 1.2.

60 S Trevisanut, N Giannopoulos, R Roland Holst, ‘Introduction: Regime Interaction in Ocean Governance’ in Trevisanut, Giannopoulos Roland Holst (eds) *Regime Interaction in Ocean Governance: Problems, theories and methods* (Brill, 2020) 3.

61 Linderfalk (2015) *supra* n. 50, 430.

62 C Giorgetti, ‘Cross-fertilisation of procedural law among international courts and tribunals: Methods and Meanings’ in A Sarvarian, F Fontanelli, R Baker, and V Tzevelekos (eds) *Procedural Fairness in international Courts and Tribunals* (BIICL, 2015) 223-240.

courts”.⁶³ By contrast, others have referred to it as the implication of using some legal technique for the interpretation and application of international rules. In that view, cross-fertilisation takes place when different international rules mutually influence each other.⁶⁴

Similarly, scholars have argued that the concept of cross-fertilisation connotes the transposition of ideas from one legal system to another by offering a source of inspiration for the solution of shared legal problems.⁶⁵ Generally, international lawyers tend to address cross-fertilisation among different “branches” of international law or as an “inter-systemic” interaction between different international regimes.⁶⁶ For instance, in Sands’ view, cross-fertilisation is the interconnection among different areas of international rules, which can influence their interpretation and application.⁶⁷ For the present research, cross-fertilisation does not imply the mere reference of other international rules by the agent of interpretation of a specific rule. It instead describes the borrowing of concepts, principles, and rules either at the standard-setting level or at the interpretation stage.⁶⁸ In addition, the present study examines cross-fertilisation not only in the event of “inter-systemic” normative interactions but also in the case of “intra-systemic interactions”, such as the ones among global and regional agreements relating to the protection of the marine environment.

The use of the word fertilisation implies that the borrowing has a positive impact, in the sense that its contextual rules and standards enrich the normative content of the receiving norm. Contrary to the concept of “legal transplantation” that indicates the rigid transfer of a legal solution from one system to another, cross-fertilisation implies a process of adaptation by the receiving legal norm.⁶⁹ Norms and standards should only be borrowed if they take into consideration the specificities of the receiving body of law.⁷⁰ That is relevant, for instance, in connection with regional rules and standards which are formulated in a specific social, political, and environmental context, and their transmutation may not be easily achieved.⁷¹ The capacity of international law to respond to global issues, such as the environmentally sustainable production of

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- 63 L. Helfer (2014) ‘The Successes and Challenges for the European Courts, seen from the Outside’, available online at: <http://www.ejiltalk.org/the-successes-and-challenges-for-the-european-court-seen-from-the-outside>.
- 64 E. Voeten (2010) ‘Borrowing and Nonborrowing among International Courts’, *Journal of Legal Studies*, 547.
- 65 AM Slaughter (1994) ‘A Typology of Transjudicial Communications’, *University of Richmond Law Review*, 117.
- 66 Trevisanut, Giannopoulos, Roland Holst (2020) *supra* n. 60. See also Kim (2016) *supra* n. 56, 25-26. Young also describes other instances of regime interaction, such as the “mutual support and learning provided between regimes”, “scrutiny”, and “cross-fertilization”, which mostly describes the influence of external norms to the interpretation of norms of a different regime, M Young (2012) Introduction: The Productive Friction Between Regimes, in M Young (ed) *Regime interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012) 22.
- 67 P Sands (1998) ‘Treaty, Custom and the Cross-fertilization of International Law’, *Yale Human Rights and Development Journal*, 92-93.
- 68 S Jaquemet (2001) ‘The Cross-Fertilization of International Humanitarian Law and International Refugee Law’, *International Review of the Red Cross*, 652.
- 69 T Wongkaew (2019) ‘The Cross-Fertilisation of International Investment Law and International Humanitarian Law: Prospects and Pitfalls’, *European Yearbook of International Economic Law*, 389.
- 70 D Nelken (2001) ‘The Meaning of Success in Transnational Legal Transfers’, *Windsor Yearbook of Access to Justice*, 350.
- 71 For a discussion on the potential applicability of regional rules and standards outside their geographic scope of application, see chapter 8.

offshore energy, is contingent upon intra- and inter-systemic normative interaction among rules which potentially overlap. Notably, these normative interactions take place in a situation of legal pluralism rather than hierarchical coherence.⁷² That is because, with a few exceptions (*jus cogens*, the UN Charter), there is no *a priori* hierarchy among norms in international law.⁷³ Therefore, the existence of legal rules and principles is necessary to understand their interrelationship.

1.3. Legal mechanisms fostering normative interactions in international law

Some international law scholars have argued that normative interactions occurring during international adjudication find their justification in the conscious or unconscious desire of the epistemic community of international judges to advance and protect global values, such as human rights protection, in a decentralised but coherent international legal order.⁷⁴ However, that argument appears to overemphasise the will of the interpreter as a justification for normative interactions. Arguably, international rules cannot operate in a state of isolation⁷⁵ and, for that reason, they interact with their normative context. However, that does not necessarily mean that normative interactions are subject to the unfettered discretion of the agent of their interpretation and application.

Although scholars have stressed the contingency of normative interactions on the human factor,⁷⁶ there are specific legal conditions that either promote or restrain normative interactions among different international instruments. For instance, the customary rules on treaty interpretation, as reflected in the Vienna Convention on the Law of Treaties, govern the interrelationship between several, but by no means all, rules of international law.⁷⁷ Under specific conditions, the normative context of an international rule can be identified by bringing the rule to bear on its connection with other relevant rules of international law. In that respect, it is argued that there exist legal reasons which can explain why specific international rules are connected

72 P Schiff Berman (2007) 'A Pluralist Approach to International Law', *Yale Journal of International Law*, 301. According to the legal pluralism theory, a plurality of legal orders interacts with each other, but without any central hierarchy. Such orders can also be of different kinds, including informal norms produced by non-state actors. See also, G Shaffer (2012) 'International Law and Global Public Goods in a Legal Pluralist World', *European Journal of International Law*, 672-673, N Krisch, 'Pluralism in International Law and Beyond' in J d'Aspremont, and S Singh (eds) *Concepts for International Law: Contributions to Disciplinary Thought* (Edward Elgar, 2019).

73 A Ghouri (2012) 'Determining Hierarchy Between Conflicting Treaties: Are There Vertical Rules in the Horizontal System?', *Asian Journal of International Law*, 1-32, D Shelton (2006) 'Normative Hierarchy in International Law', *American Journal of International Law*, 291-323, Pauwelyn (2003) *supra* n. 54, 101-106.

74 R Teitel, and R Howse (2009) 'Cross-Judging: Tribunalization in a Fragmented but Interconnected Global Order', *New York University Journal of International Law and Politics*, 959.

75 Sands (1998) *supra* n. 57, 98.

76 For example, Buergenthal has argued that the fact that international law practitioners and judges serve on different international courts and tribunals contributes to the cross-fertilisation of international jurisprudence and, consequently the enrichment of international law, see T Buergenthal (2001) 'Proliferation of International Courts and Tribunals: Is It Good or Bad?', *Leiden Journal of International Law*, 269, see also J Charney (1999) 'The Impact on the International Legal System of the Growth of International Courts and Tribunals', *International Law and Politics*, 705.

77 Sands (1998) *supra* n. 57, 93.

with the interpreted rule and, therefore, can serve as a context to enrich its normative content and shape its implementation.⁷⁸

Identifying legal methods that allow for specific normative interactions can also respond to the criticism raised by international law scholars concerning theoretical approaches that promote such horizontal interactions between rules of international law. Notably, it has been argued that the promotion of unconditional cross-fertilisation between rules belonging to different international regimes tends to ignore the inherently different structures and rationales of those interacting regimes.⁷⁹ According to this view, the normative cross-fertilisation between different regimes is a dangerous boundary crossing, which does not necessarily enhance the legitimacy of international law,⁸⁰ and should only be attempted with the utmost caution. Even though that observation is not entirely mistaken, it is not always true. For instance, in a case where legal rules or principles do not allow for normative interactions, any attempt by international adjudicators to engage in an inter-systemic interpretation of legal concepts under a particular instrument may be perceived as judicial activism by the affected parties.⁸¹ However, such a claim against judicial activism cannot be substantiated when the applicable rules require and, thus, justify the interpretation of an international norm considering its normative context.⁸²

Without undermining the importance of the human factor, in the sense of the interpreter's predispositions in the case of normative interactions, the study only focuses on the role of legal rules in justifying or excluding normative interactions. It is argued that the interpreter has to refer to a specific legal basis for assuming a relationship between the norm in question and the ones he considers as forming the normative context for its interpretation. Their interrelationship needs to be justified based on legal rules and principles.⁸³ For instance, a State party to UNCLOS interpreting its rights over its continental shelf under the Convention should not draw upon the content of rules under the 1958 Geneva Convention on the Continental Shelf when they contradict the rules in UNCLOS, because of article 311 of UNCLOS.⁸⁴

Law-making can exert a significant role in promoting normative interactions. When treaties are drafted taking into consideration other external rules, they can consequently be interpreted and implemented “*as reinforcing each other in a*

78 Linderfalk (2015) *supra* n. 50, 433.

79 J Alvarez (2016) ‘Beware: Boundary-Crossings – A Critical Appraisal of Public Law Approaches to International Investment Law’, *Journal of World Investment and Trade*, 171-228, T Skouteris (2006) ‘The New Tribunalism: Strategies of (De)Legitimation in the Era of International Adjudication’, *Finnish Yearbook of International Law*, 331-334.

80 Alvarez, *supra* n. 79, 227-228.

81 F Zarbiyev (2012) Judicial Activism in International Law – A Conceptual Framework for Analysis, *Journal of International Dispute Settlement*, 247-278, H J P Kooijmans (2007) The ICJ in the 21st Century: Judicial Restraint, Judicial Activism, or Proactive Judicial Policy?, *International and Comparative Law Quarterly*, 741-753.

82 Y Tanaka (2013) Reflections on Time Elements in the International Law of the Environment, *ZaōRV*, 150.

83 Similarly, in her monograph, Young proposes that a legal framework is necessary and “regime interaction should be constrained by procedural safeguards to ensure openness, transparency, participation and ongoing scrutiny and review”, see M Young, *Trading Fish, Saving Fish: The Interaction between Regimes in International Law* (Cambridge University Press, 2011) 243, 287.

84 Article 311 of UNCLOS reads as follows: “*This Convention shall prevail, as between State Parties, over the Geneva Conventions on the Law of the Sea of 29 April 1958*”.

complementary, as opposed to a conflictive perspective”.⁸⁵ During law-making, States have sometimes attempted to clarify the interconnection of international law rules by drafting specific rules for that purpose. Such norms on the interrelationship of international rules include priority clauses, such as article 311 of UNCLOS or article 22(1) of the Convention on Biological Diversity (CBD). Also, conflict rules, such as *lex superior derogat legi inferiori*, *lex specialis derogat legi generali*⁸⁶ and *lex posterior derogat legi priori*,⁸⁷ aim to clarify the interrelationship between international rules. However, the interpreter first needs to establish that at least two rules of international law fall within the scope of application of a conflict rule before that conflict rule can govern the relationship between them. On that account, some scholars have considered that traditional treaty-conflict rules (*lex posterior*, *lex specialis*) are unsatisfactory in managing interactions between different international instruments.⁸⁸

Another set of rules which are relevant in governing normative interactions are rules on treaty interpretation. The incorporation of extraneous legal rules at the stage of treaty interpretation has attracted much attention in the legal literature.⁸⁹ Rules on interpretation can, in some cases, identify the relevant rules of international law, which can assist in determining the content of the rule subject to interpretation. For instance, in the *Oil Platforms* case, the ICJ referred to article 31(3)(c) of the VCLT to justify the interpretation of article XXX of the 1955 Treaty of Friendship, Commerce and Navigation between Iran and the United States in the light of the prohibition on the use of force.⁹⁰ The ICJ upheld that the interpreted rule was not intended “to operate wholly independently of the relevant rules of international law on the use of force”. Therefore, it concluded that the relevant rules of international law on the prohibition of the use of force form “an integral part of the task of interpretation entrusted to the Court”.⁹¹

The ICJ’s conclusion confirms the view that the understanding of a legal norm often presupposes the reading of it in its normative context. No matter how specialised and detailed they might be, international law rules exist in a systemic

85 F Romanin Jacur, ‘The Making of International Environmental Law’ in K Brolmann, and Y Radi (eds) *Research Handbook on International Lawmaking* (Edward Elgar, 2016) 435.

86 ICJ, *Dispute Regarding Navigational and Related Rights (Costa Rica v Nicaragua)*, Judgement of 13 July 2009, para 213, where the ICJ mentions that in a case of conflict between two rules of international law, the more special is to have priority over the more general.

87 *Ibid.*

88 R Michaels, and J Pauwelyn, ‘Conflict of Norms or Conflict of Laws? Different Techniques in the Fragmentation of International Law’ in T Broude, and Y Shany (eds) *Multi Sourced Equivalent Norms in International Law* (Hart, 2011) 19-44, B Simma, and D Pulkowski (2006) ‘Of Planets and the Universe: Self-Contained Regimes in International Law’, *European Journal of International Law*, 489, C McLachlan (2005) ‘The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention’, *International and Comparative Law Quarterly*, 279-319.

89 D Pulkowski, *The Law and Politics of International Regime Conflict* (Oxford University Press, 2014) 272-317, J Pauwelyn, and M Elsig (2013) ‘The Politics of Treaty Interpretation: Variations and Explanations across International Tribunals’ in J Dunoff, and M Pollack (eds) *Interdisciplinary Perspectives on International Law and International Relations: The State of the Art* (Cambridge University Press, 2013) 445-473, Matz-Lück (2012) Norm Interpretation across International Regimes: Competences and Legitimacy, in Young (ed), *supra* n. 66, 201-234, Pauwelyn (2003) *supra* n. 54.

90 ICJ, *Oil Platforms (Islamic Republic of Iran v USA)* Judgment of 6 November 2003, para 41.

91 *Ibid.*

relationship with other co-existing rules.⁹² To be operational, they need to make use of concepts and standards found in other relevant international rules. In that spirit, Judge Trindade in his separate opinion in the *Whaling in the Antarctic* case observed that “with the growth in recent decades of international instruments..., not one single one of them is approached in isolation from the others: not surprisingly, the co-existence of international treaties of this kind has called for a systemic outlook”.⁹³ Similarly, the arbitral tribunal in the *South China Sea* arbitration declared that article 192 of UNCLOS must be read in light of the “corpus of international law relating to the environment, which informs the content of the general obligation under article 192”.⁹⁴ It upheld that the normative content of article 192 is further amplified by the subsequent provisions under Part XII of UNCLOS, as well as by reference to specific duties under other international agreements, as envisioned in article 237 of the Convention.⁹⁵

The ILC and several international law scholars have often referred to the principle of systemic integration as a tool to resolve normative conflicts between rules under different branches of international law and as a method to incorporate norms from one regime into another.⁹⁶ Many scholars have attempted to explain under which circumstances and on what legal grounds an interpreter goes (or should go) beyond the text of a certain legal instrument and incorporate external rules to determine its meaning. States have also referred to the principle of systemic integration as a tool to reassert their right to regulate in accordance with their duties under international agreements in the context of investment disputes.⁹⁷ Applying the interpretative principle under article 31(3)(c) of the VCLT, States and some investment tribunals have argued that investment obligations must be read in the light of other relevant obligations, such as the ones stemming from environmental or human rights treaties.⁹⁸

According to Judge Simma, the principle of systemic interpretation contained in Article 31(3)(c) of the VCLT should go beyond what the ILC report on Fragmentation prescribes.⁹⁹ In his view, the principle should be applied as a comprehensive tool that not only allows the incorporation of treaty obligations to which a State has adhered but also opens the door for considering rules that might be deemed generally applicable among States.¹⁰⁰ Such a flexible approach to identifying which international rules can

92 ILC, *supra* n. 51, paras 413, 423. See also, D Azaria (2020) ‘The Legal Significance of Expert Treaty Bodies Pronouncements for the Purpose of the Interpretation of Treaties’, *International Community Law Review*, 60.

93 Separate Opinion of Judge Trindade in the *Whaling in the Antarctic*, para 226.

94 PCA, *South China Sea Arbitration*, Award of 12 July 2016, para 941.

95 *Ibid*, para 942.

96 McLachlan (2005) *supra* n. 88, 318, Pauwelyn (2003) *supra* n. 54.

97 R Yotova (2017) ‘Systemic Integration: An Instrument for Reasserting the State’s Control in Investment Arbitration?’, *University of Cambridge Faculty of Law Research Paper No 37/2017*, 1-3.

98 See also chapter 4.

99 The ILC report argues that, in some cases, it is necessary to apply the principle of systemic interpretation enshrined in Article 31(3)(c) of the VCLT as legal basis for the interpreter to consider other relevant treaties among the parties to arrive at a “consistent meaning” among them. See ILC, Conclusions of the work of the Study Group on the Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law, para 21.

100 B Simma, and T Kill, ‘Harmonizing Investment Protection and International Human Rights: First Steps Towards a Methodology’ in C Binder, U Kriebaum, A Reinisch, and S Wittich (eds)

be used to inform the interpretation of UNCLOS appears to have been supported by the arbitral tribunal in the *South China Sea* arbitration. Indeed, the tribunal pointed to the “*nearly universal adherence*” of State parties to the Convention on International Trade in Endangered Species (CITES) as a justification for using it as a tool for interpreting UNCLOS.¹⁰¹ However, as the ILC conceded in its Fragmentation report, normative harmonisation based on systemic integration comes with an inherent limitation: it can function in the event of apparent conflict, but cannot resolve genuine conflicts.¹⁰² In this vein, a variety of mechanisms beyond Article 31(3)(c) of the VCLT have been suggested that allow and guide interpreters to engage in broader interpretative approaches, including rules belonging to different regimes and soft law instruments.¹⁰³ Legal norms, such as the duty to show due regard and exercise due diligence, and principles, such as reasonableness and proportionality, have been identified as alternative or complementary tools for offering flexible solutions.¹⁰⁴

Sometimes, international rules may explicitly refer to other external rules for the identification of their normative content. These references are used primarily to ensure the flexibility and resilience of international norms. Given that such norms operationalise the reference to “external” rules as a means to determine their content, they justify the interrelationship between them and the external rules. UNCLOS, as the “mother of normative interactions”,¹⁰⁵ offers an excellent example of the potential interactions between a framework agreement and more detailed rules and regulations provided by other instruments. The Convention does not create a self-contained regime for the environmental regulation of all maritime activities. For that reason, it mandates States to complement it with more specialised rules.¹⁰⁶ In several situations, its provisions do not include prescriptive obligations but instead, refer to “generally accepted rules and standards” found in other regimes.¹⁰⁷ Its “rules of reference” are a treaty-based *renvoi* to generally applicable rules and standards, that are then operationalised under UNCLOS as benchmarks to determine the level of due diligence of States in complying with their relevant obligations.¹⁰⁸

International Investment Law for the 21st Century: Essays in Honour of Christoph Schreuer (Oxford University Press, 2009) 678.

101 *South China Sea Arbitration*, para 942.

102 *Ibid.*, para 42.

103 French has described four categories of such mechanisms of incorporation of extraneous legal rules: express incorporation; subjective evaluation of meaning (intertemporal *renvoi*); objective revision in meaning; and systemic integration. See D French (2006) ‘Treaty Interpretation and the Incorporation of Extraneous Legal Rules’, *International and Comparative Law Quarterly*, 291-307.

104 F Romanin Jacur ‘Formalism and Law-Making in Treaty-Based Ocean Governance: Limits and Challenges’ in Trevisanut, Giannopoulos and Roland Holst (2020) *supra* n. 60, J Paine ‘The Judicial Dimension of Regime Interaction beyond Systemic Integration’ in Trevisanut, Giannopoulos and Roland Holst, *supra* n. 60.

105 *Ibid.*

106 Articles 197 and 237 of UNCLOS.

107 Notably, the Arbitral Tribunal in the *South China Sea Arbitration* explicitly relied on article 237 of UNCLOS to justify the fact that the relevant environmental obligations of States under other environmental agreements, prior or subsequent to the conclusion of the Convention, form “the corpus of international law relating to the environment” within which article 192 UNCLOS needs to be interpreted, see C Kojima (2018) ‘South China Sea Arbitration and the Protection of the Marine Environment: Evolution of UNCLOS Through Interpretation and the Duty to Cooperate’, *Asian Yearbook of International Law*, 172.

108 Trevisanut (2009) *supra* n. 36, 414.

International norms may refer explicitly to other rules of international law to determine their content. For instance, several investment treaties refer explicitly to the relevant jurisdictional rules of the law of the sea to define their geographical scope of application at sea.¹⁰⁹ However, that is not always the case. The wording of an international rule may also implicitly include such reference to external international rules. In the *Aegean Sea Continental Shelf* case, the ICJ examined the meaning of a reservation made by Greece, which excluded any “*disputes relating to the territorial status of Greece*” from the procedures under the 1928 General Act for the Pacific Settlement of International Disputes. To define the meaning of the “*territorial status*”, the ICJ considered that the phrase took its meaning primarily from relevant rules of international law.¹¹⁰ Relevantly, it upheld that the territorial status “*is to be understood as a generic term denoting any matters properly to be considered as comprised within the concept of territorial status under general international law*”.¹¹¹ The ICJ upheld that the term must be interpreted in light of the contemporary rules of international law because “*it hardly seems conceivable that in such a convention terms like domestic jurisdiction and territorial status were intended to have a fixed content regardless of the subsequent evolution of international law*”.¹¹² Specifically, it considered that the treaty was meant to be of continuing duration to conclude that the meaning of the term territorial status is liable to evolve following the development of international law.¹¹³

Similarly, the use of open-ended terms under UNCLOS opens the door for the evolutionary interpretation of the Convention in light of contemporary developments in international law. Many of the concepts and principles of international environmental law, such as the ecosystem approach, the precautionary principle or the designation of marine protected areas (MPAs) for the conservation of marine biodiversity, which have developed following the Rio Conference in 1992, are disconnected from UNCLOS as far as direct references and specific terminology are concerned.¹¹⁴ However, the inclusion of “*inherently evolutionary*” terms¹¹⁵ in UNCLOS has been considered as an inter-temporal *renvoi*, which is based on the presumed intentions of its parties to enable such terms to be interpreted in the light of subsequent legal developments.¹¹⁶

These are but a few of the legal mechanisms which can promote normative interactions in international law, as further discussed in this study. However, several

109 See also chapter 4, sub-section 2.1.

110 On a more elaborate discussion concerning the interpretation of the concept by the ICJ, see chapter 4, sub-section 2.1.

111 ICJ, *Aegean Sea Continental Shelf* (Greece v Turkey) Judgment, 19 December 1978, para 76.

112 *Ibid*, para 77.

113 *Ibid*, para 78. In addition, the ICJ took into account article 17 of the 1928 Act which referred to the respective rights of the parties to the dispute to support its argument on the evolutionary interpretation of the territorial status.

114 N Matz-Lück, E Van Doorn (2017) ‘Due Diligence Obligations and the Protection of the Marine Environment’, *L’Observateur des Nations Unies*, 179.

115 *Dispute Regarding Navigational and Related Rights* (*Costa Rica v Nicaragua*) para 64.

116 In the words of the Special Rapporteur for the ILC, Sir Humphrey Waldock: “whether the terms used were intended to have a fixed content or to change in meaning with the evolution of the law could be decided only by interpreting the intention of the parties”. See J Noyes ‘Memorializing UNCLOS III, Interpreting the Law of the Sea Convention and the Virginia Commentary’ in M Lodge and M Nordquist (eds) *Peaceful Order in the World’s Oceans Essays in Honor of Satya N. Nandan* (Brill 2014) 230, citing ILC ‘Yearbook of the International Law Commission, Vol 1, Part II’ UN Doc A/CN.4/SER.A/1966 (1966).

factors can obstruct normative interactions. The vague or ambiguous language of rules on the relationship between rules (such as conflict clauses), the nature and the shortcomings of the rules of treaty interpretation, which allow a broad discretion to the interpreter and applier of the rule, the difficulty of determining the intention of the parties concerning the evolutionary (or otherwise) character of specific context are among the issues which might halt normative interactions.¹¹⁷ For instance, the principle of systemic integration does not offer any guidance on how other relevant rules should be “taken into account” for the interpretation of a legal obligation. The principle does not require the interpreter to apply the relevant rules but only to use them as interpretative guidance.¹¹⁸

2. Problem definition and research methodology

Offshore energy production activities are subject to a rather complex legal framework at the international law level. A broad array of instruments, including legally binding agreements, decisions by CoPs to environmental agreements and international organisations, recommendations by other expert treaty bodies, alongside the self-regulatory instruments by the offshore energy industry, can apply simultaneously, at the global, regional and bilateral levels. This fragmented ocean “governance” framework,¹¹⁹ which applies to offshore energy production activities, justifies its choice as the focus of the present study. These instruments mingle and can influence the interpretation and implementation of the overarching duty of States under article 192 of UNCLOS to protect and preserve the marine environment in relation to offshore energy production activities.

Allot has argued that UNCLOS is a “*slow-motion metamorphosis*” to highlight the exciting potential of the Convention to evolve.¹²⁰ Other scholars have described UNCLOS as a treaty establishing a dynamic international legal framework for marine environmental protection.¹²¹ UNCLOS calls upon States to further substantiate the normative content of the general duty to protect and preserve the marine environment by adopting other sector-specific international agreements. These agreements can put flesh on the bare bones of the seemingly elusive due diligence obligation to protect the marine environment from risks related to offshore energy production activities. The determination of the standard of due diligence does not only depend on the facts of

117 Linderfalk (2015) *supra* n. 50, 455.

118 On further discussion on the shortcomings of rules on interpretation, see chapters 3 and 4.

119 Governance has been defined as “a continuous process through which conflicting or diverse interests may be accommodated and cooperative action may be taken It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements... It is a broad, dynamic, complex process of interactive decision making”, Commission on Global Governance (1995) *Our Global Neighborhood* cited in P Birnie, A Boyle, and C Redgwell, *International Law and the Environment* (Oxford University Press, 3rd edition, 2009) 43. On governance, see also E Benvenisti, *The Law of Global Governance* (Hague Academy of International Law, 2014). On a discussion about the concept of “ocean governance” from an international law perspective, see Trevisanut, Giannopoulos, Roland Holst (2020) *supra* n. 60, 5.

120 P Allott (1992) ‘Mare Nostrum: A New International Law of the Sea’, *American Journal of International Law*, 765-766.

121 J Harrison, *Saving the Oceans through Law: The international Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 304.

a case, but it is also contingent upon the applicable international obligations.¹²² That is because other international duties also influence the standard of due diligence, by setting a benchmark for the conduct expected reasonably from States.¹²³ In this context, normative interactions between UNCLOS and other international rules and standards can enrich the content of the due diligence obligation. Identifying the normative contours of the obligation to protect and preserve the marine environment in the context of offshore energy production activities is indispensable because failure to meet the required standard of care can give rise to State responsibility. Thus, defining the normative content of the international obligation to prevent marine environmental harm in the context of marine energy generation activities is essential for States to evaluate whether their conduct is adequate to meet their international duties.¹²⁴

Moreover, legal clarity regarding the environmental obligations of States and the standards applicable in offshore energy generation activities is equally essential for the industry.¹²⁵ For instance, investors should be fully aware of the legal framework within which their offshore energy projects operate to estimate regulatory risks during the long life cycle of their capital-intensive investments.¹²⁶ Despite the importance of establishing clear environmental standards for the operation of offshore energy production activities, rigid environmental rules and standards run the risk of becoming obsolete due to the galloping technological developments and the increasing awareness about the environmental risks posed by different forms of energy production at sea. The ITLOS has confirmed that due diligence is a dynamic concept that can change over time,¹²⁷ taking into account scientific and technological developments. Normative interactions and the consequent cross-fertilisation¹²⁸ of the overlapping rules can offer the necessary flexibility and adaptability of the legal framework. Such flexibility and adaptability are indispensable features of an international legal framework, which needs to address changes in technology and

122 D French (2011) 'From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor – The Seabed Disputes Chamber's 2011 Advisory Opinion', *International Journal of Marine and Coastal Law*, 541-542.

123 Matz-Lück and Van Doorn (2017) *supra* n. 114, 194.

124 N Giannopoulos (2019) 'Global Environmental Regulation of Offshore Energy Production: Searching for Legal Standards in Ocean Governance', *Review of European, Comparative and International Environmental Law*, 289.

125 The relevance of clear environmental standards is illustrated, for instance, in the Pulp Mills case Uruguay, aiming to prove that it had complied with its obligation of due diligence, argued that the technology would prevent the polluting of the river, because it was going to use state-of-the-art waste cleansing equipment, which had been adopted by both the US and the EU as the best available technology; see ICJ, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* para 220. The ICJ accepted that there was no evidence to support Argentina's claim that Uruguay had not complied with the BAT (paras 224-228).

126 S Trevisanut, and N Giannopoulos (2018) 'Investment Protection in Offshore Energy Production: Bright Sides of Regime Interaction', *Journal of World Investment and Trade*, 819.

127 ITLOS, Special Seabed Chamber, Advisory Opinion, Responsibilities and obligations of States with respect to activities in the Area, para 117, ITLOS, Advisory Opinion, Request for an advisory opinion submitted by the sub-regional fisheries commission (SRFC), para 132. See also the two reports by the ILA Study Group on Due Diligence in International Law, March 2014 and July 2016, available online at: <http://www.ila-hq.org/>.

128 Pulkowski (2014) *supra* n. 89, 272-317, Pauwelyn and Elsig (2013) *supra* n. 89, 445-473.

scientific knowledge regarding the environmental effects of different forms of energy production.

2.1. The overarching research question

In that respect, UNCLOS can provide a unifying legal framework for the international regulation of offshore energy production activities, promoting legal certainty for technological development and foreign investments in the sector.¹²⁹ In this fragmented ocean governance framework, the law of the sea serves as the general legal framework, both in terms of allocating jurisdiction and creating substantive rights and duties, and the essential “common link” between the applicable international regimes. In that respect, UNCLOS is called to interact with other, more specific international norms at the global and regional levels.

In the context of the above discussion, the overarching research question of this study is the following:

How do normative interactions between UNCLOS and other international rules and standards shape the content of the duty to protect and preserve the marine environment in relation to offshore energy production activities?

Considering that international rules and standards governing offshore energy production activities are proliferating and become more specific, the thesis inquires how these international rules and standards influence the interpretation and implementation of the duty to protect and preserve the marine environment. In that respect, the thesis explores the legal rules that justify these normative interactions and their implications for the regulation of offshore energy production. The study suggests that even inter-systemic normative interactions do not necessarily result in normative conflicts. Instead, under certain conditions, they can serve as a springboard for promoting synergies among the simultaneously applicable international rules and standards. In that way, the primary hypothesis of the thesis is that both inter- and intra-systemic normative interactions can shape and specify the normative contours of the general obligation to protect the marine environment in relation to offshore energy production activities. In other words, such normative interactions can bring clarity and precision to the content of the duty to protect the marine environment.

By taking into account the circumstances of the host State and its competing obligations, for instance, towards the protection of foreign investments, normative interactions can also result in a more balanced interpretation of the duty to protect and preserve the marine environment. For example, the commitment of a host State to protect foreign investment in offshore energy production might potentially reinforce the duty of that State to comply with international obligations which it has undertaken to preserve and protect the marine environment.¹³⁰ A recent ICSID investment award offers a useful example of how international investment law and the duty of States to protect the environment can operate synergistically. In the *Peter Allard v Barbados* case, a Canadian investor, who owned a nature sanctuary in Barbados, brought an investment claim against the government of Barbados. The investor’s claim was

129 M Kotzur, N Matz-Lück, A Proelss, R Verheyen and J Sanden (eds) *Sustainable Ocean Resource Governance: Deep Sea Mining, Marine Energy and Submarine Cables* (Brill, 2018) 79.

130 PCA, *Peter A. Allard v the Government of Barbados*, Award of 27 June 2016, PCA Case No. 2012-06.

based on the alleged failure by the host State to implement its environmental law, including international obligations stemming from the Convention on Wetlands and the Convention on Biological Diversity.¹³¹ Relevantly, he argued that the failure to comply with these international environmental obligations, which required a heightened level of diligence by the host State, resulted in the pollution of his eco-tourism sanctuary and, thus, in the deprivation of his investment's value.¹³²

To answer the overarching research question, the study focuses on the following sub-questions:

- 1) What is the normative content of the duty to protect and preserve the marine environment in relation to offshore energy production activities under UNCLOS?
- 2) How do normative developments in international environmental law, both at the global and regional level, interact with and influence the general environmental obligations under UNCLOS in the context of offshore energy production activities?
- 3) How does international investment law interact with international law on the protection of the marine environment and what are the normative impacts on the application of the duty to protect and preserve the marine environment in the context of offshore energy production activities?
- 4) How do normative developments by non-State actors, including international organisations, expert treaty bodies, and the private offshore energy industry, interact with and shape the duty to protect and preserve the marine environment under UNCLOS?

This study only examines normative interactions at the international law level. In that respect, its scope covers only interactions among norms at the global and regional or sub-regional level, excluding national and sub-national levels. The research focus mainly encompasses normative interactions: (a) between international rules and standards, including both intra-systemic and inter-systemic interactions, and (b) between international law rules and various instruments produced by non-State actors. Therefore, adopting this broad concept of normative interactions, the study also inquires how the norms and standards produced by non-State actors interact with binding instruments and what the consequences are of those interactions.¹³³ In some instances, the study also refers to institutional interactions among treaty bodies under international agreements. However, it does so only to examine their potential to act as a catalyst for normative cross-fertilisation between their respective

131 *Ibid*, paras 230-234.

132 For a discussion of the relevance of the award for marine environmental protection, see chapter 4, sub-section 2.2.2, see also J Paine (2017) 'Failure to Take Reasonable Environmental Measures as a Breach of Investment Treaty? Peter A Allard v The Government of Barbados, PCA Case No 2012-06, Award, 27 June 2016', *Journal of World Investment and Trade*, 745-754.

133 M Pollack, and G Schaffer (2012) 'The Interaction between Formal and Informal International Lawmaking' in J Pauwelyn, R Wessel, and J Wouters, (eds) *Informal International Lawmaking* (Oxford University Press, 2012) 241-270, G Schaffer and M, Pollack (2010) 'Hard v. Soft Law: Alternatives, Complements, and Antagonists in International Governance', *Minnesota Law Review*, 706-799.

international agreements and not to discuss as a separate interactive process, which has mostly attracted the focus of international relations scholars.¹³⁴

2.2. The state of the art

So far, the literature on normative interactions in international law has only marginally focused on the law of the sea and its interaction with other relevant legal regimes (except for its interplay with international trade law in the fishing sector,¹³⁵ some specialised studies on the interaction between the law of the sea and human rights and isolated studies on the interaction of law of the sea with climate change law).¹³⁶ The present research aims to cover the gap in the international law literature on the interactions between the law of the sea and other international norms governing offshore energy production activities, such as several global and regional environmental law instruments, international investment law, and EU law. It also purports to assess the implications of these normative interactions for the obligation to protect and preserve the marine environment.

Traditionally, international lawyers have been primarily preoccupied with normative conflicts arising out of (partly) overlapping international treaties.¹³⁷ For instance, the work of the ILC on the fragmentation of international law mainly focused on the issue of normative conflict between international regimes and the extent to which legal tools might be utilized to resolve them,¹³⁸ emphasising the role of the principle of systemic integration. By contrast, the proposed research, being part of the “SUSTAINABLEOCEAN” project,¹³⁹ adopts a broader concept of normative interactions. In the context of the project, regime interaction incorporates (a) the traditionally examined normative conflicts (both actual and potential), (b) the possible synergies between a wider variety of normative developments (including

134 See for instance discussions on institutional interactions in international relations literature, S Oberthur (2016) ‘Regime-Interplay Management: Lessons from Environmental Policy and Law’ in K Blome, A Fischer-Lescano, H Franzki, N Markand, and S Oeter (eds) *Contested Regime Collisions: Norm Fragmentation in World Society* (Cambridge University Press, 2016) 87-108, K Raustiala (2013) ‘Institutional Proliferation and the International Legal Order’ in Dunoff and Pollack (eds) *supra* n. 89, 293-320, T Van de Graaf (2013) ‘Fragmentation in Global Energy Governance. Explaining the Creation of IRENA’, *Global Environmental Politics*, 14-33, J D Colgan, R O Keohane, and T van de Graaf (2012) ‘Punctuated Equilibrium in the Energy Regime Complex’, *Review of International Organizations*, 117-143, S Oberthur, and S Stokke (eds) *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (MIT Press, 2011) M Ghering, and S Oberthur (2009) ‘The Casual Mechanisms of Interaction between International Institutions’, *European Journal of International Relations*, 125-156, O Young, L King, and H Schroeder (eds) *Institutional and Environmental Change: Principal Finds, Applications and Research Frontiers* (MIT Press, 2008) S Oberthur, and M Gehring (eds) *Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies* (MIT Press, 2006).

135 Young, *supra* n. 83.

136 S Trevisanut ‘Search and Rescue Operations at Sea’ in A Nollkaemper, and I Plakokefalos (eds) *The Practice of Shared Responsibility in International Law* (Cambridge University Press, 2017) 428-435, S Trevisanut (2014) ‘Is There A Right to Be Rescued at Sea? A Constructive View’, *Questions of International Law*, 3-15, see also Trevisanut, Giannopoulos, Roland Holst (2020) *supra* n. 60.

137 See *supra* section 2.

138 ILC, *supra* n. 51.

139 The research project “Accommodating New Interests at Sea: Legal Tools for Sustainable Ocean Governance” is funded by the European Research Council (ERC) under the European Union’s Horizon 2020 research and innovation programme (grant agreement No 639070 – SUSTAINABLEOCEAN). The principal investigator is Dr. Seline Trevisanut.

the interaction between legally binding and non-binding instruments and between international law and private self-regulation which has so far received insufficient scrutiny)¹⁴⁰, and (c) the potential normative cross-fertilisation resulting from interactions among international institutions.

Moreover, many international law scholars have analysed normative interactions occurring during international adjudication. In that respect, they have discussed the significant role of international courts and tribunals in managing normative interactions during the interpretation and application of the law.¹⁴¹ For instance, Sands has suggested that normative interactions in the form of cross-fertilisation among different rules are a means to face challenges “*as ever more judicial and quasi-judicial bodies are faced with an increasing caseload requiring international law to be interpreted in its general context*”.¹⁴² Similarly, other scholars have argued that normative interactions among international law rules can assist judges in finding solutions to legal problems by supporting their reasoning with authoritative sources.¹⁴³ However, these perspectives appear to overlook the fact that legal interpretation and application is by no means a prerogative of international courts and tribunals, “*but part of the fabric of day-to-day practice by the actors and participants in any given regime*”.¹⁴⁴ On that account, the present study does not only examine manifestations of normative interactions during the adjudication of international law disputes but adopts a broader perspective.

However, the study does not ignore the fact that the agent of interpretation and application of rules plays a significant role in determining the normative implications of such interactions. The outcome of the interpretation of a rule in its normative context depends both on the specific circumstances and on who has the authority to engage in the interpretative exercise.¹⁴⁵ The identification of the normative context of a rule of international law largely depends on the agent of interpretation. The interpreter must first and foremost identify and acknowledge the existence of a legal interrelationship between the applied rule and the other relevant rules of international law.¹⁴⁶ It is very likely that the predispositions and the biases of the agent of interpretation will influence the outcome of the interpretation. When it comes to international courts and tribunals in particular, such bias might relate to their mandate and jurisdictional limits.¹⁴⁷ That observation is relevant, for instance,

140 M Karavias (2017) Interactions between International Law and Private Fisheries Certification, *ACIL Research Paper 2017-24*, available online at: https://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalBrowse&journal_id=1788426, 3, on the interactions between international fisheries law and private fisheries certification standards.

141 Paine (2020) *supra* n. 104, Wongkaew (2019) *supra* n. 69, A Peters (2016) *supra* n. 47, 20-22.

142 Sands (1998) *supra* n. 57, 105.

143 Linderfalk (2015) *supra* n. 50, 428-430, E Maculan (2015) ‘Judicial Definition of Torture as a Paradigm of Cross-Fertilisation: Combining Harmonisation and Expansion’, *Nordic Journal of International Law*, 479-480.

144 S Trevisanut, N Giannopoulos, and R Roland Holst, ‘Conclusions: Proposing a Three-Fold Approach to Regime Interaction in Ocean Governance’, in Trevisanut, Giannopoulos and Roland Holst (eds) *supra* n. 60.

145 Trevisanut, Giannopoulos, Roland Holst (2020) *supra* n. 60, 12.

146 Wongkaew(2019) *supra* n. 69.

147 Trevisanut, Giannopoulos, Roland Holst (2020) *supra* n. 60, 12-13.

when the study examines the role of investment tribunals in addressing normative interactions between international investment and environmental law.¹⁴⁸

2.3. Approach and methodological choices

Given the focus of the study on legal rules justifying normative interactions and their implications for the duty to protect the marine environment, the thesis addresses normative interactions from a legal perspective. Hence, the present research employs primarily doctrinal legal methodology. In that respect, to start with, the study engages in the collection of relevant legal materials, reviewing primary sources and existing international law literature on the regulation of both traditional and renewable forms of energy at sea.

The study does not focus exclusively on legally binding instruments but pays attention to the abundant development of non-binding instruments produced by several non-State actors, including the voluntary self-regulation of the private offshore industry.¹⁴⁹ Norms that have implications for the regulation of offshore energy production vary significantly in their legal nature. For this reason, the research does not adopt a strictly binary approach to legally relevant sources of norms (“law” – “not-law” according to the sources doctrine) but considers legal normativity as a continuum.¹⁵⁰ Adopting that broad approach to legally relevant norms, it examines normative interactions at the interpretation and implementation phase, including instances of law interpretation and application by international judicial bodies. Specifically, it scrutinises judgments and awards of international courts and tribunals to assess both the legal rules on which these bodies justify normative interactions (or the lack thereof) and the outcome of such interactions on the application of the rules concerned. For instance, as explained in chapter 4, many investment tribunals have not addressed the issue of horizontal normative interactions between investment obligations and duties under international environmental law.¹⁵¹

The present study refers to normative gaps on the premise that the current vague global rules are not sufficient for the environmental regulation of offshore energy production. In particular, as discussed in chapter 3, many of the global instruments have excluded from their material scope of application the operational discharges from offshore oil and gas installations. The normative gap is even more evident in the case of marine renewables. Therefore, the thesis argues that the adoption of more detailed rules, like the ones created under specific regional agreements, is a more effective form of environmental regulation than the existing vaguely phrased international rules at the global level. Admittedly, the identification of normative gaps is a challenging, mostly subjective task. For instance, it is debatable whether we can talk about normative gaps even though there are elaborate environmental rules at the regional level because these are not globally applicable.¹⁵² As a counterargument,

148 See chapter 4, sub-section 2.5.

149 Such as instruments by CoPs to several environmental agreements that are relevant to the regulation of offshore energy or codes of conduct produced by multinational companies in the sector.

150 C Chinkin (1989) ‘The Challenge of Soft Law: Development and Change in International Law’, *International and Comparative Law Quarterly*, 850.

151 On further discussion, see chapter 4, section 1.

152 On the concept of normative gaps, see D French, and L Kotze (2019) ‘Towards a Global Pact for the Environment: International Environmental Law’s Factual, Technical and (Unmentionable) Normative Gaps’, *Review of European, Comparative and International Environmental Law*, 28-29.

the absence of specific rules can also be regarded as deference to domestic law. In that respect, it could be an “intended regulatory gap”, allowing States to adopt the relevant standards to operationalise the general international environmental obligations in the context of marine renewables. However, the author posits that there is a normative gap because of the obligation of States to adopt specific international rules, standards, recommended practices and procedures under article 208(5) of UNCLOS. UNCLOS requires that such rules and standards are adopted at the international level to set a minimum standard for domestic regulations.

Scholars have argued that the adoption of a global convention dealing comprehensively with the regulation of the offshore energy activities might be desirable to cover the existing normative gaps at the global level,¹⁵³ even though it does not seem very likely.¹⁵⁴ Whereas a universally applicable instrument could set general principles on the sustainable management of the ocean energy production, specific regional measures appear to be more feasible in dealing with the distinct threats affecting diverse marine areas.¹⁵⁵ Even though UNCLOS allows States discretion in deciding on the appropriate level of cooperation for the development of international rules and standards for seabed activities, it explicitly requires them to take into account “characteristic regional features”.¹⁵⁶ Various regional agreements, that implement (and possibly complement) the global international legal framework for offshore energy production activities, are much more advanced in terms of specificity and adaptation to local needs. Given the parallel existence of several global and regional environmental agreements with direct implications for the regulation of offshore energy production activities, the present study also addresses normative interactions between the global legal framework and the various regional instruments. Those interactions are necessary because regional cooperation for the protection of the marine environment cannot be effective unless it considers its interactions with the global framework.¹⁵⁷

Currently, there are 18 regional sea agreements, which mainly focus on the environmental regulation of specific regional sea areas against various forms of

153 Various scholars have stressed the importance of comprehensive international regulation of offshore energy production (either focusing on oil and gas or marine renewable energy), see Liu (2015) *supra* n. 4, 202-204, L Schiano di Pepe, ‘Offshore Oil and Gas Operations in the Mediterranean Sea: Regulatory Gaps, Recent Developments and Future Perspectives’ in J Ruiz, and E Bou Franch (eds) *Derecho del Mar y Sostenibilidad Ambiental en el Mediterraneo* (Tirant, 2014), 366-367, S Rares (2012) ‘An International Convention on Offshore Hydrocarbon Leaks?’, *Australian and New Zealand Maritime Law Journal*, 10, Z Gao (1998) *supra* n. 6, 31, M Tsamenyi, and M Herriman (1998) Ocean Energy and the Law of the Sea: The Need for a Protocol, *Ocean Development and International Law*, 13, F Galea (2011) A Legal Regime for the Exploration and Exploitation of Offshore Renewable Energy, *Ocean Yearbook*, 127.

154 A couple of attempts to elaborate a universal international agreement regulating offshore energy activities have failed, see J Rochette, M Wemaere, L Chabason, and S Callet, (2014) ‘Seeing Beyond the Horizon for Deepwater Oil and Gas: Strengthening the International Regulation of Offshore Exploration and Exploitation’, *IDDRI Studies No 01/14*, 9-11.

155 J Rochette, L Chabason, ‘A Regional Approach to Marine Environmental Protection: The Regional Seas Experience’ in P Jacquet, R Pachauri, and L Tubiasa (eds) *A Planet for Life* (TERI, 2011), 111.

156 Article 197 of UNCLOS.

157 A Oude Elferink, E Molenaar, and D Rothwell (2013) ‘The Regional Implementation of the Law of the Sea and the Polar Regions’, in A Oude Elferink, E Molenaar, and D Rothwell (eds) *The Law of the Sea and the Polar Regions: Interactions between Global and Regional Regimes* (Brill, 2013) 7.

pollution.¹⁵⁸ According to the UNEP Regional Seas Programme, a marine region is an ocean space within which the ecosystem merits protection, and also within which the development of coastal and island States would benefit from international co-operation.¹⁵⁹ One crucial element strengthening the regional framework of cooperation between States is the solidarity usually based on shared interests and values.¹⁶⁰ The added value of regional cooperation compared with global regulation can be summarized in three words: “*closer, further, faster*”.¹⁶¹ Besides, the environmental status and climatic conditions in different marine areas may vary substantially. For that reason, the study focuses equally on regional normative developments concerning offshore energy production activities. In that respect, it employs a comparative approach, focusing on four marine areas where States have developed specific norms regulating offshore energy production activities.¹⁶² Namely, it covers (a) the Mediterranean Sea, (b) the Baltic Sea, (c) the North-East Atlantic, and (d) the Arctic Ocean.

The selection of these marine regions¹⁶³ has been based upon two criteria: first, the existence of regional cooperation agreements, which specifically regulate offshore energy activities. The analysis has illustrated that the regional sea instruments which apply to traditional forms of hydrocarbon exploitation do not address the environmental externalities of marine renewable energy generation.¹⁶⁴ For instance, the relevant Annexes under the OSPAR and the Helsinki Conventions and the Mediterranean Offshore Protocol only address offshore oil and gas activities.¹⁶⁵ The author has also considered that some of the marine regions, such as the Arctic Ocean, might not be relevant for all forms of offshore energy production. However, these regions have not been automatically excluded from acting as *tertia comparationis*:

158 The UNEP initiated its Regional Seas Programme in 1974, two years after the Stockholm Conference on Human Environment in 1972. It “aims to address the accelerating degradation of the world’s oceans and coastal areas through the sustainable management and use of the marine and coastal environment, by engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment”, see UNEP, Regional Seas Programme, overview available online at: <http://www.unep.org/regionalseas/who-we-are/overview>.

159 A Vallega (2002) The Regional Approach to the Ocean, the Ocean Regions, and Ocean Regionalisation – post-modern dilemma, *Ocean and Coastal Management*, 727. On a discussion regarding the definition of the term “region”, see chapter 5, sub-section 1.1.

160 Boisson de Chazournes argues that States are grouped within regional organizations in order to achieve objectives that they cannot achieve through national mechanisms or universal organizations. Thus, there needs to be some integrative will. See L Boisson de Chazournes, *Interactions Between Regional and Universal Organizations: A Legal Perspective* (Brill, Nijhoff, 2017), 14.

161 J Rochette, R Bille, E Molenaar, P Drankier, and L Chabason (2015) ‘Regional Oceans Governance Mechanisms: A Review’, *Marine Policy*, 9.

162 Most regional sea conventions contain general provisions dealing with pollution caused by exploration and exploitation of the seabed. However, some of them went a step further, developing specific regional instruments regulating offshore energy production.

163 According to World Ocean Review (volume 3) the most important offshore energy production regions are the North Sea, the Mediterranean, the Caspian Sea, Southeast Asia, the Persian Gulf, Western and Central Africa and the Gulf of Mexico.

164 Most of the developed instruments apply to offshore oil and gas exploitation, but multiple decisions, resolutions and other documents have been adopted regarding marine renewable energy production. For instance, see OSPAR Commission, Agreement 2008-3, Guidance on Environmental Considerations for Offshore Wind Farm Development (2008), OSPAR Commission, Assessment of the Environmental Impact of Offshore Windfarms, Biodiversity Series (2008).

165 See Annex III of the OSPAR Convention, Annexes IV and V of the Helsinki Convention.

the mere fact that the legal rules applicable to the selected regions are not entirely comparable is not a barrier to drawing meaningful comparative conclusions. Either way, the use of a comparative methodology does not aim just to sum up the solutions adopted in different marine regions, but has the value of “*sharpening our focus on the weight of competing considerations*”.¹⁶⁶

The second criterion for the selection of the marine regions has been their diversified level of institutional development. Their institutional structure varies widely from region to region. Usually, regional sea arrangements consist of an array of binding and non-binding instruments, which are developed, implemented, and monitored by their treaty bodies. The Arctic region offers a somewhat idiosyncratic example of regional cooperation.¹⁶⁷ For instance, within the Arctic Council System,¹⁶⁸ which has not been established through an international agreement between the Arctic coastal States, a complex institutional framework has been created. Under the Arctic Council, several working groups have competences relating to the regulation of offshore energy activities.¹⁶⁹

The structural differences among the different regions affect the nature of regional arrangements and influence their normative and institutional interactions with other regimes and their capacity to accommodate in their standard-setting the relevant stakeholders and primarily the offshore energy industry. For instance, the OSPAR Commission has the authority to adopt both binding decisions and non-binding recommendations relating, *inter alia*, to the regulation of offshore energy activities. In contrast, the Helsinki Commission’s recommendations are always non-binding, while in the case of the Barcelona Convention, the parties have not created an equivalent body to the OSPAR and the Helsinki Commissions. Apart from their diverse institutional structures, regional initiatives that regulate offshore energy production are also highly fragmented because they have diversified levels of comprehensiveness, heterogeneous legal scopes, and varying levels of compliance control.¹⁷⁰

Notably, in the cases of the Mediterranean and Baltic Seas and the North-East Atlantic,¹⁷¹ EU law provides an extra layer of regional environmental regulation of offshore energy activities.¹⁷² Thus, the choice of those three regions is also justified by the fact that their rules and standards are affected and harmonised by the concurrently applicable EU law rules.¹⁷³ EU law is also examined as a unique example of enhanced regional cooperation with significant implications for offshore energy production activities. In that respect, the study examines the potential of EU law developments to

166 J Smits (2012) *The Mind and Method of the Legal Academic* (Edward Elgar, 2012) 78.

167 Oude Elferink, Molenaar, Rothwell (2013) *supra* n. 157, 8.

168 E Molenaar (2016) ‘The Evolution of the Arctic Council and the Arctic Council System’, *The Circle*, 19-20.

169 See chapter 6, sub-section 4.4.

170 Rochette, Wemaere, Chabason and Callet (2014) *supra* n. 154, 20.

171 The geographic coverage of the North-East Atlantic and Mediterranean regional sea programmes extends to areas beyond national jurisdiction. See definition of “maritime area” in Article 1 of OSPAR Convention and “Mediterranean Sea area” in Barcelona Convention.

172 Soria-Rodriguez *supra* n. 29, 314-335.

173 The EU is allegedly attempting to act as a normative leader in the governance of the offshore energy industry, see P Acconci (2015) ‘The European Union and Energy Community’s Commitments to Energy Sustainability from Renewable Sources as an Opportunity for the Enhancement of the International Law Dimension of the Renewable Energy Sector’, *Oil, Gas & Energy Law Intelligence*, 3-7.

influence the application of the duty to protect and preserve the marine environment in the selected marine regions, both across and outside Europe.¹⁷⁴

In the Arctic Ocean region, several factors have spurred an interest in exploiting Arctic offshore hydrocarbon resources. In light of that interest, the Arctic coastal States have adopted a legally binding agreement under the auspices of the Arctic Council pertaining to offshore oil and gas activities, namely the Agreement on Cooperation on Marine Oil Pollution, Preparedness, and Response in the Arctic. This agreement aims at strengthening “*the cooperation, coordination and mutual assistance among the Parties on oil pollution preparedness and response in the Arctic to protect the marine environment from pollution by oil*”.¹⁷⁵ The agreement does not address the regulation of operational pollution caused by offshore oil and gas activities.¹⁷⁶ Nonetheless, the various working groups of the Arctic Council have contributed to the regulation of the offshore energy sector both by conducting assessments of the environmental status of the Arctic Ocean and by drafting several non-binding instruments, such as the Arctic Offshore Oil and Gas Guidelines. In addition, even though EU law is not directly applicable in the Arctic Ocean, the EU has indirectly attempted to become a relevant actor in the regulation of offshore energy activities.¹⁷⁷ Therefore, the Arctic Ocean can provide another field in which to examine normative interactions between instruments of varying normativity and specificity, in addressing the challenges for the regulation of offshore energy production under its unique environmental conditions.¹⁷⁸

Importantly, the proposed approach provides the opportunity to assess comparatively whether the relevant regional agreements include common rules and standards, which can be used as a source of best practices for States in other marine regions. Those best practices can apply to other regional sea areas with similar legal geography and shared environmental challenges. However, they could also function as a legally relevant source of inspiration for other marine regions even when they have substantial differences. That is because the study does not suggest the legal transplantation of these regional rules and standards. Instead, it argues that these practices need to be adapted to address the local needs in order to fit better with the existing normative framework. Moreover, common rules and standards across several marine representative marine regions could, under certain conditions, offer valuable interpretative guidance for the application of the duty to protect and preserve the marine environment under UNCLOS.¹⁷⁹

3. Research outline

As the regulation of offshore energy production is primarily anchored to UNCLOS, the study begins with examining the significance of the Convention for offshore energy production activities. Following a brief discussion of the historical development of

174 Gavouneli (2015) *supra* n. 27, 266-267.

175 Article 1 of the Agreement.

176 See Rochette, Wemaere, Chabason and Callet (2014) *supra* n. 154, 13.

177 See Offshore Safety Directive 2013/30/EU. See also discussion on the relevance of the EU law instruments for the Arctic, Chapter 7, sub-section 3.1.2.

178 C Ebinger, J Banks, and A Schackmann (2014) ‘Offshore Oil and Gas Governance in the Arctic A leadership for the US’, *Policy Brief 21*, available online at: <https://www.brookings.edu/wp-content/uploads/2016/02/Offshore-Oil-and-Gas-Governance-web.pdf>.

179 See chapter 8, section 2.

the law of the sea in the light of the emerging energy interests of States, the Chapter 2 provides an overview of UNCLOS as the fundamental normative and institutional framework for the international regulation of energy exploitation at sea. Hence, it discusses the jurisdictional and substantive environmental rules applicable to offshore energy production activities under the Convention. Notably, it examines the relevant environmental duties, which serve as a springboard for normative interactions between UNCLOS and other related international rules and standards. Then, the chapter zooms in on the ‘system’ of institutions within the UNCLOS regime, which are relevant to the regulation of offshore energy production, to evaluate their contribution (or lack thereof) to the implementation and potential evolution of the Convention’s duties relating to offshore energy production. Thus, Chapter 2 seeks to answer the first sub-question on the normative contours of the duty to protect and preserve the marine environment in relation to offshore energy production activities as enshrined under UNCLOS, setting down the foundation for responding to the overarching research question.

The general environmental rules and principles under UNCLOS relating to offshore energy production projects are complemented by a vast array of more specific global and regional instruments. For that reason, Chapter 3 continues with an analysis of rules of customary international law and globally applicable international agreements that either directly¹⁸⁰ or indirectly regulate offshore energy production.¹⁸¹ First, the chapter explores the content and nature of these duties to illustrate their shortcomings in addressing specific aspects of offshore energy production activities. Then, it examines how several normative developments in international environmental law, including global agreements and instruments produced by non-State actors, can interact with and inform the due diligence obligation under UNCLOS to protect and preserve the marine environment. After examining the legal methods which govern such normative interactions, the chapter looks into the impact of these interactions on the application of the general duty of States to protect and preserve the marine environment in the context of offshore energy production. In this way, Chapter 3 aims to respond to the second sub-question on how international environmental rules, at the global level, interact with UNCLOS and what the normative implications of their interaction are. It also partly responds to the fourth sub-question on the relevance of instruments formulated by non-State actors in shaping the duty to protect and preserve the marine environment.

The thesis then turns to the interactions between two *prima facie* competing international regimes, namely international marine environmental law and international investment law. Chapter 4 begins with examining why and how these

180 The Convention on Oil Pollution, Preparedness, Response and Cooperation addresses environmental risks posed by offshore oil and gas exploitation, but its scope of application is limited to “any fixed or floating offshore installation or structure engaged in gas or oil exploration, exploitation or production activities, or loading or unloading oil” and thus does not apply to potential pollution from marine renewable energy devices.

181 Focusing on global instruments concerned with the protection of the marine environment in a broader sense, such as the Convention on Biological Diversity, the International Convention on the Prevention of Pollution from Ships, the International Convention on Oil Pollution, Preparedness, Response, and Cooperation, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, the Convention on Migratory Species, and the International Convention for the Regulation of Whaling.

two different branches of international law interact considering the particularities of international investment law. After explaining how these two branches of international law mingle, it assesses the effects of their cross-fertilisation both on the application of investment and marine environmental law obligations. Thus, Chapter 4 aims to answer the third sub-question on how international investment law interacts with marine environmental law and what the impact is of such interaction on the duty of States to take all necessary measures to protect and preserve the marine environment in relation to offshore energy production activities under UNCLOS.

Having examined the international law rules with implications for offshore energy production at the global level, the focus of the thesis moves to normative developments at the regional level. Chapter 5 discusses the issue of regionalism in the law of the sea. It studies the relevance of regionalism for the formulation of international environmental rules and standards for offshore energy production before reviewing the relevant developments in the selected marine regions. The chapter then looks into how UNCLOS has accommodated regionalism in the context of marine environmental protection.¹⁸² Against that background, it analyses the interrelationship between regional agreements and UNCLOS to evaluate the implications of their interaction for the application of the duty to protect and preserve the marine environment in relation to offshore energy production. Therefore, it contributes to answering the second sub-question of this research.

Building on the findings concerning regionalism, Chapter 6 comparatively analyses the substantive normative developments relating to offshore energy production activities under the selected regional instruments. Following an examination of the treaty-based rules, the chapter considers how institutional arrangements under these instruments have contributed to the further refinement and adaptation of rules and standards to address emerging local challenges. In that respect, it examines how regional rules and standards have dynamically evolved through decisions and recommendations by the regional treaty bodies in the selected areas. This comparative analysis assists in assessing how these regionally developed rules and standards can shape the implementation of the duty to protect and preserve the marine environment under UNCLOS; thus, it is a further step towards answering the second and fourth sub-questions of this thesis.

Chapter 7 examines whether EU law and its sophisticated institutional mechanisms can strengthen the rules and standards across Europe, in terms of both adding normative content to them and enhancing their enforcement. After an overview of the EU's competences and duties concerning the protection of the marine environment, the chapter discusses the various secondary EU law instruments which have direct or indirect implications for offshore energy production. It then inquires how these instruments interact with the selected regional sea instruments to assess whether they can cross-fertilise each other and shape marine environmental protection across the EU Member States. In that respect, the chapter zooms in on seas surrounding Europe to clarify how various overlapping normative developments shape the duty to protect and preserve the marine environment, contributing to the answer to the second sub-question.

182 T Treves, 'Regional Approaches to the Protection of the Marine Environment' in M Nordquist, J Norton Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Martinus Nijhoff, 2003) 146.

Based on the analysis under the previous two chapters, Chapter 8 reflects on the potential of common rules and standards under regional agreements to provide solutions beyond their territorial scope of application. It discusses the potential of regional sea agreements both to serve as transposable models for similar normative developments in other marine areas facing similar environmental challenges and to qualify as a means for defining the content of the relevant obligations under UNCLOS. Also, it explores the capacity of EU law to provide standards applicable outside the EU, focusing on the example of the EU Offshore Safety directive, and examines the directive's role (or lack thereof) for the interpretation and implementation of UNCLOS.

The final chapter, Chapter 9, presents the conclusions drawn from this exercise. Building on the interim findings of the previous chapters, it discusses how the protection of the marine environment concerning such activities is shaped through both intra- and inter-systemic normative interactions and reflects upon the need for a globally applicable agreement on the environmental regulation of offshore energy production activities. It suggests that such a binding agreement does not seem either feasible nor necessary. Instead, normative interactions between UNCLOS and the various relevant global and regional instruments can enhance the standard of diligence required for the protection of the marine environment in relation to offshore energy production.

CHAPTER 2

UNCLOS as a dynamic international legal framework for offshore energy production activities

Introduction

Since the dawn of history, the oceans and their resources have been of paramount importance to sustaining life and fostering development.¹ From early on, humankind has used the seas for navigation, fishing, trade, recreation and security purposes. The right of commercial vessels to conduct their business on significant maritime highways of the world has been the primary concern for centuries.² Under these circumstances, the principle of the freedom of the seas has prevailed since the seventeenth century. It remained the overarching doctrine governing the use of the oceans until at least the first half of the twentieth century.³ The predominance of the doctrine of the freedom of the seas appears to be justified because it limited the coastal rights and jurisdiction to a narrow sea belt and provided for States to freely navigate, develop commercial relationships and fish in the remainder of the seas. However, by the mid-twentieth century, new economic interests emerged, as soon as States discovered the abundance of marine resources concentrated close to their coasts, and technological advancements made their exploitation feasible. On that account, States incrementally asserted extended claims of sovereignty or sovereignty rights over maritime spaces to gain access to the marine natural wealth. As further discussed in the first section of this chapter, the claims for seawards expansion of State sovereignty and sovereign rights over natural resources have been highly influential in the development of the modern law of the sea.

By contrast with the land, whose value mainly stems from the fact that it is susceptible to occupation and suitable for habitation, the sea is considered valuable for humankind mostly due to its capacity to serve as a means for communication and its vast resource potential.⁴ For instance, offshore oil and gas deposits, coupled with power produced from ocean currents, tides, waves, salinity difference and solar energy at sea, could provide a solution to the challenge of global energy demands.⁵

1 Letter dated 15 May 2008 from the Co-Chairpersons of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction addressed to the President of the General Assembly, UN General Assembly Doc A/63/79, 16 May 2008, 3.

2 J Mossop (2018) 'Can We Make the Oceans Greener? The Successes and Failures of UNCLOS as an Environmental Treaty', *Victoria University of Wellington Law Review*, 575.

3 D Rothwell, and T Stephens, *The International Law of the Sea* (Hart Publishing, 2nd edition, 2016), 4, R Barnes (2009) *Property Rights and Natural Resources*, Hart Publishing, 165, J M Van Dyke, D Zaelke, and G Hewison (eds) *Freedom for the Seas in the 21st Century: Ocean Governance and Environmental Harmony* (Island Press, 1993) 14.

4 L Brilmayer, and N Klein (2001) 'Land and Sea: Two Sovereignty Regimes in Search of a Common Denominator', *International Law and Politics*, 730-732. Brilmayer and Klein argue that the difference between the land and sea areas is that the former can be used both for habitation and exploitation of natural resources, whereas the latter is rarely used as a place of dwelling.

5 A Brito e Melo, H Jeffrey (eds) (2019) 'Annual Report of an Overview of Ocean Energy Activities in 2019', available online at: <https://www.ocean-energy-systems.org/>, 4-5.

Given the oceans' potential in accommodating vital State interests, it comes as no surprise that the law of the sea, as the set of international rules regulating ocean uses, ranks among the oldest threads⁶ in the complex web of international law. A brief look at its modern history,⁷ starting from the seventeenth century up to the lengthy negotiations and eventually, the signature of the United Nations Convention on the Law of the Sea in 1982, reveals how this branch of international law has changed and evolved primarily in response to changes in powerful economic interests.⁸

Following section 1, which is devoted to the historical development of the law of the sea in light of the emerging interest of States in exploiting offshore energy resources, this chapter provides an overview of the UNCLOS regime as the fundamental normative and institutional framework for the international regulation of energy production at sea. First, it discusses the jurisdictional framework under the Convention and the relevant rights and duties granted to coastal States concerning offshore energy production activities. Then, the focus moves to the environmental rules of UNCLOS, which have implications for offshore energy production. It examines the content and nature of the rules under Part XII of the Convention, which establishes a dynamic international legal framework for the protection of the marine environment. In the third part, the chapter zooms in on the 'system' of institutions within the UNCLOS regime to assess their contribution (or lack thereof) to the implementation and further development of the Convention's environmental rules concerning offshore energy production.

1. Offshore energy interests and the historical development of the law of the sea

The best way to depict the historical development of the law of the sea is as a tug of war between two fundamental principles, the freedom of the sea and sovereignty over the sea.⁹ The roots of these legal principles have been traced by some scholars back to Roman times when legal theorists maintained that the oceans were common property (*commune omnium*),¹⁰ followed by the claims of sovereignty over the sea by European maritime powers during the Middle Ages.¹¹ Although States put forward these extensive claims of sovereignty over maritime areas to advance their respective

6 T Treves, 'Historical Development of the Law of the Sea' in D Rothwell, A Oude Elferink, K Scott, and T Stephens (eds) *The Oxford Handbook of the Law of the Sea* (Oxford University Press, 2015) 1.

7 For detailed historical analysis of the law of the sea development see, *inter alia*, T Wemyss Fulton, *The Sovereignty of the Sea: An Historical Account of the Claims of England to the Dominion of the British Seas and of the Evolution of Territorial Waters: With Special Reference to the Rights of the Fishing and the Naval Salute* (The Lawbook Exchange, 2002), R P Anand, *Origin and Development of the Law of the Sea* (Martinus Nijhoff Publishers, 1983), D Johnston, *Theory and History of Ocean Boundary-Making* (Oxford University Press, 1988), Treves (2015), *supra* n. 6.

8 A Kirchner (2007) 'History of Law of the Sea', *Max Planck Encyclopaedia of Public International Law*, online at: <http://opil.ouplaw.com>.

9 T Scovazzi, 'The Origin of the Theory of Sovereignty of the Sea' in L del Castillo, and H Camines (eds) *Law of the Sea: From Grotius to the International Tribunal for the Law of the Sea: Liber Amicorum to Judge Hugo Caminos* (Brill, 2015), 48-63, E D Brown (1994) *The International Law of the Sea*, Volume I (Dartmouth Publishing, 1994) 6.

10 Kirchner (2007) *supra* n. 8, 1.

11 The Republic of Venice claimed its sovereignty over the Adriatic Sea, while the Republic of Genoa had a similar claim over the Ligurian Sea. Moreover, following Columbus' discoveries, both Portugal and Spain asserted extensive claims of sovereignty over the whole Indian Ocean and over the Pacific and the Gulf of Mexico, respectively, on the basis of two Papal Bulls. See R Jennings, and A Watts, *Oppenheim's International Law: Volume I Peace* (Oxford University Press, 9th edition, 2008) 720,

economic interests, such claims were primarily a manifestation of power and, at that time, there were few attempts to justify them on any legal basis.¹²

This section discusses how the States' quest to lay a claim to offshore energy resources has catalysed and shaped the development of the law of the sea and, particularly, the regime of the continental shelf and the EEZ. First, it describes how the early historical development of the law of the sea (from the seventeenth until the twentieth century) was influenced primarily by the States' unquenchable thirst for power and economics. Then, the focus moves to the influence of the rush to explore and exploit offshore energy resources upon the progressive development of an international regime for the continental shelf. Following a brief overview of the mostly unilateral claims by States over offshore energy resources, the analysis turns to the relevant developments under the 1958 Geneva Convention on the Continental Shelf. It illustrates how the States' quest to expand their jurisdiction focused mainly on the exploitation of resources without creating any relevant duty to conserve them or protect the marine environment. However, technological developments in the offshore energy sector soon frustrated the delicate balance of interests struck by the Geneva Conventions. The expansion of the offshore energy sector, *inter alia*, exacerbated the need for a new legal framework, which resulted in the negotiations of UNCLOS. The last part of this section briefly reflects upon the relevance of offshore energy interests in shaping the rules of the Convention.

1.1. Economic interests as drivers in the historical development of the modern law of the sea

The origins of the modern law of the sea can be traced to the seventeenth century. That period was marked by the fierce doctrinal debate (known as “*battle of the books*”)¹³ between the Dutch jurist Hugo Grotius, father of the famous *De Mare Liberum*,¹⁴ and the supporters of the competing theory of sovereignty over the sea.¹⁵ In Grotius' view, the sea, by its nature as an infinite natural element, is not susceptible to occupation. For that reason, Grotius argued that the sea could not fall under the sovereignty of any State.¹⁶ By defending the freedom of the seas, Grotius intended to support the economic interests of the Netherlands and his client, the Dutch East Indian Company, which aimed to legally refute the proclaimed sovereignty of Spain and Portugal over the Indian Ocean in an attempt to expand the Dutch trade.¹⁷

The doctrine of the freedom of the sea was initially welcomed by other States, including England, because it supported their economic interests to navigate freely

Brown (1994) *supra* n. 9, 6, Anand (1983) *supra* n. 7, 10-67, Kirchner (2007) *supra* n. 8, 1-2, Treves (2015) *supra* n. 6, 3.

12 Johnston (1988) *supra* n. 7, 76-77.

13 B Fassbender, and A Peters (eds) *The Oxford Handbook of the History of International Law* (Oxford University Press, 2012) 366.

14 The *Mare Liberum* is a chapter of the accidentally found legal treatise ‘*De Jurae Preade*’. It was written by Hugo Grotius in legal defence of the Dutch East India Company, which faced trial for the capture of a Portuguese ship in the Strait of Malacca, Anand (1983), *supra* n. 7, 77-82. The book has been translated into English, see R Feenstra (ed) *Hugo Grotius Mare Liberum 1609-2009: Original Text and English Translation* (Brill, 2009).

15 Scovazzi (2015) *supra* n. 9, 49.

16 Jennings, and Watts (2008) *supra* n. 11, 721.

17 Brown (1994), *supra* n. 9, 7, Barnes (2009) *supra* n. 3, 166-167.

and expand their trade routes.¹⁸ However, the exceptional alignment of interests between the Dutch and the British was soon frustrated, as economic considerations concerning the establishment of exclusive fisheries zones became predominant when King James I assumed the British throne.¹⁹ Motivated by the need to support the British claims over fisheries zones, the Scottish jurist William Welwood argued that the seawards expansion of territorial sovereignty and jurisdiction was the corollary of the adjacency of the waters from the coasts and the finite nature of marine resources.²⁰ Welwood also advocated that sovereignty over marine areas is necessary to enable the coastal State to prescribe measures for the conservation of these inexhaustible resources.²¹ In that respect, Welwood has expressed one of the earliest calls for the management and conservation of marine natural resources. Subsequently, John Selden, in his book *De Mare Clausum*, also supported the British interests by furthering the argument that the seas are capable of occupation as if they were land.²²

For the next two centuries, State practice reflected the principle of the freedom of the seas and claims of sovereignty over marine areas were confined within a narrow zone.²³ Bearing in mind that the primary uses of the oceans were navigation and fisheries, the prevalence of that regime is not surprising. Given the lack of technological advancements, it was not likely that any serious conflict between the fishing or navigation interests of adjacent coastal States would occur.²⁴ Besides, ocean technology had not yet brought offshore oil and gas deposits within reach and States were not in general motivated to expand their sovereignty to marine areas further off their coasts. Even prospecting for offshore hydrocarbon resources was not yet economically viable. Therefore, the exploitation of the resources of the continental shelf was far from a reality. According to Dupuy, the law governing the oceans had a merely functional role, in the sense that it prescribed the competences of navigating States and determined the conditions under which they enjoyed the freedoms of the high seas, paying scant attention to sovereignty.²⁵

The “battle of the books” resulted in the general recognition in State practice, and even by Grotius himself, that coastal waters are susceptible to occupation. Thus, these waters can fall under the jurisdiction of the coastal State. At the same time, the freedom of the seas applied to the remainder of the oceans.²⁶ Therefore, the juridical controversy initiated and fuelled by the underlying competing economic interests of States contributed to the shaping of two cornerstone principles in the contemporary

18 Treves (2015) *supra* n. 6, 4.

19 Barnes (2009) *supra* n. 3, 167-168.

20 Barnes (2009) *supra* n. 3, 173.

21 *Ibid.*

22 Anand (1983) *supra* n. 7, 105, Kirchner (2007) *supra* n. 8, Scovazzi (2015) *supra* n. 9, 60.

23 It was another Dutch theorist, Cornelius van Bynskershoek, who argued that sovereignty over marine areas was dependent upon the effective control from the land by the coastal State. For that reason, he proposed that the limit of territorial sovereignty in the sea would be the range that could be defended by weapons on land (the “cannon shot” rule). Treves (2015) *supra* n. 6, 5-6, Scovazzi (2015), *supra* n. 9, 62.

24 Brown (1994) *supra* n. 7, 8.

25 R-J Dupuy, and D Vignes, *A Handbook on the New Law of the Sea*, Volume I (Martinus Nijhoff, 1991) 248.

26 Treves (2015) *supra* n. 6, 5-6, Fulton, *supra* n. 7, 5.

law of the sea.²⁷ Most importantly, it is the first example of how economic interests reflected in the claims for extension of sovereignty over marine areas have steered changes in the legal framework regulating the use of the oceans.²⁸ However, the balance of interests at sea significantly changed during the twentieth century.

1.2. The influence of offshore energy interests in the recent historical development of the law of the sea

Under the influence of emerging economic interests at sea, the legal status of the oceans started changing rapidly during the twentieth century. The advancements in technology and science have played a key role in shaping those new interests,²⁹ by facilitating, for instance, the exploration and exploitation of non-living resources in the seabed and subsoil of marine areas – initially – adjacent to the coasts. State sovereignty started to expand gradually in parallel with the diversification of the ocean uses. The emerging interest for State control over the wealth of the seas, and especially concerning hydrocarbon deposits, challenged the almost unconditional freedom of the seas.³⁰ Besides their traditional value as a means for communication and trade, oceans became attractive as an important economic zone for the extraction of natural resources. New techniques for the exploitation of offshore hydrocarbon resources required the deployment of fixed installations at sea. At the same time, the traditional uses of maritime transport and fisheries continued developing and expanding in more extensive marine areas.³¹ Due to the multiplication and diversification of offshore activities, the oceans have served as an arena, where competing economic interests have been measured against each other. On the one hand, States' claims of sovereignty over marine areas were prompted by their desire to have exclusive control over the living and non-living marine resources. On the other hand, States needed to align the pursuit of these interests in the exploitation of resources with the traditional freedoms of the seas.³²

In 1894, for the first time, an offshore platform was installed to drill for oil by the coast of California.³³ Notwithstanding a few exceptions, the offshore energy industry barely got its feet wet for the next fifty years.³⁴ Nonetheless, the economic relevance of offshore energy resources became a significant driver of legal claims over marine areas, as States gained awareness of the abundance of hydrocarbon resources in the seabed near their coasts.³⁵ The doctrine of the freedom of the seas was challenged, as the prospective development of offshore energy exploitation brought forward the need for its proper regulation.³⁶ As discussed below, the outcome was the gradual

27 Some scholars support the view that it was in particular European economic interests which were the most influential in the historical development of the law of the sea, criticizing the negligence of non-European legal systems. See, *inter alia*, Rothwell and Stephens (2016) *supra* n. 3, 2, Anand (1983) *supra* n. 7, 3-4, Kirchner (2007), *supra* n. 8.

28 Scovazzi (2015) *supra* n. 9, 63.

29 Anand (1983) *supra* n. 7, 162-163.

30 P Allott (1983) 'Power Sharing in the Law of the Sea', *American Journal of International Law*, 26.

31 Dupuy and Vignes (1991), *supra* n. 25, 248.

32 Barnes (2009), *supra* n. 3, 198.

33 Dupuy and Vignes (1991), *supra* n. 25, 322.

34 R P Anand, *Legal Regime of the Sea-bed and the Developing Countries* (A W. Sijthoff, 1976) 19.

35 Y Tanaka, *The International Law of the Sea* (Cambridge University Press, 2nd edition, 2015) 19, Barnes (2009) *supra* n. 3, 199.

36 Anand (1983) *supra* n. 7, 162-163, Barnes (2009) *supra* n. 3, 199-200.

recognition of sovereign rights over vast areas of the sea based on a forward-looking economic vision.³⁷

The first time³⁸ that the matter of the exploitation of sea-bed resources was unequivocally subject to an international treaty was that between Venezuela and Great Britain regarding the submarine areas of the Gulf of Paria in 1942.³⁹ Despite the theoretical controversy⁴⁰ about the nature of this treaty as the source of the doctrine of the continental shelf,⁴¹ it “marks a turning point in which the concept of the continental shelf is used”.⁴² The treaty established the respective sovereignty or control over the seabed and subsoil of the submarine areas between Trinidad and the coasts of Venezuela.⁴³ Noticeably, it created an obligation of non-interference with navigation “by any works or installations” erected above the submarine areas,⁴⁴ and a duty to prevent pollution of the other party’s territorial waters caused by the exploitation of the submarine area.⁴⁵ In terms of marine environmental protection, the treaty seems innovative for its time of signature. Not only did it enshrine the

37 S Oda (2002) ‘Some Reflections on Recent Developments in the Law of the Sea’, *Yale Journal of International Law*, 217-218.

38 It is also argued that the first national claim over the offshore minerals of the seabed was the Great Britain Cornwall Submarine Minerals Act of 1852, see B Bojang ‘The Relationship between Economic Exploitation and Management: An Analysis of the Continental Shelf Regime’ in P Chaumette (ed) *Economic Challenge and New Maritime Risks Management: What Blue Growth?* (Gomilex, 2017) 282-283.

39 Treaty between His Majesty in respect of the United Kingdom and the President of the United States of Venezuela relating to the Submarine Areas of the Gulf of Paria, signed in Caracas 26 February 1942 (ratified 22 September 1942), hereinafter: Gulf of Paria treaty. The treaty was signed with the purpose of dividing the submarine areas of the Gulf of Paria between the two signatories, and particularly “the sea-bed and sub-soil outside of the territorial waters of the High Contracting Parties...” (Article 1).

40 A Lucky, ‘The Contribution of Trinidad and Tobago in the Development of the Regime of the Continental Shelf’, in J Van Dyke, S Broder, S Lee, and J-H Paik (eds), *Governing Ocean Resources: New Challenges and Emerging Regimes A tribute to Judge Choon-Ho Park* (Martinus Nijhoff, 2013) 246-247, Dupuy and Vignes (1991) *supra* n. 25, 324-325.

41 The treaty does not use the term “continental shelf” *per se*, but it refers to the submarine areas, which included the sea-bed and sub-soil of the marine area beyond the territorial waters of the contracting parties. Article 1 of the Gulf of Paria Treaty. Relevantly, in the arbitral award in the case of *Petroleum Development Ltd v. Sheik of Abud Dhabi*, Lord Asquith concluded that “In 1939, neither contracting party had ever heard of the continental shelf which as a legal doctrine did not exist. No thought of it entered their heads”, cited in Lucky (2013) *supra* n. 40, 250.

42 H Lauterpacht (1950) ‘Sovereignty over Submarine Areas’, *British Yearbook of International Law*, 379-380, Dupuy, and Vignes (1991) *supra* n. 25, 325, Anand (1976) *supra* n. 34, 32.

43 A Garcia, *The Exploitation and Conservation of the Resources of the Sea: A Study of Contemporary International Law* (A. W. Sythoff, 2nd edition, 1959) 96.

44 Article 6 of the Gulf of Paria treaty reads: “Nothing in this treaty shall be held to affect in any way the status of the waters of the Gulf of Paria or any rights or passage or navigation on the surface of the seas outside the territorial waters of the Contracting Parties. In particular passage or navigation shall not be closed or be impeded by any works or installations which may be erected, which shall be of such a nature and shall be so constructed, placed, marked, buoyed and lighted, as not to constitute a danger or obstruction to shipping”.

45 Article 7 of the Gulf of Paria treaty reads: “Each of the High Contracting Parties shall take all practical measures to prevent the exploitation of any submarine areas claimed or occupied by him on the Gulf from causing the pollution of the territorial waters of the other by oil, mud or any other fluid or substance liable to contaminate the navigable waters of the foreshore and shall concert with the other to make the said similarity of the prime objectives measures effective as possible”.

no-harm principle (*sic utere tuo ut alienum non leadas*),⁴⁶ but it also required the parties to ensure that their concessioners did not cause transboundary pollution, by using “modern equipment” (echoing the concept of Best Available Techniques⁴⁷) and operating under the supervision of the States.⁴⁸

The period following World War II brought very substantial changes for the law of the sea. It coincided with the emergence of several newly independent States, which accelerated the global energy demand, and also with catalytic technological progress regarding the exploitation of marine natural resources.⁴⁹ In response to the increased pressure from domestic oil companies,⁵⁰ the US President, Harry S. Truman, proclaimed that the United States regards “*the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control*”.⁵¹ Even though the Proclamation did not explicitly define the outer limits of the continental shelf, a press release accompanying it mentioned that it extended to a water depth of 100 fathoms (approximately 182 metres).⁵² The Proclamation was revolutionary as it unilaterally expanded territorial jurisdiction over all the natural resources of the continental shelf, including oil, gas and minerals, moving beyond the *status quo* of international law at that time.⁵³

The Truman Proclamation was, in essence, a challenge to the well-established Grotian idea of the freedom of the seas.⁵⁴ For that reason, it purported to justify

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- 46 The principle has its origins in Roman law. In the *Trail Smelter* Arbitration, the Arbitral Tribunal held that according to principles of international law a State has the obligation to abstain from using or permitting the use of its territory “*in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein*”. *Trail Smelter Arbitration (US v Canada)*, 16 April 1938 and 11 March 1941, Reports of International Arbitral Awards, 1965.
- 47 Numerous environmental treaties require the use of the Best Available Techniques (BAT), Best Environmental Practice (BEP) as the international environmental standard for industries, whose operation can cause harm to the environment, see P Sands, J Peel, A Fabra, and R Mackenzie (eds) *Principles of International Environmental Law* (Cambridge University Press, 3rd edition, 2012) 124.
- 48 Article 8 of the Gulf of Paria treaty reads: “*Each of the Contracting parties shall cause to be inserted in any concession which may be granted for the exploration of submarine areas in the Gulf of Paria stipulations for securing the effective observance of the two preceding Articles, including a requirement for the use by the concessionaire of modern equipment, and shall cause the operation of any such concession to be supervised in order to ensure that the provisions of the present Treaty are complied with*”.
- 49 A Pardo (1984) ‘The Law of the Sea: Its Past and Its Future’, *Oregon Law Review*, 15, Anand (1983) *supra* n. 7, 162-163, Brown (1994) *supra* n. 7, 8-9, Dupuy and Vignes (1991) *supra* n. 25, 325.
- 50 US Presidential Proclamation No. 2667, Policy of the United States with Respect to the Natural Resources of the Subsoil and Seabed of the Continental Shelf, 28 September 1945, which explicitly mentions that the United States “*aware of the long range world-wide need for new sources of petroleum and other minerals, holds the view that efforts to discover and make available new supplies of those resources should be encouraged*” (preamble). See also, H Freeman (1970) ‘Law of the Continental Shelf and Ocean Resources – An Overview’, *Cornell International Law Journal*, 112, Bojang (2017) *supra* n. 38, 283-284.
- 51 *Ibid.* The US President simultaneously issued a proclamation about the US policy on exclusive fisheries zones, US Presidential Proclamation No. 2668, Policy of the United States with Respect to Coastal Fisheries in Certain Areas of the High Seas, 28 September 1945.
- 52 J Norton Moore, M Nordquist, S Nandan, and S Rosenne (eds) *United Nations Convention on the Law of the Sea 1982: A Commentary*, Volume II, (Brill/Martinus Nijhoff, 1993) 828.
- 53 Freeman (1970) *supra* n. 50, 111.
- 54 Lauterpacht (1950) *supra* n. 42, 376-379. Lauterpacht supports the view that the concept of the continental shelf was a necessary challenge to the freedom of the high seas, which had “*acquired a rigidity impervious to the needs of the international community and to a regime of effective order on the high seas*”, 378.

the US claim of jurisdiction and control over all the natural resources found in the continental shelf (“*exercise of jurisdiction ... is reasonable and just*”) on multiple grounds. Interestingly, the Truman Proclamation explicitly mentioned the duty to conserve the seabed resources to support the US claim.⁵⁵ As with the treaty of the Gulf of Paria,⁵⁶ the US proclamation was carefully phrased so as to sustain the general interest in unrestricted navigation.⁵⁷ Instead of claiming full sovereignty,⁵⁸ it used the more nuanced language of “*jurisdiction and control*” over the natural resources. That way, it attempted to balance the interest in exclusive control over the rich and newly discovered hydrocarbon resources of the continental shelf with the competing interest in safeguarding navigational rights.⁵⁹ The Truman Proclamation signalled the turning point in the establishment of coastal States’ exclusive sovereign rights beyond the territorial sea. It thus was no surprise that the ICJ perceived the Proclamation as a landmark in the historical development of the legal concept of the continental shelf.⁶⁰ Almost thirteen years later and against the backdrop of relevant State practice, the basic principles outlined in the Truman Proclamation were embodied in the regime for the continental shelf of the corresponding 1958 Geneva Convention.⁶¹

Before long, several States followed the US example and issued similar proclamations declaring authority over the seabed and subsoil adjacent to their coasts and affirming their exclusive rights in the exploration and exploitation of the natural resources therein.⁶² Lauterpacht in 1950 already observed that, with a few exceptions relating to exorbitant State claims, these unilateral acts had not been challenged, but met the general acceptance by States, which embraced the opportunity to gain exclusive rights over the natural resources of their continental shelves.⁶³ Their approval probably rested on the premise that exclusive jurisdiction would prevent

55 It also mentioned the fact that the continental shelf consists of the natural prolongation of the coasts seawards (principle of natural prolongation), and the need for self-protection of the State against the activities involved in the exploration and exploitation of such resources. See Preamble to the Proclamation, *supra* n. 50. For a discussion on the principle of natural prolongation see J-H Paik (2015) ‘The Origin of the Principle of Natural Prolongation: North Sea Continental Shelf Cases Revisited’ in Castillo and Camines (eds) *supra* n. 9, 583-594.

56 *Supra* n. 39.

57 In that respect, it specifically stated that the assertion of jurisdiction and control would not alter “*the character of the high seas of the waters above the continental shelf and the right to their free and unimpeded navigation*”, See Preamble to the Proclamation, *supra* n. 50.

58 In comparison, the earlier treaty of the Gulf of Paria only mentioned claims of sovereignty over the submarine areas. According to Lauterpacht, this phrasing was more consistent with the view of the United States in the matter of acquisition of sovereignty over the Arctic and Antarctic regions, Lauterpacht (1950) *supra* n. 38, 388.

59 Lauterpacht (1950) *supra* n. 42, 431-432.

60 Particularly, the ICJ characterised the Truman Proclamation as “*the starting point of the positive law on the subject*”, ICJ North Sea Continental Shelf Cases (Federal Republic of Germany/ Denmark; Federal Republic of Germany/ Netherlands), Judgment, 20 February 1969, para 47, and repeated that it “*must be considered as having propounded the rules of law in this field*”, para 86.

61 Convention on the Continental Shelf (Geneva) 499 UNTS 311, signed 29 April 1958 (entry into force 10 June 1964). See also, A Dean (1958) ‘The Geneva Conference on the Law of the Sea: What was Accomplished’, *American Journal of International Law*, 619, B B Jia (2014) ‘The Principle of the Domination of the Land over the Sea: A Historical Perspective on the Adaptability of the Law of the Sea to New Challenges’, *German Yearbook of International Law*, 16.

62 D Attard, *The Exclusive Economic Zone in International Law* (Clarendon Press, 1987) 3-6, Anand (1976) *supra* n. 34, 33-37, Lauterpacht (1950) *supra* n. 42, 380-383.

63 Lauterpacht (1950) *supra* n. 42, 383, also on the importance of absence of protest to the formation of international custom, 393-398.

third States, especially the more developed ones, from engaging in races to exploit the newly found energy resources.

Nevertheless, the language used and, consequently, the content of rights pronounced in these subsequent proclamations varied widely. While some instruments proclaimed exclusive jurisdiction and control, others included claims of full sovereignty.⁶⁴ Some of them used the term continental shelf, whereas others referred to the seabed and subsoil adjacent to their national territory, with or without explicit definitions of those areas.⁶⁵ Some only focused on granting rights of access to resources, while others also included a duty to conserve and manage such resources.⁶⁶ However, the most striking difference concerned the material scope of application of those rights. The Truman Proclamation and many other declarations purposefully referred to jurisdiction and control over the natural resources of the continental shelf (or the continental shelf *per se*).⁶⁷ Conversely, some of the subsequent instruments expanded those rights to the superjacent waters and airspace.⁶⁸ It was primarily the Latin American States that wished to expand their sovereignty over the “epicontinental seas” up to a distance of 200 nautical miles, mostly to protect their economic interests in whaling and fisheries in general.⁶⁹ Their claims are considered as the first precedents of the subsequent concept of the exclusive economic zone (EEZ).⁷⁰

Whereas the claims over the continental shelf had a rapid impact on the evolution of the concept in international law of the sea, the much more ambitious claims by the Latin American States did not gain general acceptance until a quarter of a century later.⁷¹ The majority of the unilateral acts proclaiming rights over the continental shelf and its resources contained a recurrent provision which clarified that the nature of the waters superjacent to the continental shelf would remain unaffected and thus navigation would be unimpeded.⁷² Given the limited technological

64 Bojang (2017) *supra* n. 37, 285.

65 Barnes (2009) *supra* n. 3, 200, Anand (1983) *supra* n. 7, 164-165, Lauterpacht (1950) *supra* n. 42, 382-383.

66 Garcia (1959) *supra* n. 43, 101.

67 However, the actual difference between pronouncing such rights over the whole continental shelf and over all the natural resources of the continental shelf has been challenged in theory, see Dupuy and Vignes (1991) *supra* n. 25, 326, Lauterpacht (1950) *supra* n. 42, 389.

68 Lauterpacht (1950) *supra* n. 42, 381-383, 413.

69 See for instance the 1952 Santiago Declaration originally between Chile Ecuador and Peru in 1952. Costa Rica also acceded to the declaration. Garcia (1959) *supra* n. 43, 100. These claims, like subsequent claims over EEZ met with more resistance than claims over continental shelves, see A Sykes, and E Posner (2009) ‘Economic Foundations of the Law of the Sea’, *John M Olin Program in Law and Economics Working Paper No. 504*, 17.

70 G Andreone (2015) ‘The Exclusive Economic Zone’ in Rothwell, Oude Elferink, Scott, and Stephens *supra* n. 6, 160-161, F Orrego Vicuna, *The Exclusive Economic Zone* (Cambridge University Press, 1989) 3-6, A Hollick (1977) ‘The Origins of 200-mile offshore zones’, *American Journal of International Law*, 494-500, Attard (1987) *supra* n. 62, 3. Attard says that the Latin American States sought to achieve their objectives through a single unified claim over both the continental shelf and the superjacent waters, asserting sovereignty which went beyond what was envisioned in the Truman Proclamation.

71 See also the Santiago Declaration of 18 August 1952, signed by Chile, Peru and Ecuador, in which the signatories proclaimed “as a norm of their international maritime policy that they each possess exclusive sovereignty and jurisdiction over the sea along the coasts of their respective countries to a minimum distance of 200 nautical miles from these coasts”, cited in Treves (2015) *supra* n. 6, 11-13.

72 Lauterpacht (1950) *supra* n. 42, 403.

possibilities of that period, it would be unrealistic to consider that the number of offshore installations erected for the exploitation of energy resources could impede the navigation rights. Therefore, the concept of the continental shelf was not creating any potential conflict with the freedom of the seas, facilitating its consolidation into customary international law.⁷³

However, due to the lack of an international regime, there were significant controversies about the legal definition of the continental shelf and the geographical limits of the area over which the coastal State had jurisdiction.⁷⁴ In the words of Lauterpacht, “[t]he expression ‘continental shelf’ has become no more than a convenient formula covering a diversity of titles or claims to the seabed and subsoil adjacent to the territorial waters of the State”.⁷⁵ In effect, the situation encouraged States to adopt unilateral measures and rush to exploit their marine resources. Since State practice regarding rights over the continental shelf was far from consistent, harmonisation of the applicable rules, i.e., in the form of codification, was necessary to establish the legal stability needed for the offshore energy industry.⁷⁶ It was a challenge calling for an international solution.

Amidst this legal vacuum, the UN tasked the International Law Commission (ILC)⁷⁷ with drafting a report on rules concerning the international law of the sea in 1950.⁷⁸ The conclusions of the ILC later became the springboard for the Geneva Conventions on the Law of the Sea, concluded at the 1958 United Nations Conference on the Law of the Sea (UNCLOS I).⁷⁹ By that time, eleven per cent of the global oil production and six per cent of the gas was reportedly extracted from the sea.⁸⁰ The explosion of interest in the exploitation of the energy resources⁸¹ of the continental shelf already appeared in the first draft of the ILC report in 1951, where the legal concept of the continental shelf, departing from the corresponding geological sense of

73 Lauterpacht (1950) *supra* n. 42, Anand (1983) *supra* n. 7, who cites an abstract of the “Memorandum on the Regime of the High Seas” said to have been drafted by Gidel in 1950 for the UN Secretary-General, UN Doc. A/CN. 4./32, 14 July 1950. According to that, Gidel advocated that “the principle of the freedom of the high seas need not remain absolute should the satisfaction of legitimate interests require that freedom to be waived”.

74 Dupuy and Vignes (1991) *supra* n. 25, 327, Brown (1994) *supra* n. 7, 161.

75 Lauterpacht (1950) *supra* n. 42, 383.

76 Dupuy and Vignes (1991) *supra* n. 25, 327.

77 The International Law Commission was established, according to Article 13(1) of the UN Charter, by the General Assembly of the UN in 1947, A/RES/174 (II), 21 November 1947. More details are available online at the ILC official website: <http://legal.un.org/ilc/>.

78 The ILC clarified that its draft articles concerning the law of the sea were not merely codification of the existing customary rules, but that it had also engaged in the “*progressive development*” or the preparation of draft rules “*which have not yet been regulated by international law or in regard to which the law has not yet been sufficiently developed in the practice by States*”. Statute of the International Law Commission, Article 15, adopted by the General Assembly in resolution 174 (II) of 21 November 1947, as amended by resolutions 485 (V) of 12 December 1950, 984 (X) of 3 December 1955, 985 (X) of 3 December 1955 and 36/39 of 18 November 1981. See also, J A C Gutteridge (1959) ‘The 1958 Geneva Convention on the Continental Shelf’, *British Yearbook of International Law*, 105.

79 Report of the International Law Commission on the Work of its Eight Session, 23 July 1956, Official Records of the General Assembly, Eleventh Session, Supplement No. 9 (A/3159), Chapter II, Law of the Sea, *Yearbook of the International Law Commission*, 1956, Volume II, 254-256.

80 R Young (1968) ‘The Legal Regime of the Deep-Sea Floor’, *American Journal of International Law*, 641.

81 In its first drafts the ILC had only dealt with mineral resources. However, it decided to use the wider term ‘natural resources’, only to include sedentary fisheries, to the extent that they were natural resources permanently attached to the bed of the sea, *supra* n. 79, 297.

the term, was defined using the “exploitability criterion”.⁸² Specifically, the continental shelf would only include areas of the seabed and subsoil beyond the territorial waters, as long as the exploitation of their natural resources was technically feasible.⁸³

Nevertheless, considerable debates took place before the ILC in light of the fear expressed by some of its members that unpredictable technological developments could enable coastal States to misuse their exclusive rights over the continental shelf.⁸⁴ The ILC attempted to reach an acceptable compromise⁸⁵ between the interest in regulating future technological developments in the exploitation of energy resources, which could enable operations in deep marine areas further from the coast,⁸⁶ and the need for legal stability. For that reason, the final report in 1956 adopted a legal rule on the determination of the continental shelf combining two criteria: water depth of 200 meters and exploitability.⁸⁷ The debates that ensued in the ILC and numerous international initiatives led to the adoption of the 1958 Geneva Convention on the Continental Shelf, which attempted to regulate the various unilateral claims into a commonly accepted international regime.⁸⁸

1.3. Offshore energy considerations reflected in the 1958 Geneva Convention on the Continental Shelf

During the Geneva Conference on the Law of the Sea in 1958, numerous States proposed changes to the definition of the continental shelf, as drafted by the ILC.⁸⁹ For instance, at a time when the assertion of exclusive rights over the natural resources of

82 The 1951 draft defined the continental shelf as “*the seabed and subsoil of the submarine areas contiguous to the coast, but outside the area of the territorial waters, where the depth of the superjacent waters admits of the exploitation of the natural resources of the seabed and subsoil*”. *Ibid.*, 296.

83 The ILC justified the choice of the exploitability criterion in the view of potential technological developments. “*Technical developments in the future might make it possible to exploit resources of the sea-bed at a depth of over 200 meters. Moreover, the Continental Shelf might well include submarine areas lying at a depth of over 200 meters but capable of being exploited by means of installations erected in neighboring areas where the depth does not exceed this limit. Hence the Commission decided not to specify a depth-limit of 200 meters in Article 1*”, *ibid.*

84 For detailed analysis of the consecutive drafts of the ILC, see Anand (1976) *supra* n. 32, 42-49, M Whiteman (1958) ‘Conference on the Law of the Sea: Convention on the Continental Shelf’, *American Journal of International Law*, 629-659.

85 Freeman (1970) *supra* n. 50, 115.

86 In 1956 a number of Latin American States and the US issued the Ciudad Trujillo resolution, which insisted upon the inclusion of the extra exploitability criterion in the definition of the continental shelf. According to the ILC final report on its articles on the law of the sea, this resolution influenced catalytically its decision to incorporate the exploitability clause. See ILC Report, *supra* n. 79, 296.

87 “*Certain members thought that the article adopted in 1953 should be modified... While maintaining the limit of 200 meters in this article as the normal limit corresponding to the present needs, they wished to recognize forthwith the right to exceed that limit if exploitation of the seabed or subsoil at a depth greater than 200 meters proved technically possible. It was therefore proposed that the following words should be added to the article, ‘or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas’*”. See ILC Report, *supra* n. 79, 296-297.

88 E D Brown, *Seabed Energy and Minerals: The International Legal Regime of the Continental Shelf* (Martinus Nijhoff, 1992) 62.

89 Anand (1976) *supra* n. 34, 50, Whiteman (1958) *supra* n. 84, 634. See also the previous comments on the draft articles of the ILC, Comments by Governments on the Draft Articles Concerning the Law of the Sea adopted by the International Law Commission at its Eighth Session, Doc A/CONF.13/5, 23 October 1957.

the continental shelf appeared to be established in the legal consciousness of States,⁹⁰ Germany advocated the internationalisation of the continental shelf.⁹¹ Germany suggested that, following the pre-existing legal framework, the exploration and exploitation of natural resources must be subject to a regime of regulated freedom and that such economic activities must not prejudice navigational rights or the environmental status of the sea.⁹² However, the ILC in its final report to the UN General Assembly had already rejected the idea that the continental shelf could qualify as *res nullius* (and thus be capable of being appropriated on a first-come, first-served basis) because “*the seabed and subsoil have become an object of active interest to coastal States*”.⁹³

Although a group of States voted against the draft proposal,⁹⁴ article 1 of the 1958 Convention on the Continental Shelf used substantially the same wording and followed the same compromise concept that was supported by the ILC. It described the continental shelf in terms of the water depth and the technical feasibility to exploit the natural resources of the seabed and subsoil.⁹⁵ States that wished for the potential expansion of their exclusive rights perceived the exploitability clause as enabling them to do so if they increased their capacity in exploiting natural resources in deeper areas. By contrast, other delegates highlighted that the part of this definition

90 Gutteridge (1959) *supra* n. 78, 104, where he cites the position of Lord Asquith of Bishopstone in the arbitration between *Petroleum Development Ltd and the Rules of Abu Dhabi* regarding the draft articles on the Continental Shelf by the ILC: “*These draft articles have been prayed in aid by the Claimants with the implication that they are or are intended to be the expression of principles which are already part of international law, not merely of principles which ought to, or might with advantage form part of that law in future. If this is indeed the contention of the claimants I am of the opinion that it is ill-founded*”.

91 On the subsequent change of the position of Germany and its proclamation on continental shelf, see R Wolfrum, ‘Germany and the Law of the Sea’ in T Treves (ed) *The Law of the Sea: The European Union and its Member States* (Martinus Nijhoff, 1997) 216-217.

92 “*These rules should contain provisions on the following lines: (a) As a general rule, any person may prospect for natural resources. For a reasonable period, the prospector shall not be disturbed by other undertakings on his prospecting site. If he discovers natural resources, he shall enjoy the right to work the resources without disturbance by neighbouring undertakings. (b) The work of exploration and exploitation shall be conducted in keeping with clearly established technical principles and in conformity with safety standards. (c) The exploitation of the natural resources in the territory of the coastal State must not suffer prejudice as a consequence. (d) The operations of prospecting and exploitation shall not prejudice unnecessarily navigation or fishing, telegraphic communications, sea bathing, etc. — e.g.: (i) They must not unduly obstruct the movements of shipping; (ii) They must not cause excessive pollution of the sea; (iii) They must not cause undue harm to marine fauna and flora. (e) Installations employed for the purpose of exploitation shall be protected from damage by other users of the sea. Such international rules would offer the advantage, among others, of permitting the exploration and exploitation of the subsoil of the sea according to uniform regulations and of forestalling malpractices.*”, Memorandum Concerning Draft Articles 67 to 73 by Federal Republic of Germany, 4 March 1958, Doc A/CONF.13/C.4/L.1.

93 ILC Report, *supra* n. 79, 298.

94 Japan also raised its opposition to the establishment of coastal States exclusive rights over the natural resources, while seven more States were clearly against the inclusion of the exploitability criterion and in favour of a more stable outer limit of the continental shelf, Freeman (1970) *supra* n. 50, 118, Gutteridge (1959) *supra* n. 78, 108-110.

95 Article 1 of the 1958 Convention on the Continental Shelf reads: “*For the purpose of these articles, the term ‘continental shelf’ is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands*”.

that depended on the exploitability was biased in favour of developed States and created unwanted legal uncertainty. They alleged that the exploitability criterion opened Pandora's box by allowing for the limitless expansion of the outer limits of the continental shelf.⁹⁶ Still, it was the general belief that the technical capacity of States to exploit the natural resources of the continental shelf would not expand far beyond the 200 meters limit in the foreseeable future.⁹⁷ The only limit set out in the provision was that of the vague notion of "adjacency" to the coast.⁹⁸

Article 2 of the Convention on the Continental Shelf recognised for the first time in a multilateral treaty that "*the coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources*". The approaches of States were again divided concerning the nature and scope of rights to be vested in the coastal State. The Latin American States, such as Mexico and Argentina, prompted by their interest in obtaining exclusive rights over the superjacent "epicontinental" waters, advanced a claim for complete sovereignty over the continental shelf.⁹⁹ Their main argument was that the continental shelf was a natural prolongation of the territory and, therefore, it was appurtenant to the coastal State.¹⁰⁰ By contrast, the majority of delegates rejected the proposals for sovereignty over the continental shelf, and voted for functional rights of the coastal State, restricted to the extent necessary for the exploration and exploitation of the natural resources.¹⁰¹ In their view, it was of the utmost importance that rights over the continental shelf did not impact the legal status of the superjacent waters as high seas, and therefore, would not interfere with the freedoms of navigation and fisheries.¹⁰² Serving these freedoms, the notion of sovereign rights fell short of complete sovereignty,¹⁰³ which *a contrario* only extended "*beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea*".¹⁰⁴

96 The Japanese scholar Shigeru Oda expressed the highly controversial view that, under the definition of the continental shelf in article 1 of the 1958 Convention on the Continental Shelf, States had divided among themselves the submarine areas of the whole ocean, S Oda (1968) 'Proposals for Revising the Convention on the Continental Shelf', *Columbia Journal of Transnational Law*, 9.

97 ILC Report, *supra* n. 79, 296 "*The Commission considered that the limit of 200 meters would be sufficient for all practical purposes at present and probably for a long way to come*", see also Dean (1958) *supra* n. 61, 620, B Oxman (1972) 'The preparation of Article 1 of the Convention on the Continental Shelf', *Journal of Maritime Law and Commerce*, 250-251.

98 Young (1968) *supra* n. 80, 644.

99 Summary Records of the 16th to 20th Meetings of the Fourth Committee, A/CONF.13/C.4/SR.16-20, 52.

100 Gutteridge cites a Statement by the Argentinian delegate who suggested that the submarine areas were "*dependent on or an appurtenance of the mainland and their ownership vested in the owner of the mainland. Hence, the coastal State, as the sovereign of the land, also exercised sovereignty over the continental shelf*", see Guteridge (1959) *supra* n. 78, 111. See also, Anand (1976) *supra* n. 34, 92.

101 Whiteman (1958) *supra* n. 84, 635-637, Gutteridge (1959) *supra* n. 78, 111-112.

102 Anand (1976) *supra* n. 34, 92-95, E D Brown, *Sea-Bed Energy and Mineral Resources and the Law of the Sea: Volume I The Areas within National Jurisdiction* (Graham & Trotman, 1984) 2-4.

103 However, there were authors who supported the view that the Convention conferred on the coastal State the same exclusive rights for the exploitation of natural resources as in the case of the seabed of the territorial waters, L Henkin, *Law for the Sea's Mineral Resources* (Columbia University Institute for the Study of Science in Human Affairs, ISHA Monograph, No 1, 1968) 15.

104 The sovereignty of the State in the territorial waters is subject to restrictions from other rules of international law, see Article 1 (1) and (2) of the Convention on the Territorial Sea and the Contiguous Zone (Geneva) 516 UNTS 216, signed 29 April 1958 (entry into force 10 September 1964). The Convention extended the sovereignty of the coastal State to the air space as well as to the seabed and subsoil of the territorial sea, Article 2 of the Convention.

In that respect, proposals to prescribe “jurisdiction and control”¹⁰⁵ or “exclusive rights”¹⁰⁶ over the continental shelf were replaced by the terminology “sovereign rights”, which aptly reflected “*the essential and legitimate interest of the coastal State in exploring and exploiting the natural resources of its continental shelf while simultaneously safeguarding the freedom of the superjacent seas*”.¹⁰⁷ In the words of the Cuban delegate, Garcia Amador, “*the unilateral declarations of States of their rights over the continental shelf all made it clear that the exploitation was the only interest of the coastal State*”.¹⁰⁸ For that reason, the sovereign rights of the coastal States are exclusive,¹⁰⁹ in the sense that they “*do not depend on occupation, effective or notional, or any express proclamation*” and other States cannot exercise them without the consent of the coastal State.¹¹⁰ While sovereign rights of coastal States over the continental shelf were limited by the duty to conserve marine living resources, there was no separate obligation for the protection of the marine environment against the dangers emanating from offshore exploration and exploitation activities in the Convention on the Continental Shelf.¹¹¹ Unlike many unilateral proclamations, the 1958 Convention did not refer to a duty of conservation and management of the resources of the continental shelf.¹¹²

As a corollary of its sovereign rights over the continental shelf, “*the coastal State is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for the purposes of exploration and exploitation of its natural*

105 As mentioned above, the Truman Proclamation used the wording “jurisdiction and control” to describe the State’s authority over the natural resources of the continental shelf. The first draft of the ILC in 1951 also adopted this language to describe the nature of coastal State rights, see summary records, *supra* n. 99, 53. In Lauterpacht’s view, an area under jurisdiction and control becomes part of State territory, “*for exclusive jurisdiction and control is sovereignty*”, Lauterpacht (1950) *supra* n. 42, 389.

106 Whiteman (1958) *supra* n. 84, 636-637, Gutteridge (1959) *supra* n. 78, 112-113.

107 According to the ILC, “*The Commission desired to avoid language lending itself to interpretations alien to an object which the Commission considers to be of decisive importance, namely, the safeguarding of the principle of the full freedom of the superjacent sea and the airspace above it. Hence it was unwilling to accept sovereignty of the coastal State over the seabed and subsoil of the continental shelf. On the other hand, the text as now adopted leaves no doubt that the rights conferred upon the coastal State cover all rights necessary for and connected with the exploration and exploitation of the natural resources of the continental shelf. Such rights include jurisdiction in connexion with the prevention and punishment of violations of the law*”, see ILC report, *supra* n. 79, 297.

108 See summary records, *supra* n. 99, 53.

109 According to Gutteridge, there is a very fine distinction between exercise of “jurisdiction and control” and “sovereign rights”, because the latter term “*has the advantage of carrying the clear implication that rights of property in the natural resources of the continental shelf as defined in the Convention are vested in the coastal State, and that the property in such resources cannot pass to other persons save by way of an express grant*”, Gutteridge (1959) *supra* n. 78, 114-115. The contiguous zone offers an example of an area over which the coastal State exercised control and jurisdiction, see Article 24 of the 1958 Convention on the Territorial Sea and Contiguous Zone.

110 Article 2 (2) and (3) of the Convention on the Continental Shelf, *supra* n. 61. “*If the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal State*”. This sentence served to clarify that the continental shelf was not *res nullius* and could not be appropriated by other States, contrary to the proposals by Germany and Japan, *supra* footnotes 91 and 94.

111 Interestingly, article 24 of the 1958 Convention on the High Seas (Geneva) 40 UNTS 82 (entry into force 30 September 1962) stated that: “*Every State shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil, taking account of existing treaty provisions on the subject*”.

112 For example, see *supra* n. 55 and corresponding text on the justification of the Truman Proclamation upon the duty to conserve the resources of the seabed and subsoil.

resources".¹¹³ However, the drafters of the 1958 Convention on the Continental Shelf aimed to reconcile the exploitation of offshore energy resources with the freedom of navigation and fisheries.¹¹⁴ In light of the spatial requirements of installations and devices used for offshore drilling, the Convention clarifies that these installations do not possess the status of islands.¹¹⁵ It also includes rules about their safety zones, measures for their protection and the duty to give due notice of their construction and location.¹¹⁶ Despite its deficiencies, the importance of the Geneva Convention on the Continental Shelf lies, *inter alia*, in the fact that it incorporated legal rules which partly resolved the ambiguities that had arisen from the inconsistent unilateral proclamations over the continental shelf.¹¹⁷ Notably, Articles 1, 2 and 3, which set out the fundamental principles of the continental shelf regime, were excluded from reservations.¹¹⁸

1.4. Offshore energy developments exacerbating the need for a new legal framework

The balance precariously struck by the 1958 Geneva Convention on the Continental Shelf was, however, soon disturbed. During the next decade, offshore oil and gas exploitation technology progressed faster than anticipated in 1958. In the late 1960s, the offshore energy industry could drill for hydrocarbon resources further away from the land and deeper into the limits of the continental shelf. Offshore oil exploitation rocketed from a modest beginning, with fewer than a million tons produced in the Gulf of Mexico in the aftermath of World War II, to almost 400 million tons globally within a decade.¹¹⁹ Despite the critical legal accomplishments of the 1958 Convention on the Continental Shelf, the lack of consensus on its outer limits created tensions and competition among adjacent States about their maritime boundaries.¹²⁰ The exploitability criterion lay at the heart of the legal problem. It was not absolutely certain whether the test referred to commercial exploitability, or the mere capacity to extract specific natural resources from the continental shelf.¹²¹ It was also far from clear which State's technological ability should serve as the yardstick.¹²²

113 Article 5 (2) of the Convention on the Continental Shelf, *supra* n. 61.

114 Articles 3, 4 and 5 (1), (3)- (6) of the Convention on the Continental Shelf, *supra* n. 61. It is evident from the records of the Conference that many of the delegates were of the opinion that freedom of navigation should take precedence over the monopoly of the coastal State to explore and exploit the natural resources of the continental shelf, see Summary records of the 1st to 5th meetings of the Fourth Committee. The Greek and Dutch delegates were of the view that "unjustifiable interference" towards navigation should be replaced with a phrase giving priority to navigation interests.

115 Article 5 (5) reads "Such installations or devices, though under the jurisdiction of the coastal State, do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea of the coastal State".

116 Article 5 of the Convention on the Continental Shelf, *supra* n. 61. In that respect, the Dutch delegate unsuccessfully tried to draw the attention on the necessity for a special provision regarding clusters of offshore energy installations, which cumulatively could constitute a serious obstacle to navigation, see Summary Records of the 26th to 30th Meetings of the Fourth Committee, A/CONF.13/SR.26-20, 81.

117 Gutteridge (1959) *supra* n. 78, 122-123.

118 Article 12 (1) of the Convention on the Continental Shelf, *supra* n. 61.

119 Anand (1976) *supra* n. 34, 19-22.

120 Freeman (1970) *supra* n. 50, 119.

121 J Dombroski (1973) 'Exploitation of Seabed Mineral Resources Chaos or Legal Order', *Cornell Law Review*, 582-583.

122 Henkin (1968) *supra* n. 103, 19-24.

Even though, at the international law level, not all the interests are “*equally organised and financed, equally effective in influencing*”¹²³ the legal developments, the expansion of the offshore energy activities was fervently backed up by coastal States and facilitated by technological advancements. Under those circumstances, the interest of the offshore energy industry in expanding its activities in deeper waters has acted as a catalyst for changes in the legal status of the continental shelf.¹²⁴ Oil companies that were considering engaging in the exploration and exploitation of seabed areas covered by waters deeper than 200 metres called for the clarification of the jurisdictional regime.¹²⁵ In particular, the offshore energy industry was in favour of the broadest possible coastal State jurisdiction over the continental shelf, because it preferred to deal with individual States rather than with an international institution.¹²⁶ For instance, the National Petroleum Council (NPC) in the US suggested that, given the vital importance of energy resources, the 1958 Convention on the Continental Shelf should be (teleologically) interpreted as describing an extensive continental shelf going beyond the geological shelf “*to the full limit of the continental landmass*”.¹²⁷ However, such a controversial interpretation of Article 1 of the Convention on the Continental Shelf was not consistent with either the views of delegates during the Geneva Conference or the ones expressed during the discussions of the ILC.¹²⁸ It seems that the NPC’s argument suggested an arbitrary *contra legem* interpretation of the treaty, because the provision expressly required the adjacency of the continental shelf to the coast.¹²⁹ Regardless of the legal ambiguity of such proposals, States had to take into account multiple other competing interests,¹³⁰ considering the repercussions such new unilateral claims could bring about.

By the late 1960s, the nature of the expansion of the coastal State powers over the natural resources of the seabed and its subsoil in more distant and deeper waters had become a matter of growing concern.¹³¹ The Maltese Ambassador, Arvid Pardo, in his historic speech in 1967 before the First Committee of the UN General Assembly, drew attention to the danger of exploitation and occupation of most of the ocean floor, in a case where new technological developments allowed for operations on the seabed beyond the continental shelf.¹³² He highlighted the risk for a potential race by developed countries to “grab” the mineral resources of the seabed and ocean floor beyond national jurisdiction because the freedom of the high seas entailed the right of all States to exploit resources without imposing any counterbalancing conservation duties. To prevent that risk, Pardo proposed the proclamation of this area of the seabed as “*common heritage of mankind*” to be used solely for peaceful purposes and its resources to be “*exploited primarily in the interests of the mankind*”.¹³³

123 L Henkin (1969) ‘International Law and the Interests: The Law of the Sea-bed’, *American Journal of International Law*, 506

124 Dombroski (1973) *supra* n. 121, 584.

125 Henkin (1968) *supra* n. 103, 7.

126 Henkin (1969) *supra* n.123, 508.

127 Henkin (1969) *supra* n. 123, 506, Anand (1976) *supra* n. 34, 118-119.

128 Anand (1976) *supra* n. 34, 51-55.

129 Anand (1976) *supra* n. 34, 52.

130 Lauterpacht (1950) *supra* n. 42, 409.

131 Anand (1983) *supra* n. 7, 194-195.

132 UN GA Official Records, Twenty -Second Session, First Committee, 1515th Meeting, 1 November 1967, para 6.

133 *Ibid*, para 3.

This turn of events took place against a background of widespread political changes, at a time when many newly independent States considered their participation in the elaboration of the law of the sea rules vital for their well-being.¹³⁴ The Group of 77 (developing) States expressed severe criticism of the law of the sea as it stood for being for the benefit of developed States, which continued to expand their sovereign claims for the exploration and exploitation of the world's oceanic riches.¹³⁵ The UN General Assembly resolution on the principle of permanent sovereignty over natural resources at sea equally mirrored the heightened global awareness of the economic importance of offshore energy resources.¹³⁶ The unquenchable thirst for energy and other mineral resources has been an essential driver of legal developments and incrementally eroded the freedom of the high seas.¹³⁷ In that context, there was a need for a more stable order promoting the better use and management of the seas and their resources when the General Assembly decided to convene the Third United Nations Conference on the Law of the Sea in 1970.¹³⁸

1.5. Offshore energy interests during the negotiations of UNCLOS

Offshore energy considerations continued to fuel changes in the legal status of the oceans during the negotiations of the United Nations Convention on the Law of the Sea.¹³⁹ Non-living resources remained among the overriding concerns during the conference, and many delegates aimed at ensuring that the jurisdictional framework under the new treaty would subject these resources to coastal State jurisdiction.¹⁴⁰ Reportedly, the number of proposals by different States concerning sovereign rights and jurisdiction over resources was quite significant compared with respective proposals on any other subject during the negotiation process.¹⁴¹ These interests have heavily influenced the development of the EEZ and continental shelf regimes. It is no coincidence that the new continental shelf regime brought “*more than 30% of the world's seabed under the special and limited sovereign rights of the coastal States*”.¹⁴² However, the recognition of exclusive rights over natural resources called for a counterbalance. The coastal States needed to agree upon safeguards for the

134 L D M Nelson (1979) ‘The Emerging New Law of the Sea’, *The Modern Law Review*, 42.

135 Anand (1976) *supra* n. 34, 239-240.

136 UN GA Resolution 1803 (XVII) of 14 December 1962 A/RES/1803, UN GA Resolution 3171 (XXVIII) of 17 December 1973 A/RES/3171. These UN General Assembly Declarations recognized the fundamental right of States to exercise permanent sovereignty over the natural resources located on land within their boundaries, as well as in the seabed and the subsoil thereof within their national jurisdiction and in the superjacent waters, in the interest of their national development. It was declared that States have the right to explore and exploit freely their natural resources, and, accordingly, regulate foreign investments in the exploration and exploitation of such resources.

137 The UN GA in the Declaration of Principles Governing the Sea-bed and the Ocean Floor, and the Subsoil thereof, beyond the Limits of National Jurisdiction, declared the principle of the common heritage of mankind, Resolution 2749 (XXV) 12 December 1970, A/RES/25/2749.

138 UN GA Resolution 2750 (XXV) 17 December 1970, UN GA Resolution 3067 (XXVIII) 16 November 1973.

139 J Stevenson, and B Oxman (1974) ‘The Preparations for the Law of the Sea Conference’, *American Journal of International Law*, 13.

140 S Oda, D Johnston, J Jorgen Holst, A Hollick, and M Hardy (eds) *A New Regime for the Oceans* (New York University Press, 1976) 26.

141 Stevenson, and Oxman (1974) *supra* n. 139, 13.

142 A Proelss (ed) *United Nations Convention on the Law of the Sea: A Commentary* (Hart/ Nomos, 2017) 611.

interests of third States or for community interests such as freedom of navigation and protection of the marine environment, to achieve widespread consensus on broad coastal State jurisdiction over ocean resources.¹⁴³

However, the exclusivity of sovereign rights vested in the coastal State is not the sole prerequisite for the effective exploitation of energy resources of the continental shelf. The protection of foreign investments was another significant issue interlinked with marine energy resources since their exploitation required specialised technical knowledge and huge amounts of capital.¹⁴⁴ In that respect, the US proposal on draft articles concerning the rights and duties of States in the “*coastal sea-bed economic area*” certainly merits acknowledging.¹⁴⁵ Regarding the protection of investments in natural resources exploitation, draft article 2 (d) read as follows:

“the coastal State shall ensure that licensees, leases or other contractual arrangements which it enters into with the agencies or instrumentalities of other States, or with natural or juridical persons who are not nationals of the coastal State, for the purpose of exploring or exploiting seabed resources are strictly observed according to their terms. Property of such agencies, instrumentalities or persons shall not be taken except for a public purpose, on a non-discriminatory basis, and shall not be taken without the prompt payment of just compensation. Such compensation shall be in an effectively realizable form and shall represent the full equivalent of the property taken, and adequate provision shall have been made at or prior to the time of the taking to ensure compliance with the provisions of this paragraph.”¹⁴⁶

While it is not always evident from the records of the negotiations, the offshore energy industry and its special interests has exerted a strong influence in the drafting of rules relevant to its operations. Article 60 (3) of UNCLOS, which regulates the decommissioning of abandoned or disused offshore installations, offers a notable example. Under the pre-existing legal framework, the corresponding article 5 of the Convention on the Continental Shelf provided for an unconditional obligation to remove installations in their entirety after their life-cycle ends.¹⁴⁷ However, such a stringent obligation would create enormous costs and thus stand against the interests of the offshore industry.¹⁴⁸ For that reason, the Oil Industry International Exploration and Production Forum applied political pressure to achieve the amendment of the provision. As a result, the final provision of UNCLOS requires removal only “*when the installations and structures represent a danger to navigation or to other legitimate uses of the sea or to the environment*”.¹⁴⁹ An extensive analysis of all the provisions that were directly or indirectly influenced by energy considerations would considerably exceed the aims of the thesis. For this overview, it suffices to mention that one of the primary reasons for the trend towards expanding coastal State jurisdiction, and especially the expansion of coastal State sovereign rights and jurisdiction over the

143 *Supra* n. 141, 15-17.

144 Oda, Johnston, Holst, Hollick, and Hardy (1976) *supra* n. 140, 41.

145 Draft Articles for a Chapter on the Rights and Duties of States in the Coastal Seabed Economic Area, submitted to the UN Seabed Committee on 16 July 1973, UN DOC. A/AC.138/SC.II/L.35, reproduced in S Oda (ed) *The International Law of the Ocean Development: Basic Documents*, Volume II (A.W. Sijthoff, 1975) 284-287.

146 *Ibid*, 286.

147 Proelss (2017) *supra* n.142, 469.

148 Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 582.

149 *Ibid*.

continental shelf up to the edge of the continental margin, was to include oil and gas resources located in the continental rise.¹⁵⁰

As was briefly illustrated, the compelling interest of both States and private industry to explore and exploit offshore natural resources has affected, *inter alia*, the zonal demarcation of the ocean spaces as well as the scope and content of coastal States' rights over these resources.¹⁵¹ The establishment of the different marine zones has been, in fact, a reflection of the various interests and State claims linked to their uses.¹⁵² What started as a unilateral act by the United States to regulate the natural resources of the seabed in the aftermath of World War II catalysed a dynamic process initially for the consolidation of a stable legal framework regarding the continental shelf. Following the 1958 Geneva Conventions and relevant State practice, those claims for the expansion of sovereign rights led to the convening of the Third United Nations Conference on the Law of the Sea, which put together a comprehensive treaty for all marine areas, all the uses of the oceans and their resources.

2. UNCLOS as the overarching normative framework for offshore energy production activities

The landmark position of UNCLOS in the international law of the sea is indisputable. According to its preamble, UNCLOS purports to promote the peaceful uses of the seas and establish a comprehensive “*legal order*” for all ocean activities.¹⁵³ It was negotiated as a “package deal”, meaning that State parties were not allowed to opt out from parts of it by making reservations.¹⁵⁴ To maintain its resilience in the face of new developments¹⁵⁵ and keep in line with its constitutional character, the Convention does not contain detailed rules on the operation of specific activities at sea, such as the activities related to exploration and exploitation of energy resources. It instead establishes a dynamic legal framework according to which States have to develop and implement elaborate norms to regulate the different uses of the oceans.¹⁵⁶

UNCLOS is the cornerstone of the regulation of offshore energy production activities at the international law level.¹⁵⁷ As is often the case with similar activities on land, offshore energy development usually requires considerable site-specific investments. Even though ocean energy devices produce more power than their

150 J Stevenson, and B Oxman (1994) ‘The Future of the United Nations Convention on the Law of the Sea’, *American Journal of International Law*, 496.

151 Freeman (1970) *supra* n. 50, 106.

152 Dupuy and Vignes (1991) *supra* n. 25, 315.

153 See Preamble to UNCLOS “*Recognizing the desirability of establishing through this Convention, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment*”.

154 Article 309 of UNCLOS.

155 The Convention has been characterised as “a living treaty”, exactly because of its alleged capacity to adapt through various legal mechanisms to the new realities and challenges faced by the oceans, see J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a Living Treaty* (British Institute of International and Comparative Law, 2016) 3-40, see also SPLOS Report/251 (2012) para 107, according to which the Convention was characterised as a “living instrument”.

156 R Churchill (2015) ‘The 1982 United Nations Convention on the Law of the Sea’, in Rothwell, Oude Elferink, Scott, and Stephens, *supra* n. 6, 30.

157 Stevenson, and Oxman (1994) *supra* n. 150, 490.

terrestrial counterparts, their construction is, in principle, far more complicated, lengthy and expensive than on land.¹⁵⁸ The jurisdictional framework of UNCLOS provides legal security for both the coastal States and the industry, offering legal tools and mechanisms to prevent and resolve potential disputes regarding the exercise of exclusive sovereign rights over marine areas.

Most importantly, UNCLOS is significant for offshore energy activities because it offers a legal framework for the regulation of their environmental externalities.¹⁵⁹ Pollution from offshore oil and gas exploitation, either accidental or operational, can spell disaster at sea. In addition, scientists are increasingly drawing attention to the potential adverse environmental impacts of marine renewable energy generation.¹⁶⁰ States must take all necessary measures to prevent energy activities that take place within their jurisdiction or under their control from causing pollution.¹⁶¹ In that regard, the following section first discusses the jurisdictional framework of UNCLOS concerning offshore energy production activities in different maritime zones. Then it discusses the environmental obligations under the Convention which have implications for offshore energy production activities.

2.1. The jurisdictional framework of UNCLOS and offshore energy production

UNCLOS establishes the legal framework for the allocation of State jurisdiction in the oceans. In that respect it also prescribes the scope and content of rights and duties of States concerning offshore energy activities in each maritime zone. Under the provisions of the Convention, the scope of rights and jurisdiction granted to the coastal States differs from one maritime zone to another. The zonal demarcation of the oceans and the allocation of rights and duties under the Convention reflect the delicate balance struck between the freedom of the seas and the expansion of sovereignty over marine areas. However, the notion of sovereignty at sea does not connote unfettered State power. It is inherently different from the concept of territorial sovereignty. State sovereignty at sea, even within the territorial sea, has also been characterised as “sovereign jurisdiction”.¹⁶² Indeed, the concept of territorial sovereignty has been adapted to convey a more functional type of sovereignty in the context of the marine environment. The authority of a coastal State declines as one moves away from the shore. Sovereign rights, as a derivative of sovereignty, are granted only for specific purposes.¹⁶³ They are conditional upon requirements set by international law for the sake of the interests of third States and community interests, such as the protection of the marine environment. The following section discusses

158 N Boillet, and G Gueguen-Hallouet (2015) ‘Marine Renewable Energies: Main Legal Issues’, in A Monaco, and P Prouzet (eds) *Governance of Seas and Oceans* (ISTE and John Wiley and Sons, 2015) 159.

159 Rothwell, and Stephens (2016) *supra* n. 3, 365

160 M Abad Castelos (2014) ‘Marine Renewable Energies: Opportunities, Law and Management’, *Ocean Development and International Law*, 222.

161 Articles 192, 194, and 208 of UNCLOS.

162 A L Morgan (1996) ‘The New Law of the Sea: Rethinking the Implications for Sovereign Jurisdiction and Freedom of Action’, *Ocean Development and International Law*, 8.

163 N Schrijver, ‘Fifty Years Permanent Sovereignty over Natural Resources’, in M Bungenberg, and S Hobe (eds) *Permanent Sovereignty over Natural Resources* (Springer, 2015) 20, M Gavouneli, *Functional Jurisdiction in the Law of the Sea* (Brill, 2007), R Barnes (2014) ‘Energy Sovereignty in Marine Spaces’, *International Journal of Marine and Coastal Law*, 583-585, Pardo (1984) *supra* n. 49, 16-17.

the relevant rules concerning the territorial sea, the EEZ, the continental shelf and the high seas, to analyse the jurisdictional framework applicable to offshore energy production activities. It also briefly reflects on the relevant rules in disputed areas.

2.1.1. *Energy production activities under the sovereignty of the coastal State: the territorial sea*

Despite the attempts to reach a formal agreement during the first and second Conferences on the Law of the Sea, States could not agree on the width of territorial waters before UNCLOS.¹⁶⁴ Article 3 of UNCLOS has put an end to the inconsistency of State practice, setting the outer limit of the area at 12 nautical miles. Sovereignty over the territorial sea also covers the air space over the waters as well as the seabed and subsoil.¹⁶⁵ The relevance of acknowledging sovereignty over both the seabed and the superjacent waters is that the coastal State has exclusive authority over both the hydrocarbon deposits of the seabed and any renewable forms of energy.¹⁶⁶ It is evident from the records of the negotiations that discussions about the territorial sea were partly influenced by the strong desire of the developing States to safeguard their sovereignty over natural resources.¹⁶⁷

UNCLOS does not contain any specific provisions on the control of energy exploited in the territorial sea.¹⁶⁸ Presumably, such regulation was redundant because the coastal State enjoys sovereignty over this narrow belt of the sea.¹⁶⁹ Sovereignty entails the right of the coastal State to determine whether and how to exploit energy resources in the territorial sea. As a result, within the internal waters and the territorial sea, the coastal State holds the exclusive authority to regulate any energy production activities, including the construction of offshore installations and devices to exploit both renewable and fossil forms of energy at sea.¹⁷⁰ Therefore, all activities related to marine energy resources, even if they are merely exploratory,¹⁷¹ must have the express consent of the coastal State.

164 Tanaka (2015) *supra* n. 35, 31, Rothwell, and Stephens (2016) *supra* n. 3, 67-68, Brown (1994) *supra* n. 7, 43-51, Dupuy and Vignes (1991) *supra* n. 25, 262-263.

165 Article 2(2) of UNCLOS.

166 During the UNCLOS III negotiations, Ecuador made a proposal which expressly stated that exclusive jurisdiction over energy production activities was inherent in the notion of sovereignty of the coastal State. "2. *By virtue of its sovereignty over the territorial sea, the coastal State shall adopt the measures necessary for its security and shall exercise jurisdiction particularly with respect to: (a) The exploration, exploitation, conservation and administration of non-renewable and renewable resources, whatever the characteristics and habits of the latter may be; (b) Other economic activities including the production of energy by utilization of water, currents and winds, ... (e) The emplacement and use of artificial islands, installations, structures and devices of any kind*". See Draft article on the nature and characteristics of the territorial sea, 17 April 1975, A/CONF.62/C.2/L.88.

167 See, *inter alia*, Records of the 48th Meeting of the Second Committee, 2 May 1975, A/CONF.62/C.2/SR.48, 75-79.

168 Barnes (2014) *supra* n. 163, 591.

169 The sovereignty over this marine area is an expansion of territorial sovereignty and not a derivative of it, such as sovereign rights on the continental shelf and the EEZ, Barnes (2009) *supra* n. 3, 259.

170 F Galea (2011) 'A Legal Regime for the Exploration and Exploitation of Offshore Renewable Energy', *Ocean Governance*, 110.

171 For instance, article 19(2)(j) of the Convention specifies that a foreign ship must be considered to be prejudicial to the peace, good order or security of the coastal State if it engages in "*the carrying out of research or survey activities*" within the territorial sea.

However, according to article 2 of UNCLOS, the sovereignty of the coastal State is “*subject to this Convention and other rules of international law*”.¹⁷² In addition to the restraints stemming from other international obligations of the coastal State,¹⁷³ UNCLOS imposes some restrictions on the exercise of sovereignty to safeguard the navigational interests of third States (right of innocent passage) and to protect the marine environment.¹⁷⁴ As far as the former is concerned, given that the right of innocent passage is an exemption to sovereignty, it must be interpreted strictly. In that respect, the right of innocent passage does not significantly limit the exclusive power of the coastal State to regulate offshore energy production activities.¹⁷⁵ That is because the exercise of the right of innocent passage is conditional upon the laws and regulations of the coastal State,¹⁷⁶ which can require the use of specific sea lanes and traffic separation schemes.¹⁷⁷ For instance, in 2008 the International Maritime Organization (IMO) reported, for the first time, that the UK had applied changes to a traffic separation scheme in the interest of protecting offshore renewable installations.¹⁷⁸ Subsequently, the Netherlands also proposed several traffic separation measures to the IMO Sub-Committee on Safety of Navigation, which related to the safety of its offshore energy installations in the territorial sea.¹⁷⁹ These examples corroborate the presumption in favour of granting priority to State sovereignty. The coastal State retains a broad discretion to determine the location of offshore energy installations within its territorial sea. However, the deployment of offshore devices should not hamper the right of innocent passage,¹⁸⁰ and coastal States are under a duty to warn third States about their location to prevent risks to navigation.¹⁸¹

The drafting history of the Convention also indicates a strong presumption in favour of coastal State sovereignty in the territorial sea. In particular, Belgium had

172 See PCA, *Chagos Marine Protected Area Arbitration (The Republic of Mauritius v The United Kingdom of Great Britain and Northern Ireland)*, Award of 18 March 2015, ICGJ 486, paras 499-517, *South China Sea Arbitration (Philippines v China)*, Award (on Merits) of 12 July 2016, ICGJ 495, paras 808-809.

173 For instance, see chapter 4 on the relevance of international investment protection obligations.

174 Part XII of the Convention, see further analysis below, section 2.2.

175 Barnes (2009) *supra* n. 3, 261, 265, Rothwell and Stephens (2016) *supra* n. 3, 78-79, Esmaeili expressed the view that “*coastal States are obliged, by virtue of the LOSC’s provisions, to not knowingly create situations where interference may be caused to the right of innocent passage in their territorial waters*”. In his view, the coastal State may not construct and operate offshore installations where they could simply interfere with the right of innocent passage, H Esmaeili (2001) *The Legal Regime of Offshore Oil Rigs in International Law* (Routledge, 2001) 72-73, Morgan (1996) *supra* n. 162, 8-9.

176 Article 21(1)(f) of UNCLOS.

177 Article 22 of UNCLOS.

178 International Maritime Organization, Sub-committee on Safety of Navigation, “Routing of Ships, Ship Reporting and Related Matters. Amendments to the Traffic Separation Scheme ‘Off Lands End, Between Longships and Seven Stones’”, IMO Doc. NAV 54/3/5 28 March 2008, cited in D Leary, and M Esteban (2011) ‘Recent Developments in Offshore Renewable Energy in the Asia-Pacific Region’, *Ocean Development and International Law*, 109-110, D Leary, and M Esteban (2009) ‘Renewable Energy from the Ocean and Tides: A Viable Renewable Energy Resource in Search of a Suitable Regulatory Framework’, *Carbon and Climate Change Review*, 420.

179 Marine Strategy for the Dutch Part of the North Sea 2012-2020, Marine Strategy Framework Directive Programme of Measures, 61.

180 Article 24(1) of UNCLOS.

181 According to Soons, foreign ships can be requested to take a slight detour to avoid collision with offshore installations within the territorial waters, but navigation still needs to be taken into serious consideration. See A Soons (1974) ‘Artificial Islands and Installations in International Law’, *Occasional Papers Series Law of the Sea Institute University of Rhode Island*, 4.

unsuccessfully suggested the inclusion of a provision dealing with the accommodation of third States' (mostly navigational) interests in the process of the construction of offshore installations in the territorial sea. According to the proposed draft article,¹⁸² the coastal State would have had an obligation of consultation with the potentially affected States before the construction of any offshore installations. In case of disagreement, a right of appeal before the competent international organisation, most probably the IMO would have been conferred on the interested State. However, the draft did not receive significant support from other delegates, since States were not eager to publish any information about the construction of offshore energy installations.¹⁸³

As far as environmental regulation is concerned, the coastal State must protect and preserve the marine environment from activities which it authorises.¹⁸⁴ In that regard, legal issues concerning the rights of third States can arise when the construction and operation of offshore energy installations might affect the adjoining marine areas within the jurisdiction of another State or in areas beyond national jurisdiction.¹⁸⁵ Therefore, as is further analysed in section 2.2. of this chapter, the coastal State is under an obligation to prevent pollution caused by the operation of offshore energy installations within its jurisdiction or under its control.¹⁸⁶ An array of specialised global and regional environmental agreements, which complement the general provisions of Part XII of UNCLOS,¹⁸⁷ impose further restrictions on the exercise of sovereignty concerning offshore energy installations.

2.1.2. *Offshore energy production and sovereign rights over the resource zones: the EEZ and the continental shelf*

The introduction of the 200 nautical miles (nm) EEZ was undeniably a major innovation of UNCLOS because it brought around one-third of the areas covered by oceans within coastal State jurisdiction.¹⁸⁸ The origins of the EEZ go back to the claims of the Latin American and African States over extensive fisheries zones up to 200nm from their coasts, characterised as "patrimonial" or "epicontinental sea."¹⁸⁹ Although the establishment of that zone was initially supported by developing States to safeguard their exclusive rights over fisheries in ocean spaces that were, until UNCLOS, open to

182 The draft article read as follows "*Before commencing the construction of artificial islands or installations as mentioned in the preceding article, the coastal State shall publish the plans thereof and take into consideration any observation submitted to it by other States. In the event of disagreement, an interested State which deems itself injured may appeal to IMCO, which though not empowered to prohibit the construction may prescribe such changes or adjustments as it considers essential to safeguard the lawful interests of other States*", reproduced in Soons (1974) *supra* n. 181, 5-6.

183 Soons (1974) *supra* n. 181, 6-7.

184 Article 192 of UNCLOS.

185 Soons (1974) *supra* n. 181, 5.

186 ICJ, *Corfu Channel Case (UK v Republic of Albania)*, Judgment of 9 April 1949, ICJ Reports, 22, where the ICJ held that the no harm principle is a general and well recognized principle, as "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States".

187 On the global and regional environmental agreements see Chapters 3, 5, 6 and 7.

188 B Kwiatkowska, *The 200 Mile Exclusive Economic Zone in the New Law of the Sea* (Martinus Nijhoff, 1989) xx-xxii, Gavouneli (2007) *supra* n. 163, 61.

189 R Beckman, and T Davenport (2012) 'The EEZ Regime: Reflections after 30 Years', *LOSI Conference Papers*, available online at: <https://www.law.berkeley.edu/files/Beckman-Davenport-final.pdf>, 4, Orrego Vicuna (1989) *supra* n. 70, 3-6, Attard (1987) *supra* n. 62, 3-9, Morgan (1996) *supra* n. 162, 11.

the freedom of the high seas,¹⁹⁰ the EEZ has become significant for a variety of interests of both coastal and third States.¹⁹¹ The legal nature of the new maritime zone was a rather thorny issue during the negotiations of the Convention.¹⁹² The Latin American States perceived the EEZ as an extension of the territorial sea and, thus, aspired to subject the new maritime zone to sovereignty, while recognising some rights and freedoms of third States as a residue of the high seas regime.¹⁹³ However, the extreme territorialism expressed by Chile, Peru and Ecuador met strong resistance from the maritime powers. The maritime powers conversely advocated that the EEZ should maintain the legal status of high seas. Nevertheless, they suggested that coastal States should obtain exclusive sovereign rights concerning the exploration and exploitation of both living and non-living resources of it.¹⁹⁴ As a compromise, the residual status of the EEZ is neither that of territorial seas nor high seas: it consists of a *sui generis* zone or *tertium genus*.¹⁹⁵

The establishment of the EEZ regime resulted in the considerable expansion and evolution of the rules under the continental shelf regime regarding the management of natural resources.¹⁹⁶ In their EEZ, coastal States enjoy sovereign rights over both living and non-living resources of the seabed, its subsoil and the superjacent waters. The exclusive rights over natural resources vested in the coastal State are highly relevant to offshore energy production activities. In particular, the exclusive sovereign rights in the EEZ explicitly cover “*activities for the economic exploitation and exploration of the zone, such as the production of energy from water, currents and winds*”.¹⁹⁷ Article 56(1) of UNCLOS provides a non-exclusive enumeration of economic exploitation activities.¹⁹⁸ However, other activities, such as the production of solar energy or desalination of ocean water, also appear to fall under the scope of sovereign rights. The wording of article 56(1) of UNCLOS introduces an element of

190 Rothwell, and Stephens (2016) *supra* n. 3, 85-86. The economic prospect of living resources was the main driver behind the EEZ, because coastal States had already established their sovereign rights over the continental shelf since the Geneva Convention on the Continental Shelf in 1958, Kwiatkowska (1989) *supra* n. 188, 2. For a historical analysis of the development of the EEZ, see also S Nandan, ‘The Exclusive Economic Zone: A Historical Perspective’, available online at: <http://www.fao.org/docrep/s5280T/s5280t0p.htm>.

191 Kwiatkowska (1989) *supra* n. 188, xxxvi.

192 Dupuy and Vignes (1991) *supra* n. 25, 277-288, Moore, Nordquist, Nandan and Rosenne (eds) (1993) *supra* n. 52, 499-504.

193 Beckman and Davenport (2012) *supra* n. 189, 6, Dupuy and Vignes (1991), *supra* n. 25, 277.

194 Beckman and Davenport (2012) *supra* n. 189, 6, Dupuy and Vignes (1991) *supra* n. 25, 284.

195 The EEZ does not belong either to the territorial sea or to the high seas but has been described as *tertium genus* between those maritime zones. See Barnes (2009), *supra* n. 3, 296, Dupuy and Vignes (1991) *supra* n. 25, 288, Gavouneli (2007) *supra* n. 163, 66, Andreone (2015) *supra* n. 70, 162, Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 514-520, Attard (1987) *supra* n. 62, 61-62.

196 Kwiatkowska (1989) *supra* n. 188, 6-7, Andreone (2015) *supra* n. 70, 170-171.

197 Article 56(1)(a) of UNCLOS.

198 El Salvador for the first time proposed the inclusion of other economic activities in the scope of rights within the EEZ. The proposal was followed by fierce debate between the developing and developed States, which could not agree on the nature of rights that should be provided concerning these economic activities, the former pushing for the prescription of sovereign rights while the latter were pushing for mere allocation of jurisdiction. Kwiatkowska (1989) *supra* n. 188, 105. For further analysis of the debate, see Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 529-542.

flexibility as it can cover projected energy activities at sea, which were either strongly anticipated or at a very early stage of development during the negotiations.¹⁹⁹

Even though most renewable energy devices are currently operating in the territorial sea, there is a growing tendency to install them further out to sea, into the EEZ.²⁰⁰ Part V of UNCLOS creates the legal basis for harnessing the resources of the EEZ, once proclaimed,²⁰¹ to produce renewable energy.²⁰² Compared with the territorial sea, the EEZ has a larger potential to accommodate the increasing spatial needs of renewable energy generation.²⁰³ Owing partly to the early stage of development of offshore energy activities in the EEZ at the time of the negotiations of the Convention, it does not contain any detailed rules on their regulation.²⁰⁴ At the time of the negotiations of UNCLOS, there was considerable uncertainty about the potential conflicts that could arise from the installation of renewable energy devices in the EEZ with freedoms enjoyed by third States therein, and even more uncertainty concerning the environmental impact of such devices.²⁰⁵

The lack of specific rules allows broad discretion for the regulation of marine renewable energy production activities at the domestic level.²⁰⁶ During the 2012 UNICPOLOS meeting, delegates highlighted the normative gap, in the sense of the absence of specific international standards for the construction and operation of marine renewable energy devices.²⁰⁷ However, marine renewable energy production must conform with the rules of UNCLOS on the construction and operation of artificial islands and installations as well as those on marine environmental protection.²⁰⁸ Furthermore, as discussed below, States authorising offshore energy activities have to pay due regard to the rights and duties of other States and must comply with the other relevant rules of UNCLOS,²⁰⁹ such as the principle of good faith under its article 300.²¹⁰

Coastal State authority over offshore energy installations connected to the seabed originates from the assertion of sovereign rights over the natural resources of

199 Gavouneli (2007) *supra* n. 163, 63, Beckman and Davenport (2012) *supra* n. 189, 9, Kwiatkowska (1989) *supra* n. 188, 105, Orrego Vicuna (1989) *supra* n. 70, 72.

200 A Chircop, and P L Esperance (2016) 'Functional Interactions and Maritime Regulation: The Mutual Accommodation of Offshore Wind Farms and International Navigation and Shipping', *Ocean Yearbook*, 456.

201 By contrast with the continental shelf, the EEZ does not exist *ipso facto* and *ab initio*, but the coastal State is required to proclaim this zone. See article 77(2) of UNCLOS regarding the continental shelf. Attard (1987), *supra* n. 62, 54.

202 K Scott (2006) 'Tilting at Offshore Windmills: Regulating Wind Farm Development within the Renewable Energy Zone', *Journal of Environmental Law*, 95, Leary and Esteban (2009) *supra* n. 178, 420.

203 Chircop and Esperance (2016) *supra* n. 200, 454-456.

204 Andreone (2015) *supra* n. 70, 171, Kwiatkowska (1989) *supra* n. 188, 105-106, Orrego Vicuna (1989) *supra* n. 70, 72-73.

205 D Leary, and M Esteban (2011) *supra* n.178, 110-111.

206 Scott (2006) *supra* n. 202, 90.

207 Report of the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, 2 July 2012, 5-6.

208 Several IMO regulations on offshore installations are also applicable in respect of safety and exclusion zones, *ibid*, 6.

209 Article 56(2) of UNCLOS.

210 Article 300 of UNCLOS reads as follows: "States Parties shall fulfil in good faith the obligations assumed under this Convention and shall exercise the rights, jurisdiction and freedoms recognized in this Convention in a manner which would not constitute an abuse of right".

the continental shelf.²¹¹ Nevertheless, under the influence of the EEZ regime, coastal State jurisdiction regarding offshore installations has significantly expanded.²¹² As a result of the expansion of sovereign rights related to offshore energy production in the EEZ, the coastal State has “*jurisdiction as provided for in the relevant provisions of this Convention*” regarding the establishment and use of artificial islands, installations and structures.²¹³ Article 60(1) of UNCLOS prescribes coastal States’ “exclusive right”²¹⁴ to construct, authorise and regulate the construction and operation of “(a) *artificial islands; (b) installations and structures for the purposes provided for in article 56 and other economic purposes; (c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone*”. UNCLOS does not define artificial islands, installations or structures.²¹⁵ Under the open-ended wording of its article 60(1)(c), the Convention grants coastal States the exclusive right to authorise and regulate almost every kind of installation in the EEZ, whether or not it is fixed on the seabed of the continental shelf.²¹⁶ By contrast, the freedom to construct offshore installations and structures is not explicitly enumerated among the freedoms that third States enjoy within the EEZ.²¹⁷ However, even if third States had had a right to construct installations for non-economic purposes, and under the condition that these installations do not interfere with the rights of the coastal State, the coastal State retains exclusive rights over offshore energy production installations in the EEZ. The exclusivity of rights accorded to the coastal State constitutes a deliberate choice “*to concentrate on a single point all relevant decisions and thus enhance their economic and strategic feasibility*”.²¹⁸ That also means that the coastal State bears the responsibility for exercising these exclusive rights.

UNCLOS clarifies that these installations do not possess the status of islands.²¹⁹ However, similar to the 1958 Continental Shelf Convention,²²⁰ the coastal State is enabled to establish safety zones around offshore installations and structures, which must not exceed 500 metres in breadth, “*except as authorised by generally accepted standards or as recommended by the appropriate international organizations*”.²²¹ Such

211 Article 5(4) of the Convention on the Continental Shelf.

212 Kwiatkowska (1989) *supra* n. 188, 129.

213 A Oude Elferink (2013) ‘Artificial Islands, Installations and Structures’, *Max Planck Encyclopaedia of Public International Law*, para 8.

214 The term “exclusive right” was chosen as a compromise between the supporters of limiting the jurisdiction of the coastal State exclusively to installations related to the economic rights of the coastal State and those that wished to expand that jurisdiction to cover all types of installations in the EEZ, Kwiatkowska (1989) *supra* n. 205, 107.

215 It is worth mentioning that UNCLOS, contrary to its predecessor, does not use the word “devices”. This omission was a deliberate attempt to exempt military devices from the exclusive coastal State jurisdiction, Kwiatkowska (1989) *supra* n. 188, 108, Oude Elferink (2013) *supra* n. 213, para 12, Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 584, T Treves (1980) ‘Military Installations, Structures and Devices on the Seabed’, *American Journal of International Law*, 841, Orrego Vicuna (1989) *supra* n. 70, 76.

216 Kwiatkowska (1989) *supra* n. 188, 109. Kwiatkowska expressed the view that UNCLOS has clearly put ocean thermal mobile devices under the exclusive jurisdiction of the coastal State, because they do not possess the status of vessels even though they are mobile.

217 Article 58(1) of UNCLOS, *a contrario* article 87(1)(d). See also, Kwiatkowska (1989) *supra* n. 188, 111.

218 M Gavouneli ‘Energy Installations in the Marine Environment’ in Barrett and Barnes (eds) *supra* n.155, 190.

219 See article 5(4) of the 1958 Convention on the Continental Shelf, *supra* n. 211 and corresponding text.

220 Article 5(3) of the 1958 Convention on the Continental Shelf.

221 Article 60(5) of UNCLOS.

standards have yet to be adopted by the IMO or any other organisation. Additionally, the coastal State bears the duty to give due notice of the construction of installations, warn third States about their location and decommission them when abandoned or misused under the conditions provided for in the Convention.²²² In that regard, the Convention stipulates that installations and safety zones around them cannot be established where they would interfere with the use of recognised sea lanes essential to international navigation.²²³

The exercise of coastal States' functional rights is subject to limitations, as the *sui generis* EEZ regime also seeks to accommodate the rights and interests of third States.²²⁴ Notably, the exercise of rights over natural resources of the seabed, under article 56(3), is conditional upon duties such as the ones enshrined in article 78 of UNCLOS. Article 78 provides that the exercise of rights over these resources should not affect the legal status of the superjacent waters and it must not infringe or result in unjustifiable interference with navigation and other rights and freedoms of third States. Also, the exercise of those exclusive rights is further subject to the duty to pay "due regard" to the rights and obligations of third States.²²⁵ According to article 58 of the Convention, all States enjoy "*the freedoms referred to in article 87 of navigation and overflight and the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms*".

The puzzle of different States' rights and duties within the EEZ can lead to conflicts among interests competing for marine space. For example, it is questionable whether a coastal State could exclude whole parts of its EEZ from navigation to install floating renewable energy production devices. The spatial requirements of such installations are more challenging than the ones concerning offshore oil and gas platforms. That is because some types of marine renewables, such as wind energy, require the erection of clusters of devices and thus can claim larger marine spaces to the exclusion of other uses.²²⁶ In that context, the obligation to pay due regard is a fundamental mechanism under UNCLOS to balance the competing interests of States in the EEZ.²²⁷ States must exercise their rights and freedoms in good faith.²²⁸ Any conflicts must be resolved by applying the rule under article 56(2) on a case-by-case basis.²²⁹

The Convention imposes a mutual obligation of due regard.²³⁰ Specifically, article 58(3) provides that the third States also need to pay due regard to the coastal State's rights when they exercise their rights and freedoms in the EEZ. However, UNCLOS provides little guidance on the normative content of this obligation. The duty of due regard was first introduced in the 1958 Convention on the High Seas as

222 Article 60 (3) and (7) of UNCLOS. The previous rigid obligation for the removal of installations when they had been abandoned was qualified in UNCLOS under pressure from the offshore oil industry, see *supra* n. 147-149 and corresponding text.

223 IMO has adopted Resolution A. 671(16) on Safety Zones and Safety of Navigation around Offshore Installations and Structures, available online at: https://puc.overheid.nl/nsi/doc/PUC_1400_14/1/.

224 Andreone (2015) *supra* n. 70, 165.

225 Article 56(2) of UNCLOS.

226 See relevant concern during the first law of the sea conference, expressed by the Dutch delegation, *supra* n. 116 and corresponding text.

227 Proelss (2017) *supra* n. 142, 430-431.

228 Article 300 of UNCLOS.

229 *Ibid.*

230 Proelss (2017) *supra* n. 142, 431, Attard (1987) *supra* n. 62, 74-75.

an obligation of all States to give “reasonable regard” to the interests of other States in the exercise of their high seas freedoms.²³¹ Interpreting that provision of the 1958 Convention on the High Seas, the International Court of Justice held that Iceland’s unilateral extension of an exclusive fisheries zone was against the rights of the UK, and had thus violated the obligation of reasonable regard.²³² The ICJ declared that Iceland’s preferential fishing rights were not unlimited and both States had a duty to take full account of each other’s rights for such rights to continue to co-exist.²³³ The ICJ concluded that the most appropriate way to resolve the conflict was through recourse to negotiations.²³⁴ The conclusion of the ICJ confirmed that the requirement to pay due regard is not a duty of result, but instead is an obligation of conduct.

Arbitral tribunals have also had the opportunity to reflect on the duty of due regard under article 56(2) of UNCLOS. In the *Chagos Marine Protected Area Arbitration*, the tribunal held that the UK had breached its duty of due regard because the unilateral establishment of a marine protected area “failed to properly balance its own rights and interests with Mauritius’ rights”.²³⁵ In the tribunal’s words, “the ordinary meaning of due regard calls for the United Kingdom to have such regard for the rights of Mauritius as is called for by circumstances and by the nature of those rights”.²³⁶ The tribunal upheld that the Convention requires the co-existence of competing rights and interests. In this context, the balancing exercise of paying due regard would “depend upon the nature of the rights held by Mauritius, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated by the United Kingdom, and the availability of alternative approaches”.²³⁷

In the *South China Sea Arbitration*, the tribunal, interpreting article 58(3) of UNCLOS, confirmed that the obligation of due regard is “a due diligence obligation, not an obligation of result”.²³⁸ Nonetheless, it remains contestable whether this seemingly reciprocal obligation of due regard, which binds both coastal and third States, possesses similar content in both balancing acts.²³⁹ In the author’s view, the duty of due regard shifts the emphasis in favour of the sovereign rights of the coastal State.²⁴⁰ A counterargument suggesting that the mutual duty of due regard creates a relationship of legal equality among States in the EEZ overlooks the fact that the EEZ regime was developed to differ substantially from the high seas regime substantially.²⁴¹ Moreover, the position that supports the priority of coastal States’

231 Article 2 of the 1958 Convention on the High Seas.

232 ICJ, *Fisheries Jurisdiction Case (United Kingdom v Iceland)*, Judgment of 2 February 1973, ICGJ 141, para 67.

233 *Ibid*, paras 69-71.

234 *Ibid*, para 78.

235 *Chagos Marine Protected Area Arbitration*, *supra* n. 172, para 535.

236 *Ibid*, para 519.

237 *Ibid*.

238 *South China Sea Arbitration*, *supra* n. 172, 743.

239 J Gaunce (2016) ‘The South China Sea Award and the Duty of “Due Regard” under the United Nations Law of the Sea Convention’, Calgary Faculty of Law, available online at: <http://ablawg.ca/2016/09/08/south-china-sea-and-duty-of-due-regard/>.

240 Proelss (2017) *supra* n. 142, 432. Attard has also argued that due regard creates a rebuttable presumption in favour of the coastal State’s right concerning economic resources, moving the burden of proof onto the third States, which need to establish that the coastal State has not conformed with its duty by exercising its sovereign rights in the EEZ, see Attard (1987) *supra* n. 62, 75.

241 J Gaunce (2018) ‘On the Interpretation of the General Duty of Due Regard’, *Ocean Yearbook*, 45.

interests in the EEZ seems more convincing given that the sovereign rights of the coastal State derive from the notion of sovereignty and, thus, grant the coastal State some privileges.

Coastal States can also implement their duty of due regard through the use of Maritime Spatial Planning (MSP).²⁴² The lack of reference to the concept of MSP in UNCLOS does not necessarily make it incompatible with the Convention.²⁴³ MSP safeguards the coastal State's broad discretion in exercising its sovereign rights. According to Proelss, the coastal State has the right to *a priori* (before the occurrence of conflict between its rights and other freedoms) exercise its sovereign rights through conducting planning processes and prioritising specific uses instead of others.²⁴⁴ In addition, as an instrument which requires prior consultation with the affected third States, MSP appears to conform with the due diligence nature of the duty of due regard. MSP can play a significant role as an inclusive regulatory tool for decision making by safeguarding the sustainable coexistence of competing uses of the seas in multifunctional maritime zones.²⁴⁵ In that respect, it can support the further development of the offshore energy sector.²⁴⁶ As mentioned above, the projected multiplication of marine renewable energy installations could alter the balance among the uses of the EEZ.²⁴⁷ By allocating certain maritime zones to specific purposes for given periods, MSP can dilute the legal uncertainty about the location of offshore energy installations and thus enhance the legitimate expectations of the industry and third States.²⁴⁸

Even though there is an overlap between the EEZ and the continental shelf regimes concerning the natural resources of the seabed up to the limit of 200nm,²⁴⁹ the former has not absorbed the latter; they co-exist in a complementary manner.²⁵⁰

242 S Trevisanut, N Giannopoulos, R Roland Holst (forthc) 'Introduction: Regime Interaction in Ocean Governance' in S Trevisanut, N Giannopoulos, R Roland Holst (eds) *Regime Interaction in Ocean Governance: Problems, Theories and Methods* (Brill, 2020) 14. For a discussion on the EU MSP Directive, see chapter 7.

243 Article 56(2) *in fine*.

244 Proelss (2017) *supra* n. 142, 432-433.

245 M Young (2015) 'Building the Blue Economy: The Role of Marine Spatial Planning in Facilitating Offshore Renewable Energy Development', *International Journal of Marine and Coastal Law*, 157, F Maes (2008) 'The International Legal Framework for Marine Spatial Planning', *Marine Policy*, 797-810.

246 D Leary, and M Esteban (2009) 'Climate Change and Renewable Energy from the Ocean and Tides: Calming the Sea of Regulatory Uncertainty', *International Journal of Marine and Coastal Law*, 646.

247 EU Commission, 'Blue Growth Opportunities for Marine and Maritime Sustainable Growth, COM (2012), 494, EU Commission, 'Blue Energy, Action Needed to Deliver on the Potential of Ocean Energy in European Seas and Oceans by 2020 and Beyond', COM (2014), 8.

248 The importance of MSP as a tool for cooperation between States for the prevention of conflicts between offshore energy production and other competing marine uses is highlighted in the context of regional seas, see Report of the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, 2 July 2012, 11.

249 For instance, article 56(3) spells out that "*the rights set out in this article with respect to the seabed and subsoil shall be exercised in accordance with Part VI*", to safeguard a degree of uniformity in the exercise of the same rights within the two regimes, Beckman and Davenport (2012) *supra* n. 189, 9.

250 During the negotiations of UNCLOS, there were conflicting views regarding the retention of the continental shelf as an autonomous regime in parallel to the EEZ. Kwiatkowska (1989) *supra* n. 188, 6-19, Attard (1987) *supra* n. 62, 137-140, Dupuy, and Vignes (1991) *supra* n. 25, 331. Judge Shigeru Oda substantiated a theory of parallelism between the EEZ and the Continental Shelf in his Dissenting Opinions in the 1982 *Tunisia v Libya* and 1985 *Libya v Malta* cases, regarding the

A substantial change introduced under the UNCLOS regime of the continental shelf relates to the definition of its outer limit, which no longer depends on the ambivalent open-ended “depth of exploitability” criterion.²⁵¹ The highly technical legal description of the continental shelf in article 76 of UNCLOS is the outcome of fierce negotiations, driven primarily by the interest of States with wide geological continental shelves to subject the vast natural resources found therein to their jurisdiction.²⁵² The continental shelf covering the seabed and subsoil of the submarine areas beyond the territorial sea to the outer edge of the continental margin or up to a distance of 200nm enables all coastal States, regardless of their physical continental shelf structure, to enjoy sovereign rights for the exploration and exploitation of resources.²⁵³ The naturally advantaged States can also claim rights over a more extended zone, under particular conditions.²⁵⁴ The Convention imposes a further limitation on the exercise of sovereign rights in the extended continental shelf since coastal States are subject to obligations of revenue sharing under article 82.

As in the preexisting regime, the coastal State’s sovereign rights over the continental shelf remain functionally limited to the exploration and exploitation of the natural resources of the seabed and its subsoil.²⁵⁵ These rights are exclusive in the sense that no one may undertake activities related to the exploration and exploitation of the resources of the continental shelf “*without the express consent of the coastal State*”.²⁵⁶ They are almost identical to the sovereign rights of the coastal State regarding the natural resources of the seabed under the EEZ regime.²⁵⁷ Their difference lies in the fact that sovereign rights over the continental shelf are inherent, since “*they do not depend on occupation, effective or notional, or any express proclamation*”.²⁵⁸ Also, in the EEZ, the coastal State’s rights are broader since they extend to the living resources of the superjacent waters, as well as any economic activities for the exploitation of that zone. Despite the legal overlap, retaining a separate regime for the continental shelf remains indispensable in two cases: a) when the continental shelf extends beyond the limit of 200 nm, and b) when the coastal State has not proclaimed an EEZ.²⁵⁹

impact of the EEZ on the continental shelf and its outer limit, described in Kwiatkowska (1989) *supra* n. 188, 9-19.

251 See definition of the legal continental shelf in Article 1 of the 1958 Convention on the Continental Shelf.

252 Dupuy and Vignes (1991) *supra* n. 25, 351-356, Barnes (2009) *supra* n. 3, 201, 272, Brown (1984) *supra* n. 102, I.4, 1-18, Proelss (2017) *supra* n. 142, 590-591.

253 Article 76 (1) of UNCLOS.

254 Article 76 (4)-(7) and Annex II of UNCLOS.

255 Article 77(1) of UNCLOS.

256 Article 77(2) of UNCLOS.

257 Article 77(4) of UNCLOS defines natural resources as: “*..the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil*”. Note also the cross-reference to Part VI in Part V, article 80.

258 Article 77(3) of UNCLOS. The inherent character of the sovereign rights of the coastal State over the natural resources of the continental shelf was justified under the Geneva Convention in light of the principle of natural prolongation. While UNCLOS also uses distance criteria to define the continental shelf, the natural prolongation principle is still mirrored in article 76 (1) and (3). The inherent character of the rights over the continental shelf was also underlined in the North Sea Continental Shelf Cases, see Dupuy and Vignes (1991) *supra* n. 25, 370-371.

259 Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 919, Oude Elferink (2013) *supra* n. 213, para 16. For instance, that is especially important in the case of the Mediterranean Sea, where

Article 77 of UNCLOS largely reiterates article 2 of the 1958 Geneva Convention on the Continental Shelf. On that account, the discussion in section 1.3. about the nature and scope of sovereign rights is relevant *mutatis mutandis* for the respective rights under UNCLOS.²⁶⁰ The exercise of sovereign rights comes with a series of limitations.²⁶¹ They cannot alienate the legal status of the superjacent waters (which might belong to the EEZ or the high seas) and must not infringe on or result in unjustifiable interference with navigation and other rights and freedoms of other States.²⁶² Even though the Convention does not impose any obligation to conserve the natural resources of the continental shelf upon the coastal State,²⁶³ its sovereign rights must be exercised in accordance with its duty to protect and preserve the marine environment.²⁶⁴ Besides UNCLOS, several other agreements are relevant for the regulation of offshore energy production activities in the continental shelf,²⁶⁵ such as international environmental and investment treaties, discussed in the following chapters.

Following the developments concerning the EEZ regime, UNCLOS granted coastal States the exclusive right to authorise and regulate drilling activities on the continental shelf for all purposes.²⁶⁶ The explicit recognition of this right marked the significant expansion of a coastal State's authority since drilling falls under its exclusive jurisdiction regardless of whether it relates to the exploration and exploitation of the natural resources of the seabed and its subsoil.²⁶⁷ The exclusive drilling right is indisputably crucial for offshore hydrocarbon exploitation activities.²⁶⁸ For instance, technological developments have unlocked the potential for devices which can move

many coastal States have not proclaimed an EEZ.

260 D Azaria (2016) 'The Scope and Content of Sovereign Rights in Relation to Non-Living Resources in the Continental Shelf and the Exclusive Economic Zone', *Journal of Territorial and Maritime Studies*, 5-27, where Azaria cites the Order for Provisional Measures in the *Ghana v. Cote D' Ivoire Maritime Boundary Dispute* to support the argument that an element of sovereign rights is the exclusive access of the coastal State to confidential information regarding the resources of the continental shelf. In particular, in para 94, ITLOS held "[c]onsidering that the Special Chamber considers that the rights of the coastal State over its continental shelf include all rights necessary for and connected with the exploration and exploitation of the natural resources of the continental shelf and that the exclusive right to access to information about the resources of the continental shelf is plausibly among those rights".

261 Dupuy and Vignes (1991) *supra* n. 25, 368-369.

262 Article 78 of UNCLOS.

263 D Ong, 'Towards an International Law for the Conservation of Hydrocarbon Resources within the Continental Shelf?', in D Freestone, R Barnes, and D Ong (eds), *The Law of the Sea: Progress and Prospects* (Oxford University Press, 2006) 93-119. *Contra*, see Bojang (2017) *supra* n. 38, 294, who suggests that such a duty exists by necessary implication.

264 Article 193 of UNCLOS and relevant provisions of Part XII.

265 See also article 311(2) of UNCLOS.

266 Despite the importance of drilling activities for the exploration and exploitation of the natural resources in the seabed, the Geneva Convention on the Continental Shelf did not expressly confer such a right on the coastal State. The right was presumed to be incorporated in the sovereign rights of the coastal State, since it was necessary for their exercise, see Proelss (2017) *supra* n. 142, 635.

267 Article 81 of UNCLOS.

268 The right of a coastal State to authorise drilling activities on the continental shelf had been disputed in the *Abu Dhabi Award* in 1953. A private petroleum company, which had a concession agreement with the Sheikh Shakbut, claimed that the exclusive rights granted to it in respect "of the whole of a State including the territorial sea" were to be read as including rights of drilling on the continental shelf. However, the arbitrator held that in 1939, when the contract had been signed, the customary rule that provided sovereign rights to the coastal State over the resources of the continental shelf

on the seabed to drill on the continental shelf.²⁶⁹ Furthermore, the exclusive drilling rights have added value concerning geothermal energy production on the continental shelf, which requires drilling on the seabed and therefore, falls now clearly within the exclusive competence of the coastal State.²⁷⁰ Under the Geneva Convention, it was not clear whether drilling for geothermal energy production qualified as an activity for the exploration and exploitation of the natural resources of the continental shelf.²⁷¹

Coastal State rights over the construction and operation of installations and structures on the continental shelf were also considerably influenced by the EEZ regime. Article 60 of UNCLOS concerning artificial islands, installations and structures in the EEZ applies *mutatis mutandis* to those on the continental shelf.²⁷² However, it is debatable whether the phrase *mutatis mutandis* should be interpreted as conferring on the coastal State exclusive rights only over installations and structures operating for the exploration and exploitation of the continental shelf or whether it also encompasses platforms for other economic purposes.²⁷³ Arguably, since the *raison d'être* of the continental shelf is the allocation of sovereign rights for the exploration and exploitation of its natural resources, the reference to article 60 in Part VI can only relate to those rights necessary for the exploration and exploitation of the seabed and its subsoil.²⁷⁴ However, the drafting history of the provision seems to support the opposite view. During the negotiations of UNCLOS, various proposals suggested including all kinds of installations and structure used for economic purposes within the scope of the exclusive rights of the coastal State in the continental shelf.²⁷⁵ The supporters of this view advocate that article 80 must be read in combination with article 246 of UNCLOS, which subjects marine scientific research on the continental shelf to the prior consent of the coastal State when the project involves the construction, operation or use of artificial islands. In that regard, they posit that UNCLOS grants coastal States the exclusive right over any offshore installations, including those used for the production of energy.²⁷⁶

The issue has particular practical relevance for the offshore energy industry. While it is clear that sovereign rights over the continental shelf provide a sufficient legal basis for the authorisation and regulation of hydrocarbon extraction, the same cannot be said for marine renewable energy activities when an EEZ has not been proclaimed. For instance, marine renewable energy devices, such as those harnessing the power of currents, waves, the wind and the sun, can be anchored to the seabed,

had not yet emerged. On that ground, the company's claim was rejected. See E J Cosford (1954) 'The Continental Shelf and the Abu Dhabi Award', *McGill Law Journal*, 110-111.

269 A Rentcome, and R McLin (2011) 'The New Technology Frontier: Moving Oil and Gas Production to the Seabed', Scientific Report for Rockwell Automation, available online at: http://literature.rockwellautomation.com/idc/groups/literature/documents/wp/oag-wp006_-en-p.pdf.

270 R Zedalis, *International Energy Law* (Ashgate, 2016) 26-27.

271 For instance, under the pre-existing regime, it could be submitted that heat qualifies as a natural resource extracted from the seabed.

272 Article 80 of UNCLOS.

273 Chircop and Esperance (2016) *supra* n. 200, 458-462.

274 Proelss (2017) *supra* n. 142, 472, 632, Tanaka (2015) *supra* n. 35, 132.

275 See for instance suggestions by Belgium and the US, Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 920, Article 3(1) of US Draft Articles for a Chapter on the Economic Zone and the Continental Shelf, *supra* n. 145.

276 K Scott (2006) *supra* n. 202, 96.

or they can be floating in the superjacent waters.²⁷⁷ Under the Geneva Convention, the coastal State would be able to regulate renewable energy activities according to its freedoms on the high seas. However, this would not provide the coastal State with any exclusive rights over such activities. Therefore, the expansion of the coastal State's exclusive rights over the continental shelf can resolve the legal ambiguity and offer a stable legal environment for the employment of renewable energy devices, whose connection to the seabed is most of the time incidental. Such expansion of coastal State rights is also implied in article 79(4) of UNCLOS, which refers to the exercise of rights over cables and pipelines constructed or used both in connection with the exploitation of the continental shelf's resources and the operations of any artificial islands, installations and structures under its jurisdiction.²⁷⁸

The situation gets more complicated with regard to the nature of coastal State rights on the continental shelf extending beyond the 200nm limit, since the superjacent waters form part of the high seas and, thus, are subject to the freedoms of the high seas.²⁷⁹ There seems to exist an inherent legal conflict, presuming that the coastal State also retains exclusive rights regarding installations and structures in the waters superjacent to the continental shelf, whilst all other States have the freedom to construct such devices.²⁸⁰ In this case, the phrase “*subject to Part VI*” in article 87(1) (d) might be the key to solving the legal riddle. The Convention subjects the exercise of the freedoms of the high seas to the continental shelf regime, thus prioritising the rights of the coastal State. Nonetheless, the balance needs to be struck on a case-by-case basis taking all the contextual facts into account. Therefore, despite some potential restrictions discussed above, the EEZ and the continental shelf regimes grant the coastal State exclusive rights over almost any activity related to offshore energy production.²⁸¹

2.1.3. Offshore energy production in disputed maritime zones: preliminary considerations

Even though coastal States have exclusive sovereign rights over the energy resources of the continental shelf and the EEZ, hydrocarbon deposits often straddle the maritime borders of adjacent States, giving rise to fierce delimitation disputes.²⁸² The expansion of offshore energy activities further off the coasts has aggravated inter-State friction regarding the exact location of their maritime boundaries. Frequently, such disputes are pending for several years. During that period, the complete suspension of energy exploitation activities in the disputed area runs against the economic interests of the

277 Scientific evidence regarding the various technologies used for offshore renewable energy generation suggests that third generation technologies could be floating in deeper marine zones, see EU Oceana website: <https://eu.oceana.org/en/eu/media-reports/features/marine-renewable-energy>.

278 G Goettsche-Wanli, 'Sustainable Production of Offshore Renewable Energy: A Global Perspective' in M Kotzur, N Matz-Lück, A Proelss, J Sanden, and R Verheyen (eds) *Sustainable Ocean Resource Governance: Deep Sea Mining, Marine Energy and Submarine Cables* (Brill, 2018) 19.

279 Article 87 of UNCLOS.

280 See articles 56, 60, 80, and 87(1)(d) of UNCLOS.

281 M Tsamenyi, and M Herriman (1998) 'Ocean Energy and the Law of the Sea: The Need for a Protocol', *Ocean Development and International Law*, 7.

282 T Martin, 'Energy and International Boundaries', in K Talus (ed) *Research Handbook on International Energy Law* (Edward Elgar, 2014) 181, N Bankes (2014) 'Recent Framework Agreements for the Recognition and Development of Transboundary Hydrocarbon Resources', *International Journal of Marine and Coastal Law*, 666.

States concerned.²⁸³ On that account, this section briefly discusses the rights and duties of the States under UNCLOS concerning the exploitation of energy resources in disputed maritime zones.

Articles 74(3) and 83(3) of the Convention address the duties of States in cases of overlapping claims over the EEZ and the continental shelf respectively.²⁸⁴ The States concerned are under a positive obligation to make every effort to enter into provisional arrangements of a practical nature and simultaneously under a negative one to make every effort, in good faith, not to jeopardise or hamper the reaching of the final agreement “*during this transitional period*”.²⁸⁵ UNCLOS does not shed much light on either the type of provisional arrangements required or the activities that could jeopardise or hamper the reaching of the agreement.²⁸⁶ The drafting history of these provisions reveals that these duties were agreed upon as the necessary compromise to avoid the imposition of an absolute moratorium on the economic exploitation of disputed areas pending delimitation.²⁸⁷ The rationale of the provisions was to provide an incentive for States to reach provisional agreements for the commercial exploitation of the disputed area, and to restrain unilateral activities.²⁸⁸

In the case between Guyana and Suriname, the arbitral tribunal dealt with the nature and scope of these obligations.²⁸⁹ The tribunal upheld that the phrase “*in a spirit of understanding and cooperation*” refers to the duty of States to engage in meaningful negotiations under the principle of good faith.²⁹⁰ This obligation to seek provisional arrangements of practical nature, for example, by establishing a Joint Development Zone,²⁹¹ does not qualify as an obligation of result; it is instead a duty of conduct. Concerning the obligation not to jeopardise or hamper the final agreement, the tribunal distinguished unilateral activities that lead to a permanent

283 T Davenport, ‘The Exploration and Exploitation of Hydrocarbon Resources in Areas of Overlapping Claims’ in R Beckman, I Townsend-Gault, C Schofield, T Davenport, and L Bernard (eds) *Beyond Territorial Disputes in the South China Sea: Legal Frameworks for the Joint Development of Hydrocarbon Resources* (Edward Elgar, 2013) 100, C Yiallourides (2016) ‘Oil and Gas Development in Disputed Waters Under UNCLOS’, *UCL Journal of Law and Jurisprudence*, 59, Rothwell and Stephens (2016) *supra* n. 3, 442, R Leal-Arcas, A Filis, and E Abu Gosh (eds) *International Energy Governance: Selected Legal Issues* (Edward Elgar, 2014) 216-217.

284 Articles 74(3) and 83(3) of UNCLOS read: “*The States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature and during the transitional period, not to jeopardize or hamper the reaching of final agreement. Such arrangements shall be without prejudice to the final delimitation*”.

285 Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 984, Yiallourides (2016) *supra* n. 283, 67-69.

286 Yiallourides (2016) *supra* n. 283, 66.

287 *Ibid.*, 70.

288 British Institute of International and Comparative Law (2016) ‘Report on the Obligations of States under Articles 74(3) and 83(3) of UNCLOS in Respect of Undelimited Maritime Areas’, available online at: <https://www.biiicl.org/undelimited-maritime-area>, 22.

289 Y Tanaka (2015) ‘Unilateral Exploration and Exploitation of Natural Resources in Disputed Areas: A Note on the Ghana/Cote D’Ivoire Order of 25 April 2015 before the Special Chamber of ITLOS’, *Ocean Development and International Law*, 315-316, S Trevisanut, ‘Foreign Investments in the Offshore Energy Industry: Investment Protection v. Energy Security v. Protection of the Marine Environment’ in T Treves, F Seatzu and S Trevisanut (eds) *Foreign Investment, International Law and Common Concerns* (Routledge, 2013) 258-259.

290 PCA, *Guyana v Suriname*, Award of 17 September 2007, ICGJ 370, para 461.

291 Martin (2014) *supra* n. 282, 189-190, Rothwell and Stephens (2016) *supra* n. 3, 442-444, Proels (2017) *supra* n. 142, 582-583.

physical change, and thus, can prejudice or hamper the final arrangements, from those unilateral actions that do not cause such change, such as seismic exploration.²⁹² On those grounds, it found that authorising drilling activities in disputed maritime areas was a breach of the obligation to make every effort not to hamper or jeopardize the reaching of final agreements since drilling could result in a permanent physical change.²⁹³ A State must first inform, notify and consult the other affected State before carrying out unilateral exploration or exploitation of natural resources.²⁹⁴

In the dispute between Ghana and Côte d'Ivoire, the special chamber of ITLOS appears to have adopted a slightly different interpretation of the obligation not to hamper the reaching of a final agreement. Considering the request for provisional measures by Côte d'Ivoire, the chamber first confirmed that the ongoing exploration and exploitation activities conducted by Ghana in the disputed area would result in the alteration of the physical characteristics of the continental shelf. In the special chamber's view, "*there is a risk of irreparable prejudice where, in particular, activities result in significant and permanent modification of the physical character of the area in dispute and where such modification cannot be fully compensated by financial reparations*".²⁹⁵ However, in light of the economic importance of the exploitation activities for Ghana,²⁹⁶ it distinguished ongoing from new exploitation activities. In particular, it upheld that "*the suspension of on-going activities conducted by Ghana in respect of which drilling has already taken place would entail the risk of considerable financial loss to Ghana and its concessionaires and could also pose a serious danger to the marine environment resulting, in particular, from the deterioration of the equipment*".²⁹⁷ Its reasoning implies that, under certain circumstances, unilateral exploitation activities in disputed maritime areas do not breach the negative obligation under articles 74(3) and 83(3) of UNCLOS.²⁹⁸

In its final judgment, the special chamber rejected Côte d'Ivoire's claims that Ghana had breached the obligation not to hamper the final agreement under article 83(3) on two grounds.²⁹⁹ The first reason was that "*Ghana finally suspended its activities by implementing its obligations in accordance with the Order of the Special Chamber ... to ensure that no new drilling either by Ghana or under its control would take place in the disputed area*".³⁰⁰ However, the chamber seems to have disregarded the fact that Ghana's obligation pre-dated the provisional measures order since

292 *Guyana v Suriname*, *supra* n. 290, para 467.

293 *Ibid*, para 480.

294 Davenport (2013) *supra* n. 283, 112.

295 ITLOS, Special Chamber, *Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana v Côte d'Ivoire)* Provisional Measures of 25 April 2015, ICGJ 494, para 89.

296 *Ibid*, para 100 which reads "*an order suspending all exploration or exploitation activities conducted by or on behalf of Ghana in the disputed area ... would cause prejudice to the rights claimed by Ghana and create an undue burden on it*".

297 *Ibid*, para 99.

298 Tanaka (2015) *supra* n. 289, 327.

299 N Bankes (2017) 'ITLOS Judgement in the Maritime Boundary Dispute between Ghana and Cote d' Ivoire', available online at: <https://site.uit.no/jclos/2017/10/27/itlos-judgment-in-the-maritime-boundary-dispute-between-ghana-and-cote-divoire/>.

300 ITLOS, Special Chamber, *Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana v Côte d'Ivoire)* Judgment of 23 September 2017, para 632.

article 83(3) of UNCLOS requires States to refrain from activities that hamper the reaching of the final agreement “*during the transitional period*”. That duty covers the whole period over which States are aware of the overlapping claims. As Judge Paik stated in his separate opinion: “*the fact that Ghana suspended much of its activities in compliance with the Order ...cannot exonerate Ghana from its responsibility*”.³⁰¹ The second reason was that Ghana had undertaken activities exclusively in the part that was finally recognised as its own. That was a merely technical argument that relied on the phrasing of the final submissions of Côte d’Ivoire, which requested the special chamber to declare and adjudge the breach of Ghana’s obligation “*in the Ivorian maritime area*”.³⁰² Noticeably, the tribunal explicitly considered the fact that Ghana had taken all the necessary safety measures to protect the marine environment and had paid due regard to other users of the marine area.³⁰³

As far as offshore energy activities are concerned, the chamber upheld that:

“in case of overlap, both States concerned have an entitlement to the relevant continental shelf on the basis of their relevant coasts. Only a decision on a delimitation establishes which part of the continental shelf under dispute appertains to which of the claiming States. This means that the relevant judgement gives one entitlement priority over the other. Such a decision accordingly has a constitutive nature and cannot be qualified as merely declaratory”.³⁰⁴

The chamber upheld that unilateral activities by a State in a part of the continental shelf which has been attributed to another State by an international judgment, do not breach the latter’s sovereign rights under two conditions. These activities should have occurred before the judgment, and the area must have been the subject of overlapping claims made in good faith by both States.³⁰⁵ The above case law illustrates that, in disputed maritime areas, there is still ambiguity concerning the rights of States to authorise exploitation activities unilaterally. The fate of any offshore energy exploitation activities authorised by such unilateral acts is still uncertain.³⁰⁶ Therefore, in keeping with their procedural obligation, the concerned States should engage in reaching provisional agreements facilitating the development of offshore energy production activities. In the words of the arbitral tribunal in the Guyana/Suriname case, “[s]uch arrangements promote the realisation of one of the objectives of the Convention, the equitable and efficient utilisation of the resources of the seas and oceans”.³⁰⁷

2.1.4. Energy production activities in areas beyond national jurisdiction

The seawards expansion of coastal States’ sovereign rights and jurisdiction over the EEZ and the continental shelf resulted in the curtailment of the high seas. Also, the

301 ITLOS, Special Chamber, *Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d’Ivoire in the Atlantic Ocean*, Separate Opinion of Judge Paik, para 17, cited in Bankes (2017) *supra* n. 299.

302 *Ghana v Côte d’Ivoire* (Judgment) *supra* n. 300, para 633.

303 *Ibid*, para 650.

304 *Ibid*, para 591.

305 *Ibid*, para 592.

306 S Trevisanut, and N Giannopoulos (2018) ‘Investment Protection in Offshore Energy Production: Bright Sides of Regime Interaction’, *Journal of World Investment and Trade*, 823.

307 *Guyana v. Suriname* (Judgment) *supra* n. 300, 460.

seabed and its subsoil beyond the limits of national jurisdiction are no longer *res nullius*. Under Part XI of UNCLOS, the ocean floor beyond national jurisdiction (or the “Area”) qualifies as “common heritage of mankind”. It is entrusted to international management by the International Seabed Authority (ISA).³⁰⁸ The internationalised regime of the Area only covers “*all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules*”.³⁰⁹ It does not apply to other non-living resources that could be exploited on the high seas, such as energy produced by currents, waves, wind or solar power.³¹⁰ Notwithstanding its spatial diminution, the legal status of the high seas as *res communis* remained unaltered, and all States enjoy, *inter alia*, the freedom to explore and exploit the energy resources therein, observing the conditions for the exercise of high seas freedoms.

In particular, all States have the right to construct “*artificial islands and other installations permitted under international law, subject to Part VI*”.³¹¹ The acknowledgement of this freedom signals the emerging interest of States in using high seas for new economic activities, such as ocean energy production.³¹² The use of offshore energy installations is allowed insofar as it does not rise to a claim of sovereignty over any part of the high seas.³¹³ However, the projected establishment of energy installations on the high seas could stretch the limits of the high seas regime, because such devices can permanently, or at least for a lengthy period occupy extensive areas of the high seas to the exclusion of other uses.³¹⁴ The long-term occupation of large parts of the high seas by energy installations could be inconsistent with the duty to pay due regard to the interests of third States in their exercise of the freedoms of the high seas and, therefore, could breach the prohibition on claiming sovereignty over the high seas.³¹⁵ Nonetheless, such concerns may be addressed in the future, for instance, through creating multi-use platforms. Such multi-purpose installations

308 Rothwell and Stephens (2016) *supra* n. 3, 127-128.

309 Article 133(a) of UNCLOS.

310 R Zedalis (2016) *supra* n. 270, 114-115. Zedalis claims that projected exploitation of geothermal energy in the Area could potentially create legal difficulties regarding the definition of mineral resources.

311 Article 87(1)(d) of UNCLOS. The right to construct artificial islands and other installations was not mentioned in the indicative enumeration (“*inter alia*”) of high seas freedoms in article 2 of the 1958 Convention on the High Seas. Despite the lack of explicit reference to this freedom, Soons supports the view that the freedom to construct installations on the high seas is not *a priori* against general principles of international law. Since this right is corollary to sovereign rights over the continental shelf, international law permits their construction. They fall under the provision of article 2(2) which reads: “*These freedoms, and others which are recognized by the general principles of international law, shall be exercised by all States with reasonable regards to the interests of other States in their exercise of the freedom of the high seas*”, Soons (1974) *supra* n. 181, 7-10.

312 R Zedalis (2016) *supra* n. 270, 113, Esmaeili (2001) *supra* n. 175, 83, Report of the Work of the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, 2 July 2012, 9.

313 F Galea (2009) *Artificial Islands in the Law of the Sea*, PhD dissertation, Faculty of Law University of Malta, 91-93, Soons (1974) *supra* n. 181, 8-9, 12, Zedalis (2016) *supra* n. 270, 113.

314 N Lund (2010) ‘Renewable Energy as A Catalyst for Changes on the High Seas Regime’, *Ocean and Coastal Law Review*, 108-109, M Gavouneli ‘Energy Installations in the Marine Environment’ in Barrett and Barnes (2016) *supra* n. 155, 189, Galea (2011) *supra* n. 169, 120.

315 Article 89 of UNCLOS. See also, Lund (2010) *supra* n. 314, 109.

could provide a solution by combining various economic activities within designated marine areas, such as the exploitation of energy, fisheries and aquaculture.³¹⁶

Under the freedoms of the high seas, States can harness marine renewable energy subject to their obligations to protect and preserve the marine environment, their duty to pay due regard to the interests of others States,³¹⁷ as well as rights of third States concerning mining activities in the Area.³¹⁸ As far as offshore energy installations are concerned, a distinction needs to be drawn between those located on the high seas above the continental shelf and those that are above the Area.³¹⁹ In the first case, the freedom to construct installations is restricted by the rights of the coastal State over the continental shelf.³²⁰ As already explained, UNCLOS has granted coastal States the exclusive right to authorise and regulate any drilling activities on the continental shelf,³²¹ as well as the exclusive right to control the construction, operation and use of artificial islands, installations and structures.³²² Consequently, third States need to request the express consent of the coastal State before engaging in any offshore energy production activities that would either be connected to the seabed or would in any way interfere with those coastal State rights.³²³

Arguably, third States enjoy the freedom to construct offshore installations for purposes unrelated to the exploration and exploitation of the natural resources of the seabed on that part of the high seas, which is above the outer limit of the continental shelf.³²⁴ For instance, that would allow States to use floating renewable energy structures without the need to acquire the coastal State's consent, insofar as they do not interfere with the coastal State's sovereign rights. However, that argument cannot be based on articles 77 and 78 of the Convention when these devices are in any way connected to the continental shelf. That differentiation is essential because the exclusive right of the coastal State to authorise and regulate offshore installations related to commercial purposes covers the entire continental shelf, including the part that potentially extends beyond the 200 nm limit.³²⁵

In the second case, the construction of renewable energy installations above the Area is allowed as long as they are “*conducted with reasonable regard*” for activities

316 M Stuiver et al (2016) ‘The Governance of multi-use platforms at sea for energy production and aquaculture: challenges for policy makers in European seas’, *Sustainability*, 334. See also, chapter 1 of the thesis.

317 The ILC, in its draft articles, had already stated that “*States are bound to refrain from any acts that might adversely affect the use of the high seas by nationals of other States*”, see ILC report, *supra* n. 79, 278.

318 Article 87(2) of UNCLOS. Activities in the Area mean all the activities related to the exploration and exploitation of the resources of the Area pursuant to article 1(1)(3) of UNCLOS.

319 Rothwell, and Stephens (2016) *supra* n. 3, 166, Soons (1974) *supra* n. 181, 7.

320 On the other hand, the exercise of sovereign rights of the coastal State over its continental shelf “*must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States provided for in this convention*”, article 78(2) of UNCLOS.

321 Article 81 of UNCLOS.

322 Articles 80 and 60 of UNCLOS read in conjunction.

323 Soons (1974) *supra* n. 181, 14-15, who describes the complicated legal issues that arose out of the previous regime under the Geneva Conventions, Proelss (2017) *supra* n. 142, 633.

324 Esmaili (2001) *supra* n. 175, 84.

325 During the negotiations of UNCLOS, a proposal to restrain the exclusive rights of the coastal State concerning offshore installations on the extended continental shelf was rejected, see Proelss (2017) *supra* n. 142, 630.

related to the internationalised regime of the deep seabed.³²⁶ All installations and devices related to the mineral resources of the Area are regulated by the ISA, which acts “*on behalf of mankind*”.³²⁷ Such activities must be authorised according to the specific rules applicable in the Area.³²⁸ During the discussions of UNICPOLOS in 2012, delegates considered whether marine renewable energy could qualify as “bio-derived resources” and, as such, fall under the competence of the ISA.³²⁹ The discussion seems to be of purely theoretical interest for the time being. Nevertheless, some scholars have already suggested the establishment of an international organisation with broad competence regarding marine renewables given the challenges they pose.³³⁰

2.2. Offshore energy production and the environmental framework of UNCLOS

Compared with the economic interest in the exploitation of offshore energy resources, the interest in marine environmental protection is a relatively recent development, following the groundbreaking ecological awareness in the late 1960s.³³¹ Insofar as the natural resources were perceived to be inexhaustible and the oceans presumably had limitless assimilative capacity, there was little concern about the cumulative environmental impacts of economic activities at sea.³³² On that account, the 1958 Geneva Conventions on the Law of the Sea paid inadequate attention to environmental matters in their few and rather undeveloped provisions on the protection of the oceans.³³³ In that context, pollution was regarded by States as implied freedom of the seas.³³⁴ The first global UN Conference on the Human Environment, held in Stockholm in 1972, signified a critical turning point for the development of international environmental law.³³⁵ The momentum generated by the Stockholm Conference, alongside the adoption of global and regional treaties

326 Article 147(3) of UNCLOS. The previous two paragraphs of article 147 regulate installations particularly used for the purposes of exploration and exploitation of the Area. The provision imposes on them similar restrictions to the ones enumerated in article 60.

327 Article 153 (1) of UNCLOS.

328 See Part XI of UNCLOS and Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea, 28 July 1994.

329 Report of UNICPOLOS at its thirteenth meeting, UN Doc A/67/120, 2 July 2012, 11.

330 Abad Castelos (2014) *supra* n. 160, 230-232.

331 V Franck, *The Protection and Preservation of the Marine Environment under International Law* (Brill, 2007) 13, Brown (1994) *supra* n. 7, 336-337, Dupuy and Vignes (1991) *supra* n. 25, 1153.

332 D König (2013) ‘Marine Environment, International Protection’, *Max Planck Encyclopaedia of Public International Law*, para 1.

333 Article 24 of Convention on the High Seas dictates that “*every State shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil, taking account of existing treaty provisions on the subject*”. Accordingly, the Convention on the Continental Shelf included an obligation for the protection of the living resources, see Article 5 (1) and (7).

334 P Birnie, A Boyle, and C Redgwell, *International Law and the Environment* (Oxford University Press, 3rd edition, 2009) 383.

335 For a historical analysis of the development of the environmental law of the sea preceding the Stockholm Conference, see D Johnston (ed) *The Environmental Law of the Sea* (IUCN, 1981) 17-46.

on the prevention of oil pollution in the early 1970s,³³⁶ decisively paved the way for integrating environmental protection rules in UNCLOS.³³⁷

The environmental protection provisions of the Convention altered the previously established balance of interests and powers at sea. The almost absolute rights of coastal States to exploit the natural resources in areas within their jurisdiction and the total freedom of the high seas were conditional upon coastal States' overarching duty to protect the marine environment.³³⁸ At the time of its adoption, it was considered "*the most comprehensive environmental treaty ever negotiated*".³³⁹ It lays down a clear framework for the adoption and enforcement of domestic measures to protect the marine environment, which is complemented by a wide range of specialized global and regional environmental instruments.³⁴⁰ Under article 237, UNCLOS acknowledges its co-existence with several international environmental treaties which deal with the protection of the marine environment.³⁴¹ UNCLOS does not contain any detailed environmental rules on offshore activities,³⁴² including offshore energy production. Instead, it delegates the further development of specific rules to States and the competent international organisations.³⁴³ Adopting this strategy, the Convention avoids creating detailed technical rules, which could soon become obsolete, and allows for the accommodation of legal and factual changes.³⁴⁴ That way, it purports to safeguard its resilience. This section discusses UNCLOS' environmental obligations which apply to offshore energy production

336 In response to the Torrey Canyon incident in 1967, important international treaties were adopted at the global and regional level. Among them were the 1969 Convention on the Intervention on the High Seas in Cases of Oil Pollution Casualties, UKTS 77 (entry into force 6 May 1975), the 1969 Convention on Civil Liability for Oil Pollution Damage, 973 UNTS 3 (entry into force 19 June 1975), and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, UKTS 75 (entry into force 16 October 1978), the 1972 Convention on the Prevention of Marine Pollution from Dumping of Wastes and other Matters, UKTS 43 (entry into force 1975), and several Regional Seas Conventions.

337 Declaration of the United Nations Conference on the Human Environment, Principle 7 reads "*States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea*". See also Recommendations 46-47, 86-94 in Report of the United Nations Conference on the Human Environment, A/CONF.48/14/Rev.1.

338 Article 192 of UNCLOS.

339 W Burke (1996) 'Importance of the 1982 UN Convention on the Law of the Sea and Its Future Development', *Ocean Development and International Law*, 3.

340 Y Tanaka, 'Principles of International Marine Environmental Law', in R Rayfuse (ed) *Research Handbook on International Marine Environmental Law* (Edward Elgar, 2015) 34-35, S Trevisanut, 'La Convention des Nations Unies sur le droit de la mer et le droit de l'environnement : développement intrasystémique et renvoi intersystémique' in H Ruiz Fabri and L Gradoni (eds) *La circulation des concepts juridiques : le droit international de l'environnement entre mondialisation et fragmentation*, Société de législation comparée (Société de législation comparée, 2009) 397-426.

341 While article 237 UNCLOS is generally considered as a conflict clause, the tribunal in the *South China Sea Arbitration* relied upon it to justify the normative interactions between UNCLOS and other relevant environmental agreements, see *South China Sea Arbitration*, *supra* n. 172, para 942. See also, J Harrison (2019) 'The Protection of Species, Ecosystems and Biodiversity under UNCLOS in Light of the South China Sea Arbitration: An Emergent Duty of Marine Ecosystem Restoration?', *Edinburgh School of Law Research Paper No 2019/20*, 5-6.

342 R Churchill, 'The LOSC Regime for the Protection of the Marine Environment – Fit for the Twenty-First Century?' in Rayfuse (2015) *supra* n. 340, 5.

343 Article 197 of UNCLOS.

344 William Burke (1996) *supra* n. 339, 3.

activities. It discusses the content and nature of the duties under UNCLOS, which assist the Convention in overcoming alleged normative gaps through its normative cross-fertilisation with subsequent developments in international environmental law.³⁴⁵

2.2.1. General environmental obligations applicable to offshore energy production

Part XII of UNCLOS establishes a general environmental framework, which applies to all activities at sea. As such, it sets the ground rules and calls for the adoption of further specialised agreements at the global and regional levels.³⁴⁶ According to article 192, States – for the first time under an international treaty – bear a general obligation to protect and preserve the marine environment.³⁴⁷ It establishes a comprehensive duty, in the sense that it covers all possible sources of marine pollution as well as other sources of environmental damage.³⁴⁸ UNCLOS does not define the “marine environment”.³⁴⁹ Despite the zonal segregation of the oceans for the allocation of jurisdiction, the fundamental obligation of marine environmental protection applies to the oceans as a whole.³⁵⁰ As revealed by article 194(5) of UNCLOS, the marine environment includes “rare and fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life”.³⁵¹ Thus, regardless of the location of an offshore energy installation, its construction and operation are subject to the obligation to protect and preserve the marine environment.³⁵²

The open-ended language of article 192 of UNCLOS has allowed international courts and tribunals to interpret broadly the normative content of the general duty to protect and preserve the marine environment.³⁵³ In that regard, the tribunal in the *South China Sea Arbitration* found that article 192, despite its vague wording, imposes a dynamic duty on States, which must be interpreted in combination with other provisions of Part XII of UNCLOS and the relevant applicable rules of international law.³⁵⁴ According to the tribunal, States are under a duty both to adopt positive measures to maintain and improve the marine environment and to prevent

345 N Matz-Lück, and E van Doorn (2017) ‘Due Diligence Obligations and the Protection of the Marine Environment’, *L’Observateur des Nations Unies*, 178.

346 Proelss (2017) *supra* n. 142, 1281, M McConnell, and E Gold (1991) ‘The Modern Law of the Sea: Framework for the Protection and Preservation of the Marine Environment’, *Case Western Reserve University Journal of International Law*, 85.

347 Kwiatkowska (1989) *supra* n. 188, 162-163, J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 23, Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, Part XII, 37.

348 Harrison (2017) *supra* n. 347, 24, J Mossop (2018) *supra* n. 2, 576-577.

349 However, UNCLOS provides the definition of pollution in article 1(4).

350 ITLOS, *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion of 2 April 2015, ITLOS Reports 2015, para 120, Proelss (2017) *supra* n. 142, 1280.

351 A Boyle (2012) ‘Law of the Sea Perspectives on Climate Change’, *International Journal of Marine and Coastal Law*, 832.

352 J Warren Kindt (1985) ‘The Law of the Sea: Offshore Installations and Marine Pollution’, *Pepperdine Law Review*, 413.

353 The tendency of tribunals to read substantive content into the vaguely phrases article 192 has been criticised by Harrison as being on the outer limits of interpretation and flirting dangerously with judicial law-making.

354 *South China Sea Arbitration*, *supra* n. 172, para 941. See also, Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, Part XII, 40.

activities which might cause significant damage to the marine environment.³⁵⁵ Therefore, moving beyond the traditional duty to prevent pollution, the tribunal held that States also have a positive obligation to restore degraded marine ecosystems.³⁵⁶ It further clarified that this duty does not only apply in relation to activities directly attributed to States but also in relation to those within their jurisdiction or control.³⁵⁷ In the tribunal's view, States are required to exercise due diligence in regulating activities which are potentially harmful to the marine environment.³⁵⁸

UNCLOS does not explicitly refer to the concept of due diligence as a benchmark for measuring the compliance by States with their duty to protect the marine environment. However, both the tribunal in the *South China Sea Arbitration* and the special chamber of ITLOS in its Advisory Opinion on *Responsibilities and Obligations of States in the Area*, read an obligation of due diligence into article 192 of UNCLOS.³⁵⁹ In light of their reasoning, it appears that the due diligence standard is connected with their nature as obligations of conduct.³⁶⁰ Defining the standard of diligence required under article 192 of UNCLOS necessitates the normative interaction between rules and principles of international environmental law with the Convention.³⁶¹ As discussed in chapter 3, the standard of due diligence can be operationalised to enrich UNCLOS with rules and standards promulgated under other environmental agreements and, therefore, function as a means for the evolutionary interpretation of the duty to protect and preserve the marine environment under the Convention.³⁶² International rules and standards can cross-fertilise each other to achieve the objective of marine environmental protection.³⁶³ In that respect, the standard evolves over time and may differ among groups of States.³⁶⁴ That does not reduce the legal value of the duty to protect the marine environment. Arguably, the benefits of a dynamic and adaptive standard of due diligence outweigh the disadvantages of vagueness and unpredictability.³⁶⁵

UNCLOS stresses that States are required to subject their sovereign rights over natural resources to their primary obligation to protect and preserve the marine environment.³⁶⁶ The provision of article 193 lays down an interpretational principle, transcending the whole Convention.³⁶⁷ It highlights the need for balance between two seemingly competing interests, namely the encouragement of economic exploitation

355 *South China Sea Arbitration*, *supra* n. 172, para 941.

356 Harrison (2019) *supra* n. 341, 10, Matz-Lück and Van Doorn (2017) *supra* n. 345, 183.

357 *South China Sea Arbitration*, *supra* n. 172, para 944.

358 *Ibid.*

359 *Ibid.*, para 743, 744, 944, ITLOS, Special Chamber, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Advisory Opinion of 11 February 2011, ICGJ 449, paras 120, 129.

360 ITLOS, *Seabed Chamber's Advisory Opinion*, *supra* n. 359, para 111. Similarly, see ITLOS, *SRFC Advisory Opinion*, *supra* n. 350, para 125.

361 Matz-Lück and van Doorn (2017) *supra* n. 345, 179.

362 The *Seabed Chamber's Advisory Opinion* found that "compliance with these [primary] obligations can also be seen as a relevant factor in meeting the due diligence obligation to ensure", *supra* n. 359, para 123.

363 M Mbengue (2016) 'The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations', *American Journal of International Law*, 286.

364 On the relevance of the level of development of States in defining the standard of due diligence, see chapter 3.

365 N Matz-Lück, E van Doorn (2017) *supra* n. 345, 190.

366 Article 193 of UNCLOS.

367 Harrison (2017) *supra* n. 347, 25, McConell and Gold (1991) *supra* n. 346, 89.

of marine resources and the protection of the marine environment. The coastal States are not allowed to exploit their marine energy resources without taking measures to prevent potential adverse effects on the marine environment. In other words, they must integrate environmental concerns into their decision making with regard to the management of offshore energy resources. Nonetheless, article 193 does not imply that the protection of the marine environment necessarily prevails over economic interests.³⁶⁸ Instead, a balance is necessary for the co-existence of the exploitation of resources and marine environmental protection.³⁶⁹ For instance, the definition of pollution reflects that balance, because it does not preclude any *de minimis* harm caused to the marine environment.

2.2.2. Defining the content of the duty to protect the environment concerning offshore energy production: the obligation to take all measures necessary

The content of the general duty to protect and preserve the marine environment is substantiated by other rules under Part XII of UNCLOS, such as the duty to take measures to prevent, reduce and control the pollution to the marine environment under article 194.³⁷⁰ The tribunal in the *South China Sea Arbitration* highlighted that article 192 must be read in connection with the other relevant rules of Part XII of UNCLOS, pointing particularly to article 194.³⁷¹ Therefore, even though these provisions establish separate primary duties upon States, they also form part and inform the normative content of the general duty to protect and preserve the marine environment.³⁷² In the words of the tribunal, “*the content of the general obligation in article 192 is further detailed in the subsequent provisions of Part XII, including article 194*”.³⁷³ Therefore, the relevant rules of the Convention shape the normative content of the duty to protect and preserve the marine environment with regard to offshore energy production activities.

The scope of the definition of pollution under UNCLOS is broad enough to include not only traditional sources of marine pollution, such as hydrocarbons, but also other threats to the marine environment, such as noise or heat.³⁷⁴ In that respect, the definition can cover the different environmental externalities of offshore energy production activities, *inter alia*, the leakage of hydrocarbons as an operational or accidental discharge and the introduction of various forms of energy, mainly by devices used for the production of wave, current, or thermal energy at sea. Similarly,

368 It is however suggested that the duty to protect the marine environment got elevated above the sovereign right of States to exploit their natural resources, see Rothwell and Stephens (2016) *supra* n. 3, 370.

369 McConell and Gold (1991) *supra* n. 346, 98, Kwiatkowska (1989) *supra* n. 188, 163, Proelss (2017) *supra* n. 142, 1288.

370 Article 194(1) reads as follows: “*States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection*”.

371 *South China Sea Arbitration*, *supra* n. 172, para 944.

372 See *supra* n. 362.

373 *South China Sea Arbitration*, *supra* n. 172, para 944.

374 F M Lehmann, *Offshore Carbon Dioxide Capture and Storage: An International Environmental Law Perspective* (Peter Lang GmbH, 2013) 65-66, Harrison (2017) *supra* n. 347, 26-27, Tanaka (2015) *supra* n. 340, 35, Proelss (2017) *supra* n. 142, 1303.

greenhouse gas emissions produced during the production of offshore energy fall within the definition of pollution, as substances or energy resulting in the harm of the marine environment.³⁷⁵ Relevantly, article 194(3) (c) and (d) of UNCLOS requires States to adopt measures to minimise to the fullest extent possible pollution arising from installations and devices used in exploration and exploitation of natural resources of the seabed and its subsoil, as well as those operating in general in the marine environment.

Although States have considerable discretion in identifying the measures which are necessary to discharge their responsibility, their discretion is not absolute. The measures adopted by States must be reasonably appropriate to achieve the objectives described in article 194. The provision stresses that measures must be appropriate to prevent, reduce and control pollution from installations and devices used both for the exploitation of natural resources of the seabed and the subsoil and for any other purpose, including the production of renewable forms of ocean energy.³⁷⁶ In that respect, courts and tribunals have relied upon the test of reasonableness to assess compliance by States. For instance, the ICJ in the *Whaling in the Antarctic* case relevantly inquired whether the design and implementation of the measures by Japan were reasonable to achieve their scientific objective. In examining the reasonableness, the ICJ appears to have attached a remarkable degree of precision to the vague rule under the Whaling Convention.³⁷⁷ The ICJ considered a list of omissions attributable to Japan, which could have increased the chance of providing reasonableness to the examined measures.³⁷⁸

Similarly, the special chamber of ITLOS in its advisory opinion declared that “*reasonableness and non-arbitrariness must remain the hallmarks of any action taken by the sponsoring State*”.³⁷⁹ It upheld that States must consider the relevant options objectively in a manner that is reasonable, acting in good faith.³⁸⁰ Although it appears that the nature of the Area as the common heritage of mankind influenced the reasoning of the chamber, its references to reasonableness, non-arbitrariness and good faith are relevant in assessing States’ compliance with similar obligations requiring due diligence.³⁸¹ Interestingly, the chamber referred to examples of measures that States could adopt, drawing upon existing best practices followed by other States.³⁸² In that respect, it implied that best practices could serve as a significant benchmark to evaluate the reasonableness of measures adopted by States to comply with their duty to protect and preserve the marine environment. Therefore, best practices can inform

375 Boyle (2012) *supra* n. 351, 832-833, S M Watson (2020) ‘Greenhouse Gas Emissions from Offshore Oil and Gas Activities – Relevance of the Paris Agreement, Law of the Sea, and Regional Sea Programmes’, *Ocean and Coastal Management*, 8.

376 See particularly, article 194(3)(c) and (d) of UNCLOS.

377 M Hayashi, ‘The Whaling Judgment and the Challenges of Dynamic Treaty Regimes’ in M Fitzmaurice, D Tamada (eds) *Whaling in the Antarctic: Significance and Implications of the ICJ Judgment* (Brill, 2016) 233-234.

378 ICJ, *Whaling in the Antarctic (Australia and New Zealand v Japan)*, Judgment of 31 March 2014, ICGJ 471, para 227.

379 *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 230.

380 *Ibid.*

381 D French (2011) ‘From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor – The Seabed Disputes Chamber’s 2011 Advisory Opinion’, *International Journal of Marine and Coastal Law*, 565.

382 *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 234.

the standard of due diligence. Even if they cannot be regarded as the only means for a State to discharge its obligation, the adoption of best practices can function as evidence that the State has acted diligently.

The considerable scientific uncertainty about the environmental impact of marine renewables is another important consideration in identifying the normative content of the duty to protect the marine environment.³⁸³ On that account, the duty of States to protect and preserve the marine environment must be read in light of the precautionary principle.³⁸⁴ According to the precautionary principle, as enshrined in Rio Principle 15, States cannot postpone the adoption of preventive steps when there is a lack of complete scientific certainty about the impact of activities which could cause serious or irreversible environmental damage.³⁸⁵ Even though UNCLOS does not prescribe the precautionary principle,³⁸⁶ ITLOS indirectly accepted its application as an element of interpretation of the Convention in the *Southern Bluefin Tuna* case. In the tribunal's view, "*the parties should in the circumstances act with prudence and caution to ensure that effective conservation measures are taken to prevent serious harm to the stocks of southern Bluefin tuna...although the Tribunal cannot conclusively assess the scientific evidence presented by the parties, it finds that measures should be taken as a matter of urgency to preserve the rights of the parties and to avert further deterioration*".³⁸⁷ In the absence of conclusive scientific knowledge about the impacts of renewable energy generation, a more reasonable solution might be for States to authorise small-scale installations and monitor their effects initially.³⁸⁸

The duty to take all measures necessary to prevent pollution is applicable regardless of whether the harmful activities might cause transboundary effects. In other words, UNCLOS introduces an obligation, which goes beyond the customary rule of prevention, as that rule is triggered only in the event of transboundary risk

383 R Long, 'Offshore Wind Energy Development and Ecosystem-Based Marine Management in the EU: Are the Regulatory Answers Really Blowing in the Wind?', in M Nordquist, J Norton Moore, A Chircop, and R Long (eds) *The Regulation of the Continental Shelf Development: Rethinking International Standards* (Martinus Nijhoff, 2013) 28-31, Galea (2011) *supra* n. 194, 124-125.

384 Rio Principle 15 states that "*In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation*". United Nations Conference on Environment and Development: Rio Declaration on Environment and Development, 14 June 1992. Regarding the legal nature of the principle or approach, see inter alia A Trouwborst (2007) 'The Precautionary Principle in General International Law: Combating the Babylonian Confusion', *Review of European, Comparative and International Environmental Law*, 185-195, Tanaka (2015) *supra* n. 340, 40-45.

385 Birnie, Boyle and Redgwell (2009) *supra* n. 334, 384, where the authors support the view that Chapter 17 of Agenda 21 introduced the precautionary principle to the marine environment, and UNCLOS needs to be interpreted in light of this principle, see also Harrison (2017) *supra* n. 347, 213, Rothwell, and Stephens (2016) *supra* n. 3, 515-516.

386 See further analysis on the relevance of the precautionary principle for the interpretation of the environmental obligations under UNCLOS in chapter 3, section 2.1.

387 ITLOS, *Southern Bluefin Tuna case (New Zealand v Japan/ Australia v Japan)* Provisional Measures of 27 August 1999, ICGJ 337, paras 77, and 80. Judge Treves in a separate opinion added that he "*understood the reluctance of the Tribunal in taking a position as to whether the precautionary approach is a binding principle of customary international law*". See Judge Treves Separate Opinion, para 9.

388 Harrison (2017) *supra* n. 347, 217.

caused by activities within the jurisdiction or control of a State.³⁸⁹ The arbitral tribunal in the *South China Sea* Arbitration confirmed that there is no absolute obligation to prevent any pollution from occurring, as it is not an obligation of result.³⁹⁰ By contrast, the requirement to take measures to prevent, control and minimise pollution is an obligation of conduct, which requires States to exercise due diligence in the sense of adopting relevant measures and displaying a certain level of vigilance in their enforcement.³⁹¹ In other words, States are expected to use adequate means, exercise best possible efforts and do their utmost.³⁹²

The standard of diligence is flexible since it depends on the nature of the risk posed by the activities.³⁹³ For instance, offshore energy production is likely to pose a significant risk for the marine environment and calls for a higher threshold of diligence by the authorising State. According to the view of the tribunal, States bear a duty to “prevent or at least mitigate significant harm to the environment when pursuing large-scale construction activities”.³⁹⁴ While the Convention does not offer much insight into the normative contours of the obligation, State practice and relevant international obligations might give some normative guidance.³⁹⁵ The economic and technological capabilities of States are another critical factor influencing the standard of care.³⁹⁶ However, taking into account the capacity of developing States does not absolve them from their duty to protect the marine environment and, thus, take positive measures towards that end. According to the special chamber of ITLOS, “what counts in a specific situation is the level of scientific knowledge and technical capability available to a given State in the relevant and scientific fields”.³⁹⁷ That remark by ITLOS appears to be sufficiently general to apply outside the context of activities in the Area and, in that sense, could justify a higher level of scrutiny for a developing State to claim that its level of development prevented it from adopting the reasonably expected environmental measures.³⁹⁸

Specifying the relevant duty to prevent, reduce and control pollution from any source under article 194, article 196 of UNCLOS addresses pollution resulting from the use of technologies under the jurisdiction or control of States, regardless of whether they may produce pollution in a perceptible degree or not.³⁹⁹ The provision acknowledges the need for measures to minimise uncertain risks possibly arising from the use of technologies. Article 196 of UNCLOS goes beyond the more general

389 Kwiatkowska (1989) *supra* n. 188, 164, Harrison (2017) *supra* n. 347, 27, Proelss (2017) *supra* n. 142, 1306, Rothwell, and Stephens (2016) *supra* n. 3, 370-371.

390 The tribunal explicitly referred to the ICJ’s Judgment in the *Pulp Mills on the River Uruguay (Argentina v Uruguay)* Judgment (on the merits) of 20 April 2010, ICGJ 425, para 19, and the *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 404, in support of its conclusion.

391 *South China Sea Arbitration*, *supra* n. 172, para 944.

392 *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 110.

393 *Ibid*, para 242.

394 *Ibid*, para 941.

395 See discussion in chapter 3, section 2.3. See also, Harrison (2019) *supra* n. 341, 12.

396 Article 194(1) specifies that States must use “the best practical means at their disposal according to their capabilities”. See also, J L Vallarta (1983) ‘Protection and Preservation of the Marine Environment and Marine Scientific Research at the Third United Nations Conference on the Law of the Sea’, *Law and Contemporary Problems*, 147-148, Principle 11 of the Rio Declaration.

397 *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 162.

398 French (2011) *supra* n. 381, 558.

399 Proels (2017) *supra* n. 142, 1320.

duty under article 194 insofar as it requires measures relating to uncertain risks stemming from the use of new technologies.⁴⁰⁰ In that sense, it appears to reflect the precautionary principle. The Convention does not refer to a specific type of technology.⁴⁰¹ It uses it as an open-ended term which, according to its ordinary meaning, can encompass all potential future technological developments. It has been suggested that, in light of the progressive nature of the provision, it can be assumed that not only established but also most upcoming technological developments should be subject to this duty to prevent pollution.⁴⁰² In that respect, it is arguable that the provisions of article 196 apply to emerging technologies used for the production of renewable forms of energy at sea.

2.2.3. *The procedural aspects of the duty to protect the marine environment*

The procedural duties of continuous monitoring and assessing the potential effects of planned activities are also directly relevant for offshore energy production activities.⁴⁰³ Such activities, regardless of whether they take place on the seabed or in the superjacent waters, “*may cause substantial pollution of or significant and harmful changes to the marine environment*” in the meaning of article 206. As a result, offshore energy production activities are subject to the procedural obligation to assess their potential effects on the marine environment, “*as far as practicable*”.⁴⁰⁴ The provision requires the conduct of an environmental impact assessment.⁴⁰⁵ The duty is triggered regardless of the potentially transboundary nature of the impact⁴⁰⁶ and whether or not activities take place in marine zones within national jurisdiction.⁴⁰⁷ However, UNCLOS does not define the meaning of substantial pollution or significant and harmful changes to the marine environment, which trigger the duty to carry out an EIA, nor does it prescribe the content or how an EIA is to be conducted.⁴⁰⁸ In that respect, it allows States considerable discretion because they are only required to undertake such assessment when there are “*reasonable grounds*” to believe that the planned activities “*may cause substantial pollution of or significant and harmful changes to the marine environment*”.⁴⁰⁹ In light of the precautionary principle, the terms need to be read as posing a low evidential threshold for triggering the EIA

400 *Ibid*, 1323.

401 However, see definition of technology under Part XIV, article 5(8) Annex III.

402 J Firestone, C Jarvis (2007) ‘Response and Responsibility: Regulating Noise Pollution in the Marine Environment’, *Journal of International Wildlife Law and Policy*, 126.

403 Articles 204-206 of UNCLOS.

404 Article 206 of UNCLOS.

405 However, it is argued that the Convention contains a rather vague duty to conduct environmental assessments which does not reflect the elaborate rules on EIAs under other agreements or customary international law, see M Gavouneli, ‘Protection Standards for the Marine Environment: Updating Part XII of the Law of the Sea Convention?’, in S Minas, and J Diamond (eds) *Stress Testing the Law of the Sea: Dispute Resolution, Disasters & Emerging Challenges* (Brill/Nijhoff, 2018) 263-266.

406 The Espoo Convention only applies to potential transboundary environmental damage, see UNECE Convention on Environmental Impact Assessment in a Trans-boundary Context (Espoo), signed 25 February 1991 (entry into force 27 June 1997), article 2(1).

407 Harrison (2017) *supra* n. 347, 32, Proelss (2017) *supra* n. 142, 1371.

408 C Kojima (2015) ‘South China Sea Arbitration and the Protection of the Marine Environment: Evolution of UNCLOS Part XII Through Interpretation and the Duty to Cooperate’, *Asian Yearbook of International Law*, 176.

409 The Espoo Convention requires an EIA to be conducted even if risks are uncertain and potential harm is not necessarily irreparable, *supra* n. 406, article 2.2, see also Lehmann (2013) *supra* n. 374, 79.

obligation.⁴¹⁰ Nevertheless, article 206 of UNCLOS is silent on the contents of an EIA and, in general, falls short of the – recognised as customary law – standards spelt out by the ICJ in the *Pulp Mills* and *Construction of a Road/Certain Activities* cases.⁴¹¹

However, the normative contours of the customary duty to conduct EIAs, as clarified by international courts, can inform the relevant duty under UNCLOS.⁴¹² The arbitral tribunal in the *South China Sea Arbitration* found that the duty to carry out an EIA is a direct obligation under UNCLOS and at the same time an obligation under customary international law, confirming the reasoning of the 2011 advisory opinion of ITLOS on the *Responsibilities and Obligations of States with respect to Activities in the Area*.⁴¹³ The ICJ similarly upheld the customary nature of the duty in the *Pulp Mills* case, stressing that an assessment must be conducted before the implementation of the project and that it does not suffice to be justified *ex ante*.⁴¹⁴ Since the obligation to conduct an EIA forms an essential aspect of the principle of prevention,⁴¹⁵ the ICJ found that it would be difficult for a State to prove that it has complied with its obligation of due diligence without carrying out such an assessment.⁴¹⁶ In that assessment, the State needs to take into consideration all the effects that production of offshore energy can have on the environment, including on living resources and their habitats.⁴¹⁷

In addition, once the operation of an offshore energy project has started, “continuous monitoring of its effects on the environment shall be undertaken” throughout its life cycle.⁴¹⁸ Therefore, there is an obligation to review the initial EIA and monitor the effects of a long-term project on the marine environment,⁴¹⁹ primarily to address any previously unpredicted impacts. The requirement of continuous monitoring is of the utmost importance in the case of offshore energy production installations, which usually operate in the marine environment for several years.⁴²⁰ Therefore, any EIA conducted before the commencement of the activities cannot reasonably anticipate all its long-term effects on the marine environment.

Articles 205 and 206 of UNCLOS provide that States must publish reports of the results obtained to the competent international organisations, which should make them available to all States. As further discussed in chapter 3, the tribunal in the *South China Sea* arbitration found that the obligation to publish the results of an EIA is absolute,⁴²¹ even though article 206 of UNCLOS is replete with qualifiers

410 Harrison (2017) *supra* n. 347, 33, Proelss, (2017) *supra* n. 142, 1374. See also chapter 3, sub-section 2.1.2.

411 Gavouneli (2016) *supra* n. 218, 195.

412 See for instance how the special chamber of ITLOS relied on the findings of ICJ concerning the duty to conduct EIAs under customary international law, *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 148. On the potential interaction of UNCLOS with rules of customary law, see further chapter 3, sub-section 1.2.

413 *South China Sea Arbitration*, *supra* n. 172, para 948, see also *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 145.

414 *Pulp Mills*, *supra* n. 390, para 205.

415 *Seabed Chamber’s Advisory Opinion*, *supra* n. 359, para 147.

416 *Pulp Mills*, *supra* n. 390, 204.

417 Harrison (2017) *supra* n 347, 212.

418 *Pulp Mills*, *supra* n. 390, 205.

419 Article 204(2) of UNCLOS.

420 *Ghana v Côte d’Ivoire*, (Provisional Measures) *supra* n. 260, dispositif, para 1 (c).

421 *South China Sea Arbitration*, *supra* n.172, para 948, for further discussion, see chapter 3, sub-section 2.3.1.

moderating the duty to conduct an EIA. In that respect, the tribunal upheld that China's allegations that it had undertaken an environmental assessment in accordance with its domestic law were not sufficient to fulfil the duty to communicate an EIA.⁴²² Although China did not participate in the proceedings, the tribunal evaluated whether its alleged actions met the international standards set by international jurisprudence. It concluded that the SOA Statement fell short of China's domestic standards and was "far less comprehensive" than EIAs reviewed by other international courts and tribunals.⁴²³ The duty to conduct EIAs under UNCLOS has been supplemented by normatively specific (and sometimes sectoral) provisions at the global and regional levels. On that account, further guidance on the international standards concerning EIAs, as well as the obligation to conduct Strategic Environmental Assessments, can be found in other (mostly regional) international environmental instruments, discussed in chapters 6 and 7.⁴²⁴

UNCLOS also contains procedural obligations with implications for accidental pollution from offshore installations. It requires States to promptly notify other potentially affected States as well as the competent international organisations, once they become aware of cases in which the marine environment is in imminent danger or has been damaged by pollution.⁴²⁵ This duty applies both in cases of actual damage and where such damage is anticipated in the near future ("*imminent danger*").⁴²⁶ It appears that the duty to notify under article 198 of UNCLOS speaks more to preparedness and response in cases of accidental pollution. In that sense, it is much more specific and limited than the relevant duty to notify other potentially affected States under customary international law,⁴²⁷ which treats it as a significant element of the prevention obligation.⁴²⁸ Remarkably, as further discussed in chapter 6, the relevant provisions on accidental pollution under regional marine environmental agreements also emphasise measures on preparedness and response instead of prevention.⁴²⁹ Although the wording "*it deems likely to be affected*" imports a subjective element to the duty of notification, it is argued that States must err on the side of precaution and notify of any situation likely to result in damage.⁴³⁰

The affected States must cooperate with competent international organisations to eliminate, "*to the extent possible*", the effects of accidental pollution or control

422 *Ibid.*, para 991.

423 *Ibid.*, para 990, referring to the *Pulp Mills* case.

424 See chapter 6, sub-section 3.2., and chapter 7 sub-section 2.1.1.

425 Article 198 of UNCLOS.

426 Proelss (2017) *supra* n. 142, 1336.

427 Concerning the customary duty of notification, the ICJ in the *Certain Activities/Construction of a Road* case found that "if the environmental impact assessment confirms that there is a risk of significant transboundary harm, the State planning to undertake the activity is required, in conformity with its due diligence obligation, to notify and consult in good faith with the potentially affected State, where that is necessary to determine the appropriate measures to prevent or mitigate the risk", *Certain Activities carried out by Nicaragua in the Border Area; Construction of a Road in Costa Rica along the San Juan River (Costa Rica v Nicaragua)*, Judgment (on the merits) of 16 December 2015, ICJ Rep 665, para 104.

428 On the relationship between the customary prevention duty and the relevant environmental obligations under UNCLOS, see chapter 3, sub-section 1.2.

429 See chapter 6, sub-sections 3.1-3.2.

430 Proelss (2017) *supra* n. 142, 1337. On the relevance of the precautionary principle/ approach in the interpretation of UNCLOS see chapter 3, section 2.1.2.

and minimise the damage.⁴³¹ For instance, in the case of accidental pollution from offshore energy production installations, States bear the duty to cooperate with the relevant institutions under regional agreements to which they have adhered, such as the Regional Marine Pollution Emergency Response Centre (REMPEC) for the Mediterranean Sea, to implement their general obligation under UNCLOS.⁴³² It appears that the duty to cooperate towards eliminating, controlling or minimising damage from pollution emergencies is heavily qualified, indicating that the relevant requirement may be stricter for the developed than for the developing States.⁴³³ However, as already mentioned, the capacity of each State to cooperate must be examined individually in a specific situation.⁴³⁴

The second sentence of article 199 of UNCLOS has a more preventative focus. Substantiating the general duty to cooperate, it requires States to jointly develop and promote contingency plans for responding promptly to such accidents.⁴³⁵ UNCLOS does not define the content of such contingency plans but instead relies on the specific rules and standards under relevant global and regional agreements. These procedural duties concerning pollution emergencies have been further elaborated in a range of global, regional and bilateral agreements, examined in the following chapters.⁴³⁶

2.2.4. *The specific rules on pollution from offshore energy production activities as a springboard for normative interactions*

By the time the UNCLOS negotiations started, pollution from seabed activities had already become a severe environmental problem, which called for the adoption of international rules.⁴³⁷ In that respect, article 208 of UNCLOS deals explicitly with the prevention of pollution from such activities, elaborating upon the general duty on marine environmental protection.⁴³⁸ The coastal States bear the obligation to adopt domestic law and regulations to prevent, reduce or control pollution arising from or in connection with seabed activities subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction.⁴³⁹ The Convention does not define the term “seabed activities”. However, all types of offshore energy production activities within national jurisdiction fall within the scope of this provision since it applies to installations and structures according to articles 60 and 80 of UNCLOS. Article 208, in combination with article 214 of UNCLOS, embrace all

431 Article 199 of UNCLOS.

432 See chapter 6, sub-section 3.2.3.

433 *Seabed Chamber's Advisory Opinion*, *supra* n. 359, para 161-162.

434 French (2011) *supra* n. 381, 558.

435 Article 199 of UNCLOS.

436 See chapter 3, sub-section 1.3.1. on the relevant obligations under the OPRC, as well as chapter 6, sub-section 3.2 on the regional instruments on prevention, preparedness, response of accidental pollution.

437 Following the Stockholm Declaration, the UNEP undertook a study of the environmental impacts of offshore energy exploitation, which resulted in several reports of the Working Group of Experts on Environmental Law stressing the need for international rules to protect the marine environment, see A de Mestral (1979) ‘Prevention of Pollution of the Marine Environment Arising from Offshore Mining and Drilling’, *Harvard International Law Journal*, 472-473.

438 Proelss (2017) *supra* n. 142, 1392.

439 Article 208(1) of UNCLOS.

aspects of tackling pollution from offshore energy production including regulation and enforcement.⁴⁴⁰

Since activities of exploration and exploitation of the seabed and its subsoil mostly take place in areas within national jurisdiction, the recognition of coastal State authority to adopt and enforce environmental standards on these activities was almost self-evident.⁴⁴¹ The right of coastal States to regulate the environmental externalities of offshore energy activities is a corollary of their sovereign rights over the natural resources of the seabed within national jurisdiction. During the negotiations of UNCLOS, a primary issue concerning pollution from seabed activities within national jurisdiction was whether coastal State rights should be subject to commonly agreed minimum environmental standards.⁴⁴² This proposal was adopted, despite the opposition by a few States, which argued that setting minimum environmental standards for the exploitation of resources within national jurisdiction conflicted with the concept of the EEZ.⁴⁴³ For that reason, the Convention dictates that international rules and standards prevail over domestic regulations (“*no less effective*”) with regard to standard-setting and enforcement measures when it comes to this source of pollution.⁴⁴⁴ In other words, States retain the right to adopt domestic regulations and use their means and technologies to explore and exploit the seabed within their jurisdiction, as long as they respect the internationally recognised minimum environmental and safety standards.

The “rule of reference”⁴⁴⁵ under article 208(3) of the Convention is a *renvoi* to international minimum standards, which consequently become applicable as benchmarks to assess compliance by all parties to UNCLOS. The provision appears to be an acknowledgement by the Convention that detailed prescriptive standards soon become outdated.⁴⁴⁶ On that account, it establishes the legal basis for normative interactions between UNCLOS, as the overarching legal framework for the regulation of offshore energy activities, and specialised instruments that pre-existed or may be adopted.⁴⁴⁷ The application of article 208(3) of UNCLOS depends upon the development of such standards.⁴⁴⁸ However, unlike the well-regulated field of vessel source pollution, there is an almost total lack of globally applicable

440 S Vinogradov, and J P Wagner, ‘International Legal Regime for the Protection of the Marine Environment Against Operational Pollution from Offshore Petroleum Activities’, in Z Gao (ed) *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998) 99.

441 Vallarta (1983) *supra* n. 396, 148.

442 Stevenson and Oxman (1974) *supra* n. 139, 25.

443 *Ibid.*

444 See Articles 194(3)(c) and (d) and 214 of UNCLOS.

445 R van Reenan (1981) ‘Rules of Reference in the New Convention on the Law of the Sea in particular connection with pollution of the sea by oil from tankers’, *Netherlands Yearbook of International Law*, 3-44.

446 J N Moore ‘Comments on the Unfinished Business of UNCLOS III’, in Nordquist, Moore, Chircop and Long (2013) *supra* n. 383, 359-360.

447 A Bonfanti, and F Romanin Jacur (2014) ‘Energy from the Sea and the Protection of the Marine Environment: Treaty-Based Regimes and Ocean Corporate Social Responsibility’, *International Journal of Marine and Coastal Law*, 625.

448 Vallarta (1983) *supra* n. 396, 149. The 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation (entry into force 13 May 1995) could be such an international treaty which includes standards applicable under article 208(3) of UNCLOS. See also, C Redgwell (2014) ‘Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Industry’, *International Journal of Marine and Coastal Law*, 610-611.

international rules and standards for offshore energy production activities. While the Convention imposes an explicit obligation for the development of international rules and standards to prevent, reduce and control pollution produced by offshore energy activities,⁴⁴⁹ there is much left to be desired when it comes to the adoption of global environmental standards.⁴⁵⁰ Allegedly, the lack of a single international organisation with competence for the regulation of these activities at the international level, such as the IMO for international shipping, partly explains the virtual absence of global standards in the sector.⁴⁵¹

The Convention does not identify the legal nature of rules and standards which qualify as “international” for article 208 of UNCLOS. Relevantly, it has been argued that UNCLOS refers only to universally binding rules accepted as part of customary international law or at least rules found in conventions that have been ratified widely.⁴⁵² However, in the author’s view, the phrase “*standards and recommended practices and procedures*” also aimed to encompass non-binding instruments.⁴⁵³ In this context, it has been argued that such non-binding standards become internationalised by reference and set the legal parameters for the adoption of equally effective domestic legislation.⁴⁵⁴ However, the legal value of the incorporated rules and their capacity to guide States in adopting the necessary laws and measures will also depend upon their drafting.⁴⁵⁵ Vague standards are designed to allow broad discretion to States in their implementation.

Compared with other rules of reference under UNCLOS, article 208(3) of UNCLOS does not require States to conform with “generally accepted” rules but instead refers to “international” rules and standards. Read in combination with article 208(4) of UNCLOS,⁴⁵⁶ the provision can be interpreted as referring to norms and standards elaborated not only at the global level but also at the appropriate regional level.⁴⁵⁷ For instance, UNCLOS highlights the necessity of cooperation and coordination of environmental regulation at the regional level in the case of enclosed or semi-enclosed seas, such as the Mediterranean.⁴⁵⁸ Although there is no global agreement on the prevention of pollution from seabed activities, the corresponding developments at the regional level, discussed in the second part of the thesis, have resulted in more advanced rules, which could function as international minimum standards under certain conditions.⁴⁵⁹ In addition, UNCLOS explicitly requires

449 Article 208(5) of UNCLOS.

450 Churchill (2015) *supra* n. 156, 28.

451 J A Roach, ‘International Standards for Offshore Drilling’ in Nordquist, Moore, Chircop and Long (2014), *supra* n. 383, 106.

452 Proelss (2017) *supra* n. 142, 1332.

453 Vinogradov and Wagner (1998) *supra* n. 440, 116-117. See further discussion in chapter 3, sub-section 3.4.

454 Bonfanti, Romanin Jacur (2014) *supra* n. 447, 632.

455 Harrison (2017) *supra* n. 347, 215.

456 Article 208(4) of UNCLOS lays out a weaker obligation (“States shall endeavor”) to harmonize their environmental policies regarding pollution from seabed activities at the regional level.

457 *Ibid.* On the importance of regionalism in the regulation of offshore energy activities, see also, Y Tanaka (2016) ‘Four Models on Interaction between Global and Regional Legal Frameworks on Environmental Protection against Marine Pollution: The Case of the Marine Arctic’, *Ocean Yearbook*, 354-356, Rothwell, and Stephens (2016) *supra* n. 3, 400-402. See also, chapters 5 and 8.

458 Article 123 of UNCLOS.

459 Redgwell (2014) *supra* n. 448, 611-612, Harrison (2017) *supra* n. 347, 215, 217-225, Tanaka (2015) *supra* n. 35, 277.

States to review these international norms and standards periodically as necessary.⁴⁶⁰ Given the rapid technological developments in the offshore industry, the Convention stresses the importance of flexibility of these rules and standards to accommodate changes. This method of incorporation of rules and standards produced under agreements that utilise more flexible decision-making processes than UNCLOS,⁴⁶¹ allows the Convention to continuously adapt to changes without engaging in the stringent formal amendment procedures.⁴⁶²

The duty to cooperate for the adoption of specialised global and regional instruments is part of the Convention's legal mechanism for the further refinement of the normative contours of the obligation to protect the environment in relation to offshore energy production activities.⁴⁶³ According to Allott, the Convention provides for a “*delegation of power*”.⁴⁶⁴ Article 208(5) of UNCLOS contains an obligation for the formulation of international rules, standards, recommended practices and procedures, which is phrased in stronger language than the corresponding obligation concerning pollution from land-based sources.⁴⁶⁵ The provision envisages the adoption of both legally binding rules to add normative content to the general duty to prevent pollution and non-binding norms to guide the relevant State practice.⁴⁶⁶ Both articles 208(5) and 197 of UNCLOS require States to act “*especially through competent international organisations or diplomatic conference*”. In that respect, the role of the IMO is often highlighted.⁴⁶⁷ However, there are more international organisations that could play an active role in the development of environmental rules and standards for the offshore energy industry, such as the UNEP (primarily through the Regional Seas Programme) and the International Renewable Energy Agency.⁴⁶⁸ These organisations can facilitate the negotiation of international norms and standards by providing their expertise and by bringing all the relevant actors together into a single forum.⁴⁶⁹

3. The institutional framework under UNCLOS and its contribution (or lack thereof) to the progressive development of rules on offshore energy production

Another very important innovation of UNCLOS has been the creation of institutions mandated with the development and implementation of its rules. The significance of these institutional arrangements for the environmental regulation of offshore energy production activities relates to their role (or lack thereof) in the evolution of the environmental legal framework under UNCLOS.⁴⁷⁰ Bearing in mind the fate of the previous Geneva Conventions, some of whose provisions became obsolete

460 Article 208(5) of UNCLOS.

461 Bonfanti and Romanin Jacur (2014) *supra* n. 447, 630.

462 Articles 312-313 of UNCLOS, see also A Boyle (2005) ‘Further Development of the Law of the Sea Convention: Mechanisms for Change’, *International Law and Comparative Law Quarterly*, 569.

463 *Supra* n. 433 with corresponding text.

464 Allott (1983) *supra* n. 30, 10.

465 According to article 207 States “shall endeavor...”

466 Roach (2014) *supra* n. 451, 107.

467 Vinogradov and Wagner (1998) *supra* n. 440, 100, Redgwell (2014) *supra* n. 448, 607, Roach (2014) *supra* n. 451, 107-117, Tanaka (2015) *supra* n. 35, 35.

468 See further discussion, chapter 3, sub-section 3.4.2.

469 Harrison (2017) *supra* n. 347, 36.

470 A Oude Elferink (2004) ‘Reviewing the Implementation of the LOS Convention: The Role of the United Nations General Assembly and the Meeting of State Parties’, in A Oude Elferink, and

soon after their adoption, the introduction of an institutional framework can serve as a safeguard for the normative resilience of UNCLOS.⁴⁷¹ Aside from that, UNCLOS aims to coordinate the already existing international institutions related to the protection of the marine environment. Consequently, as well as building its institutions to oversee the implementation of the Convention, UNCLOS creates a framework within which other associated institutions have developed.⁴⁷² Specialised international organisations dealing with the protection of the marine environment and various environmental treaty bodies have been serving as a laboratory for the development of rules and standards, which add content to the duty to protect and preserve the marine environment in the context of offshore energy activities.

This section considers the institutional framework under UNCLOS and its role (or lack thereof) in developing further or safeguarding the implementation of its environmental rules for offshore energy production activities. First, it examines the mandate of institutions established by UNCLOS, which might be of relevance to the regulation of offshore energy production activities. It then turns to the relevant UN organs and institutions, which are historically and culturally linked to UNCLOS⁴⁷³ and, finally, describes the Convention as the legal framework for normative developments by institutional arrangements at the global and regional levels.

3.1. The limited role of UNCLOS' institutions in the progressive development of environmental rules concerning offshore energy production

By 1956, the ILC had already recognised the need for a central institution within the UN framework, which would develop regulations covering all the matters related to the law of the sea.⁴⁷⁴ However, the idea of establishing a single body with general competence over any issue related to the law of the sea- was rejected as impracticable, “owing to the very diversity of interests with which it would have to deal”.⁴⁷⁵ In the view of the ILC, any such attempt could result in applying “an excessively uniform standard to varying situations and fail[ing] to take adequate account of the different interests concerned”.⁴⁷⁶ The creation of a centralised body was also rejected for fear of resulting in unnecessary duplication of effort, because its mandate would overlap with the corresponding mandates of already existing institutional arrangements. Due to these concerns, States rejected the idea of establishing institutions to support the implementation and progressive development of the 1958 Geneva Conventions.⁴⁷⁷ By contrast, UNCLOS came along with new institutions, namely the Commission on

D Rothwell (eds) *Ocean Management in the 21st Century: Institutional Frameworks and Responses* (Martinus Nijhoff, 2004) 296-297.

471 J Harrison (2015) ‘The Law of the Sea Convention Institutions’ in Rothwell, Oude Elferink, Scott and Stephens, *supra* n. 6, 374-375, see also Moore, Nordquist, Nandan and Rosenne (1993) *supra* n. 52, 293, with reference to the remarks of the Secretary General at the 14th meeting of the Conference in Caracas, who suggested that the delegates should consider “whether some institutional means should be created whereby, within the framework of the new convention, common measures could be agreed upon and taken whenever necessary so as to avoid obsolescence under changing world conditions”.

472 Rothwell and Stephens (2016) *supra* n. 3, 20-22.

473 T Treves (1998) ‘The Law of the Sea System of Institutions’, *Max Planck Yearbook of United Nations Law*, 340.

474 ILC, Yearbook of the International Law Commission, Volume II, 2.

475 *Ibid.*

476 *Ibid.*

477 Harrison (2017) *supra* n. 347, 298.

the Limits of the Continental Shelf (CLCS), the International Seabed Authority (ISA) and the International Tribunal for the Law of the Sea (ITLOS).

However, as explained below, these institutions have a limited role in substantiating the environmental rules of UNCLOS in relation to offshore energy production. Their weakness can be identified when one compares them with institutional arrangements under “second-generation” environmental agreements, adopted after 1992.⁴⁷⁸ In general, these second-generation environmental agreements establish an institutional framework which is competent to make decisions about the operation of the agreement, develop new rules, produce scientific data to bolster decision-making and enhance compliance.⁴⁷⁹ Usually, the institutional arrangements consist of a Conference of the Parties (CoP) and a secretariat, as well as technical and scientific bodies.⁴⁸⁰ These institutions play a vital role in the process of adapting the rules and standards of their respective treaty to address changing circumstances. These bodies sometimes express their views on measures necessary for the implementation of their respective agreement without the consent of all the State parties.⁴⁸¹ Although their pronouncements often take the form of non-binding recommendations, they can affect the conduct of parties to the treaty in various ways.⁴⁸² Under certain conditions, these pronouncements offer significant interpretative guidance for the application of the rules of the agreement.⁴⁸³ In that respect, they are indispensable for the establishment of dynamic treaty-regimes, in the sense that the normative content of their rules evolves.⁴⁸⁴ Bearing those differences in mind, this section focuses on the role of dispute settlement mechanisms, including ITLOS, the Meeting of the State Parties and the ISA for the further development of the environmental rules under UNCLOS, which apply to offshore energy production activities.

3.1.1. *The role of dispute settlement mechanisms under UNCLOS*

Recognising the importance of third-party dispute resolution mechanisms for the implementation of UNCLOS, the Convention includes “a menu of options” for dispute settlement.⁴⁸⁵ The compulsory dispute settlement mechanism was essential to maintain the integrity of the “package deal” and to safeguard the consistent interpretation and implementation of its provisions.⁴⁸⁶ In addition to the choices

478 On further discussion, see chapter 5, sub-section 2.1.

479 J Brunnée (2002) ‘COPing with Consent: Law-Making Under Multilateral Environmental Agreements’, *Leiden Journal of International Law*, 1.

480 R Churchill, and G Ulfstein (2002) ‘Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law’, *American Journal of International Law*, 623.

481 See the example of the recommendations of the Scientific Committee under the Whaling Convention, chapter 3, sub-section 2.5.2.

482 *Ibid.*

483 Chapter 3, sub-section 3.1. on the relevance of the output of expert treaty bodies for the interpretation of treaties, see also D Azaria (2020) ‘The Legal Significance of Expert Treaty Bodies Pronouncements for the Purpose of the Interpretation of Treaties’, *International Community Law Review*, 33-60.

484 Hayashi (2016) *supra* n. 377, 221-222.

485 L Boisson de Chazournes (2017) ‘Plurality in the Fabric of International Courts and Tribunals: The Threads of a Managerial Approach’, *European Journal of International Law*, 27-28.

486 D Rothwell, and T Stephens, ‘Dispute Resolution and the Law of the Sea: Reconciling the Interaction between the LOS Convention and Other Environmental Treaties’ in Oude Elferink and Rothwell (2004) *supra* n. 470, 209.

to initiate proceedings before the ICJ or have recourse to international arbitration, UNCLOS established ITLOS as a new specialised judicial body to deal with disputes on the law of the sea.⁴⁸⁷ ITLOS is valued as one of the most significant arrangements within the institutional architecture of UNCLOS.⁴⁸⁸ Although the Convention does not pronounce ITLOS as the default dispute resolution body,⁴⁸⁹ it has a special role under UNCLOS. Specifically, its special chamber retains the exclusive jurisdiction concerning disputes and requests for advisory opinions related to the Area, and the Tribunal has jurisdiction to entertain requests for provisional measures pending the establishment of an Annex VII arbitral tribunal and residual jurisdiction in prompt release cases.⁴⁹⁰

The *rationae personae* jurisdiction of ITLOS represents a significant development for offshore energy production activities. According to its Statute, “[t]he Tribunal shall be open to entities other than States Parties ... in any case submitted pursuant to any other agreement conferring jurisdiction on the Tribunal which is accepted by all the parties to that case”.⁴⁹¹ Arguably, the provision does not necessarily require an international agreement between States to confer jurisdiction upon the Tribunal.⁴⁹² According to Treves, such interpretation of the Statute could enable an offshore energy company to bring a dispute with the coastal State concerning the delineation of a pipeline on the continental shelf, before ITLOS by an agreement between the industry and the State concerned.⁴⁹³ Also, the resolution maritime delimitation cases and the jurisdiction of ITLOS to prescribe provisional measures are particularly crucial features for the offshore energy production activities.⁴⁹⁴

Disputes regarding the exercise of the coastal State’s sovereign rights or jurisdiction are, in principle, automatically excluded from compulsory jurisdiction under article 297 of UNCLOS, which only enumerates three exemptions. The exemption of disputes concerning the sovereign rights and jurisdiction of the coastal State from mandatory dispute settlement mechanisms reflects the intention of the Convention to safeguard the sovereign privileges attributed to the coastal State over maritime areas within its jurisdiction.⁴⁹⁵ However, it is argued that the exemption from the compulsory jurisdiction should be interpreted restrictively to prevent

487 Article 287 of UNCLOS. See also, S Scott, ‘The Contribution of the LOS Convention Organizations to Its Harmonious Implementation’ in Oude Elferink, and Rothwell (2004) *supra* n. 470, 316-318.

488 D Rothwell (2004) ‘Building the Strengths and Addressing the Challenges: The Role of Law of the Sea Institutions’, *Ocean Development and International Law*, 132, D Rothwell, ‘The Contribution of ITLOS to Oceans Governance through Marine Environmental Dispute Resolution’, in R Wolfrum, C Kojima, T Mensah, T Malick Ndiaye (eds) *Law of the Sea, Environmental Law, and Settlement of Disputes: Liber Amicorum to Judge Thomas A. Mensah* (Brill, 2007) 1008.

489 Article 287(3) and (5) provide that Annex VII Arbitration is the default option when States have not made a common decision as to the forum for the settlement of their dispute.

490 J L Jesus, ‘The Role of ITLOS in the Settlement of Law of the Sea Disputes’, in M Nordquist, H-S Kim, J Norton Moore, and A Soons (eds) *The Law of the Sea Convention: US Accession and Globalization* (Martinus Nijhoff, 2012) 159.

491 Annex VI of UNCLOS, article 20(2).

492 T Treves (2007) ‘The International Tribunal for the Law of the Sea and the Oil and Gas Industry’, presentation at the Second International Oil and Gas Conference, available online at: https://www.itlos.org/fileadmin/itlos/documents/Statements_of_president/wolfrum/treves_oil_gas_200907_eng.pdf.

493 *Ibid.*, 5.

494 See also *supra* section 2.1.3.

495 Orrego Vicuna (1989) *supra* n. 70, 124.

neutralising the general obligation of compulsory dispute settlement under section 2 of Part XV of the Convention.⁴⁹⁶ The interpretation of the exemption cannot result in generally excluding a whole batch of disputes concerning maritime zones, such as the EEZ or the continental shelf, because that would be inconsistent with the functional legal nature of these maritime zones.⁴⁹⁷

This general exemption is indisputably relevant for offshore energy activities. Disputes concerning the exercise of sovereign rights over marine energy resources of the continental shelf and the EEZ would be excluded from mandatory dispute settlement procedures. Moreover, the exemption extends to any disputes concerning offshore energy installations and structures, over which the coastal State exercises exclusive jurisdiction in the EEZ and the continental shelf. However, there is always the possibility for these disputes to be submitted to adjudication by agreement between the parties. The Convention also prescribes compulsory jurisdiction in the case of claims that the coastal State has contravened the provisions of the Convention regarding navigation, overflight, submarine cables and pipelines and related activities in the exercise of its sovereign rights or jurisdiction.⁴⁹⁸ For instance, the implementation of the obligation to pay due regard could be the subject matter of a dispute falling under the compulsory jurisdiction.⁴⁹⁹ In the face of serious concerns about the creeping jurisdiction of the coastal State within the EEZ, the preservation of compulsory jurisdiction has supplied invaluable legal leverage for third States towards safeguarding their rights in the EEZ.⁵⁰⁰

Moreover, disputes concerning the exercise of the coastal States' sovereign rights and jurisdiction fall within the compulsory jurisdiction under UNCLOS in a case where the coastal State "*has acted in contravention of specified international rules and standards for the protection and preservation of the marine environment*".⁵⁰¹ As has already been discussed, Part XII of UNCLOS provides the legal basis for normative interactions between UNCLOS and other international norms on the protection of the marine environment. Part XV pronounces that disputes concerning rules adopted according to article 197 may be subject to the Convention's compulsory jurisdiction.⁵⁰² Article 297(1)(c) facilitates the normative cross-fertilisation between UNCLOS and other environmental rules. In particular, it enables the initiation of judicial proceedings for the violation of international environmental rules, which have been developed in furtherance of UNCLOS.

Allegedly, those rules encompass the international rules and standards referred to under article 208(3) of UNCLOS, regardless of whether the respondent has consented to the adoption of that norm or standard. On that point, it could be

496 B Oxman 'Courts and Tribunals: The ICJ, ITLOS and Arbitral Tribunals' in Rothwell, Oude Elferink, Scott and Stephens (2015) *supra* n. 6, 404.

497 Vicuna (1989) *supra* n. 70, 124.

498 Article 297(1)(a) of UNCLOS.

499 Treves (2007) *supra* n. 492, 6.

500 D Rothwell, A Oude Elferink, K Scott, and T Stephens, 'Charting the Future for the Law of the Sea', in Rothwell, Oude Elferink, Scott and Stephens (2015) *supra* n. 6, 892.

501 Article 297(1)(c) of UNCLOS.

502 Article 297(1)(c) provides that the dispute settlement provisions of Part XV are applicable to disputes regarding violations of "*specified international rules and standards for the protection and preservation of the marine environment ... established by this Convention or through the competent international organizations*".

counterargued that the respondent's consent to the invoked rule is necessary because article 297(1)(c) of UNCLOS requires that these international rules and standards are "applicable to the coastal State". However, international rules within the scope of the rule of reference apply as benchmarks for assessing the conduct of all States parties to UNCLOS, even when some may not have adhered to them formally.⁵⁰³ Their consent to respect the benchmarks set by these international rules has been granted upon the ratification of UNCLOS.⁵⁰⁴ Perhaps, such a "liberal" interpretation of the provision could meet strong opposition from States, which would regard it as a severe violation of their sovereignty and in that sense advocate more a restrictive interpretation of the reference to rules and standards, which are supposed to be determinate and specific.⁵⁰⁵ Nonetheless, the argument appears to have been supported by the reasoning of the arbitral tribunal in the *South China Sea Arbitration*. The tribunal found that the 1972 Convention on International Regulations for Preventing Collisions at Sea (COLREGS) was binding upon both parties to the dispute through the rule of reference under article 94 of UNCLOS even though the Philippines did not become a party to it until 2013.⁵⁰⁶ What weighed in the reasoning of the tribunal was that the COLREGS represented generally accepted rules of international law as one of the most widely adopted multilateral conventions in force, since it had 156 parties, representing more than 98 per cent of world shipping tonnage.⁵⁰⁷

From the above, it follows that the dispute settlement mechanisms under UNCLOS could have a bearing on the development of the environmental rules of the Convention regarding offshore energy production. Treves has deliberately characterized ITLOS as "a well-oiled piece of machinery at the disposal of all States involved in maritime activities".⁵⁰⁸ Nonetheless, an obvious disadvantage of the ITLOS, and in general of the dispute settlement mechanisms, concerning the progressive development of the relevant rules of the Convention is that it has been employed sporadically by States as a forum for the resolution of disputes. As recently illustrated by Judge Paik's separate opinion in the *Ghana v. Côte d'Ivoire* case, in general its case law is heavily dependent on the particular circumstances of each dispute.⁵⁰⁹ Therefore, besides the cardinal importance of its judgments and advisory opinions in specifying the content of the duty to protect the marine environment,⁵¹⁰ the role of ITLOS in the evolution of the environmental regulation of offshore energy production activities is somewhat incidental.

503 B Oxman (1991) 'The Duty to Respect Generally Accepted International Standards', *New York University Journal of International Law and Politics*, 133.

504 F Romanin Jacur 'Formalism and Law-Making in Treaty-Based Ocean Governance: Limits and Challenges' in Trevisanut, Giannopoulos and Roland Holst (2020) *supra* n. 242, 176-177.

505 Oxman (1991) *supra* n. 503, 158-159, Oxman (2015) *supra* n. 496, 404.

506 *South China Sea Arbitration*, *supra* n. 172, para 1082.

507 *Ibid*, para 1081.

508 Treves (2007) *supra* n. 492, 12.

509 ITLOS, Special Chamber, Separate Opinion of Judge Paik in the *Ghana v. Côte d'Ivoire* Dispute, *supra* n. 300, para 6.

510 A Proless, 'The Contribution of the ITLOS to Strengthening the Regime for the Protection of the Marine Environment' in A Del Vecchio, R Virzo (eds) *Interpretations of the United Nations Convention on the Law of the Sea by International Courts and Tribunals* (Springer, 2019) 93-106.

3.1.2. *The role of the Meeting of the State Parties under UNCLOS*

The oversight of the judicial function of ITLOS is among the tasks of the Meeting of the State Parties (SPLOS), which primarily has an administrative role. Even though the SPLOS is not formally an institutional body under the Convention, UNCLOS has expressly conferred on it a series of administrative functions concerning the election, administration and financial issues of ITLOS and the election of members and administration of the CLCS.⁵¹¹ Since it is mostly concerned with administrative functions under UNCLOS, the SPLOS does not resemble the respective Conferences of the Parties (CoPs), which are created as the “*supreme organs*” under other international environmental agreements.⁵¹² However, the mandate of the SPLOS is far from clear. Under article 319(2)(e) of UNCLOS, the Secretary-General of the UN has the authority to “*convene necessary meetings of States Parties in accordance with this Convention*”. This provision has been the source of ongoing heated controversy among the delegates of different States parties concerning the ambiguous mandate of the SPLOS since its sixth meeting in 1997.⁵¹³

Despite the legal and political controversies about the mandate of the SPLOS, this body has adopted a few decisions that have had the effect of interpreting or modifying the Convention.⁵¹⁴ None of those, however, related to substantive issues, and even less concerned the offshore energy production and its regulation under UNCLOS. Notably, during its twenty-second meeting, the SPLOS highlighted the importance of marine renewable energy as a tool for economic and social development.⁵¹⁵ The relevant discussion before the SPLOS took place in response to the report produced by the Secretary-General on legal issues regarding marine renewables. However, the SPLOS has not yet followed up on developments concerning that report. Thus, in practice, its relevance to the development and implementation of the relevant rules of UNCLOS has been marginal. Another element reducing the potential of SPLOS in stimulating legal developments concerning the regulation of offshore energy production is its lack of universal membership.⁵¹⁶

3.1.3. *The role of the International Seabed Authority*

In terms of the development of international standards, which might bear implications for the regulation of offshore energy production activities, the ISA could arguably play the most decisive role among the Convention’s institutions. UNCLOS mandates the ISA to adopt appropriate rules, regulations and procedures for the protection of the marine environment.⁵¹⁷ Specifically, the ISA is authorised to develop the ‘Mining Code’, which is a body of rules and standards for the regulation of prospecting for,

511 Annex VI of UNCLOS.

512 For instance, see the 1992 Convention on Biological Diversity (entry into force 29 December 1993) article 23, the 1992 United Nations Framework Convention on Climate Change (entry into force 21 March 1994) article 7(2), SPLOS Report/73 (2001) para 90. See also, Brunnée (2002) *supra* n. 479, 4.

513 SPLOS Report/24 (1997) paras 35-41. At the sixth meeting of SPLOS, it was debated for the first time whether UNCLOS allocated to the SPLOS a role in the reviewing process of the Convention.

514 J Harrison, *Making the Law of the Sea: A Study in the Development of International Law* (Cambridge University Press, 2011) 75-82.

515 SPLOS Report/251 (2012) para 94. Its importance was reiterated in the subsequent report of the SPLOS in 2013, see SPLOS Report/263 (2013) para 83.

516 Harrison (2011) *supra* n. 514, 73-74, 280.

517 Article 145 of UNCLOS.

exploration and exploitation of minerals in areas beyond national jurisdiction.⁵¹⁸ Besides a series of regulations on the exploration of specific mineral resources in the Area, the Authority is in the process of adopting exploitation regulations for those resources and has published several papers on marine environmental protection related to mining activities.⁵¹⁹ Even though those instruments are concerned with mining activities in the Area, it is arguable that they could also influence the setting of domestic standards for seabed activities within national jurisdiction. For instance, scholars have posited that, given the interconnectedness of the oceans, environmental measures for seabed activities within and beyond national jurisdiction should be “compatible”⁵²⁰ to ensure the integrity of the seafloor.⁵²¹

Notably, it is debatable whether the rules and standards produced by the ISA could qualify as international rules and standards for the regulation of similar seabed activities, such as drilling for oil and gas, in areas within national jurisdiction under article 208(3) of UNCLOS, or whether they could inform the international benchmark against which domestic environmental measures are assessed.⁵²² To ascertain whether rules and standards created by the ISA fall within the scope of article 208(3) of UNCLOS, it is first necessary to examine if the ISA is competent to develop such standards under article 208(5) of UNCLOS. Even though the mandate of the ISA is restricted to regulating certain mining activities within the Area for the protection of the marine environment,⁵²³ that does not necessarily mean that its regulations are not legally relevant for seabed activities within national jurisdiction.⁵²⁴ It appears that article 208(5) of UNCLOS illustrates a preference for law-making through competent international organisations or diplomatic conferences. However, it does not preclude the potential of developing international rules and standards, which also apply to seabed activities within national jurisdiction through other institutions or in different contexts.⁵²⁵

518 Articles 145 and 153 UNCLOS.

519 See for instance Decision of the Assembly of the ISA relating to the Regulations on the Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area ISBA/18/A/11, Decision regarding Polymetallic Sulphides ISBA/16/A/12, Decision regarding Polymetallic Nodules ISBA/19/C/17, Draft Regulations on the Exploitation of Mineral Resources in the Area ISBA/24/LTC/6.

520 See for instance article 7(2) of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (entry into force 11 November 2001) which requires measures to be adopted for the high seas which are compatible with those adopted for areas under national jurisdiction.

521 T Markus, and P Singh (2016) ‘Promoting Consistency in the Deep Seabed: Addressing Regulatory Dimensions in Designing the International Seabed Authority’s Exploitation Code’, *Review of European, Comparative and International Environmental Law*, 357-358.

522 A Friedman, ‘Article 208 of UNCLOS and National Regulation of Seabed Mining’ in I Martin, C Salonidis, C Hioureas, I Laird, and B Sahabi (eds) *Natural Resources and the Law of the Sea: Exploration, Allocation, Exploitation of Natural Resources in Areas under National Jurisdiction and Beyond* (Juris Arbitration Law, 2017) 273.

523 Article 157 of UNCLOS.

524 In that respect, the Secretary-General of the ISA has suggested that the Authority must “ensure comprehensive protection in all zones of maritime space within and beyond national jurisdiction in the manner envisaged by articles 208 and 209 of the Convention”, see Report of the Secretary-General of the ISA under Article 166 of UNCLOS, para 114, referred to in Markus, Singh (2016) *supra* n. 521, 358.

525 Proelss (2017) *supra* n. 142, 1398.

Conversely, it is arguable that, if the regulations developed by the ISA were applicable as minimum standards for seabed activities under article 208(3), the provision of article 209(2) of UNCLOS would be redundant.⁵²⁶ Article 209(2) of UNCLOS requires States to adopt measures, which are no less effective than the international rules and standards referred to in article 209(1). The main difference between the similar provisions of article 208(3) and article 209(2) of UNCLOS is that the article 209(2) only refers to standards produced by the ISA under part XI of the Convention. By contrast, article 208(3) orders States to take measures no less effective than international rules and standards, which can and, according to article 208(5) of UNCLOS, must be adopted especially through “*competent international organizations*”. Therefore, article 208(5) of UNCLOS refers to a much broader category of standard-setting processes and institutions, potentially including the ISA.

The exclusive competence of the ISA in setting environmental standards for activities taking place in the Area, which must set the minimum standard for any domestic measures adopted by sponsoring States seems to be justified as means of protecting the “common heritage of mankind”. In the case of seabed activities within national jurisdiction, States are bound to take no less effective environmental measures than the ones prescribed by international standards which, arguably, include the ones adopted by the ISA. However, given the fact that the seabed within national jurisdiction is not internationalised, UNCLOS allows (and requires) States to adopt international environmental standards through any organisations or diplomatic conferences they see fit. For instance, as further discussed in chapter 8, rules and standards adopted through regional cooperation could also qualify as international for the implementation of article 208(3) UNCLOS under specific requirements.⁵²⁷

As to whether the ISA’s regulations are international, in the sense that they are generally accepted by States, it should be remembered that all States parties to UNCLOS are members of the ISA and are bound by its decisions.⁵²⁸ In that respect, regulations developed by the ISA could qualify as international standards, which could serve as a benchmark for the adoption of equally effective domestic regulation under article 208(3) of UNCLOS. Relevant State practice could determine whether such standards are regarded as influential for the regulation of seabed activities within national jurisdiction. Nonetheless, compliance with environmental measures recommended under them can serve as proof that a State has exercised due diligence in adopting all measures necessary to protect the environment from risks related to seabed activities conducted within its jurisdiction.⁵²⁹

526 Friedman (2017) *supra* n. 522, 275, where he argues that even in the case where article 208(3) is interpreted as requiring States to adopt standards that are at least as effective as the regulations made by the ISA for mining activities beyond national jurisdiction, article 209(2) would still have an added value as it would apply to land-locked States conducting activities only in the Area.

527 Compare article 208(3) with article 210(6), which requires that in the case of dumping domestic measures are to be no less effective than the global rules and standards. Arguably, the drafters of the provision had in mind the global rules and standards under the London Convention and wanted those to serve as the minimum standard, precluding the imposition of the stricter standards under regional agreements from becoming the globally applicable minimum standard. Since article 208(3) does not refer explicitly to global rules and standards, it is arguable that the provision does not prevent regional standards from setting the minimum global standard in the case of pollution from seabed activities.

528 Article 156(2) of UNCLOS.

529 Friedman (2017) *supra* n. 522, 286-287.

3.2. The role of UN institutions in the further development of UNCLOS rules on offshore energy production activities

Undeniably, UN institutions have a crucial role in the development of UNCLOS. Various UN bodies have assisted the process of implementation and have supported the establishment of the institutions and organs provided under the Convention.⁵³⁰ The UN institutions have played a cardinal role in the exchange and dissemination of the scientific data and information for State parties and international organisations to monitor the developments concerning UNCLOS.⁵³¹ During the UNCLOS negotiations, the proposals on the introduction of a periodic review mechanism did not bear fruit.⁵³² The calls for a review mechanism were partly addressed by Article 319, which provides that the UN Secretary-General must “report to all State Parties, the Authority and the competent international organisations on issues of a general nature that have arisen with respect to the Convention”.⁵³³ Under this provision, the Secretary-General, alongside the usual depositary functions, must submit reports, *inter alia*, to the State parties on the implementation of UNCLOS and any developments relating to the law of the sea, considering relevant scientific and technological progress.⁵³⁴

The scope of these annual reports has gradually expanded to include all relevant developments on the law of the sea.⁵³⁵ For instance, technological developments in the offshore energy industry raise legal issues concerning the implementation of the Convention and, therefore, have been a relevant subject for the Secretary-General to report upon. In 2012 the Secretary-General’s report addressed legal issues related to marine renewables.⁵³⁶ The report primarily provides an overview of the policy and legal questions regarding these offshore activities.⁵³⁷ In that context, it highlights the importance of UNCLOS as laying down a robust jurisdictional framework and spelling out the rights and duties of States in the different maritime zones concerning the resources found therein.⁵³⁸ Also, the report identifies the relevant global and

530 Moore, Nordquist, Nandan, and Rosenne (1993) *supra* n. 52, 296.

531 For instance, the International Oceanographic Commission, which is a UN specialised body in ocean science and services, has fulfilled the role of providing scientific data on marine resources and the marine environment. In that respect, it has assisted States and competent organisations to comply with their duty under article 244 of UNCLOS. See also B Kwiatkowska, H Dotinga, E Molenaar, A Oude Elferink, and A Soons (eds) *International Organizations and the Law of the Sea* (Martinus Nijhoff, 1999) 83.

532 Oude Elferink (2004) *supra* n. 470, 302, Moore, Nordquist, Nandan and Rosenne (1993) *supra* n. 52, 293, Harrison (2015) *supra* n. 471, 375, see also SPLOS Report/73 (2001) para 89.

533 Article 319(2)(a) of UNCLOS.

534 UN GA, Resolution 49/28, para 15(a), see also E Hey, ‘Reviewing Implementation of the LOS Convention and Emerging International Public Law’ in Oude Elferink and Rothwell (2004) *supra* n. 470, 86.

535 “[T]he annual report of the Secretary-General on the law of the sea covers all developments pertaining to the Convention, including the institutions established by the Convention, as well as other developments in the field of ocean affairs. It also serves as a report on the work of the Organization, and of the United Nations system as a whole, in the field of ocean affairs. The report thus provides the necessary basis for the “annual consideration and review of the overall developments relating to the law of the sea by the General Assembly, as the global institution having the competence to undertake such a review”, see Secretary-General annual report (1996), para 11.

536 UN Secretary General (2012) Report on Oceans and Law of the Sea, A/67/79. See also Redgwell (2014) *supra* n. 448, 619-620.

537 UN Secretary General Report, *supra* n. 536, 4-15.

538 *Ibid.*, 9-10.

regional developments and illustrates the opportunities and challenges brought about by this new use of the oceans.⁵³⁹ In 2008, the Secretary-General submitted a study to the General Assembly concerning the production of offshore energy.⁵⁴⁰ Specifically, the study recommended action to be taken through regional seas conventions to prevent pollution from offshore installations. Nevertheless, the Secretary-General has not reported on any such developments.

The UN General Assembly (GA) has identified itself as the global institution having the competence to undertake the annual review and assessment of the implementation of the Convention.⁵⁴¹ The reports submitted by the Secretary-General inform the yearly survey by the GA about the implementation of UNCLOS. In the view of its quasi-universal membership and flexible participation rules, which enable pertinent other institutions to attend its meetings as observers, the GA has obtained significant responsibility in the further development of UNCLOS. Primarily for the same reasons, the GA has additionally acted as a critical forum for the negotiation of new rules regarding the law of the sea.⁵⁴² Its role is somewhat comparable to that of a CoP under many international environmental treaties.⁵⁴³ In its annual resolutions on the law of the sea,⁵⁴⁴ the GA addresses a wide range of issues, such as the impacts of climate change on the oceans, ocean noise and oil spills. Inevitably, the resolutions have touched upon matters concerning the regulation of offshore energy.⁵⁴⁵

Despite the heated scholarly debate concerning the legally binding nature of some GA resolutions,⁵⁴⁶ their drafting is taken very seriously by States, and they carry remarkable political weight.⁵⁴⁷ These resolutions are not only relevant to the UN member States but also call for actions by specialised international organisations.⁵⁴⁸ Some of these organisations may have a duty to take action following a GA Resolution, depending on their commitments under relationship agreements which they have entered into with the UN.⁵⁴⁹ As a result, GA resolutions can bring about legal developments in the regulation of offshore energy or create the necessary impetus for the negotiation of relevant norms. However, the importance of the UN GA resolutions for the further development of offshore energy regulation must not be overestimated, since they have not yet contributed to the development of any international rules and standards in that respect.

The United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea (UNICPOLOS) has been established by the GA to facilitate the annual review of developments in ocean affairs.⁵⁵⁰ Each year UNICPOLOS discusses

539 *Ibid*, 15-24.

540 Oceans and Law of the Sea, Study prepared by the Secretariat of the GA, A/63/342, 15.

541 S Tarassenko, and I Tani (2012) 'The Functions and Role of the United Nations Secretariat in Ocean Affairs and the Law of the Sea', *International Journal of Marine and Coastal Law*, 692.

542 J Harrison, 'Actors and Institutions for the Protection of the Marine Environment' in Rayfuse (2015) *supra* n. 340, 59.

543 Oude Elferink (2004) *supra* n. 472, 304.

544 These resolutions are concerned with the law of the sea and the oceans, while there is also an annual resolution on fisheries.

545 UN GA, Resolution 67/78, on marine renewables, paras 213, 253.

546 J Alvarez, *The Impact of International Organizations on International Law* (Brill, 2017) 143-151.

547 Harrison (2017) *supra* n. 347, 296.

548 Oude Elferink (2004) *supra* n. 472, 305.

549 Harrison (2017) *supra* n. 347, 296.

550 UN GA, Resolution A/RES/54/33, 24 November 1999.

a multitude of substantive matters on the law of the sea and submits a report to the GA.⁵⁵¹ It can make suggestions to the GA on which issues should be drawn to the attention of the competent international organisations.⁵⁵² Unlike the meetings of the GA, the Process meetings are open to broader participation by observers, including international organisations and relevant NGOs. The broad range of actors participating in its meetings has a positive influence on the content of its reports and is considered one of its main advantages.⁵⁵³ During its thirteenth meeting in 2012, the discussions of the Process focused on the issue of marine renewables.⁵⁵⁴ The importance of promoting marine renewable energy was stressed by many experts participating in the meeting, who also highlighted the need for protecting investments, providing financial means and developing marine spatial planning to strengthen the industry.⁵⁵⁵ However, as of yet, there have been no relevant normative developments at the global level.

Furthermore, another crucial cognitive mechanism regarding the environmental regulation of offshore energy production is provided under the auspices of the UN by the Regular Process for Global Reporting and Assessment (RPGRA) of the state of the marine environment.⁵⁵⁶ The RPGRA bears the responsibility of reporting and assessing the status of the marine environment, including socio-economic aspects. In 2015 the GA approved the first World Oceans Assessment Report drafted by the RPGRA.⁵⁵⁷ Among other topics, the report contains detailed information on the impacts on the marine environment of both offshore hydrocarbon industries⁵⁵⁸ and renewable energy industries.⁵⁵⁹ Even though it does not directly contribute to the further development of environmental rules on offshore energy activities, its assessments provide invaluable information on their impact on the marine environment. In that way, these assessments shape a common understanding of the need to adopt measures to protect the marine environment from offshore energy activities. In this respect, the RPGRA retains a potentially significant role in evaluating actions taken in different regions and illustrating any gaps in the regulation of offshore energy production.

3.3. Competent international organisations as fora for the further development of rules on offshore energy production

Other international organisations have also played a significant role in updating the normative content of the duty to protect the marine environment under UNCLOS. In that regard, the Convention requires States to cooperate towards developing

551 Oude Elferink (2004) *supra* n. 472, 305.

552 Harrison (2011) *supra* n. 514, 253-257.

553 Harrison (2011) *supra* n. 514, 254-255.

554 UNICPOLOS, Report, *supra* n. 207.

555 *Ibid*, paras 49-58.

556 UN GA, Resolution 57/141, para 45. The legal basis for the establishment of this body is found in article 200 of UNCLOS, according to which States have the duty to participate actively in regional and global programmes to assess the nature and extent of marine pollution or degradation of the marine environment.

557 UN GA, Resolution 70/235, para 266.

558 Chapter 21 of the 2015 World Oceans Assessment, available online at: http://www.un.org/Depts/los/global_reporting/WOA_RPROC/Chapter_21.pdf.

559 Chapter 22 of the 2015 World Oceans Assessment, available online at: http://www.un.org/Depts/los/global_reporting/WOA_RPROC/Chapter_22.pdf.

environmental rules and standards, *inter alia*, through the competent international organisations.⁵⁶⁰ States must cooperate on a global basis and, as appropriate, on a regional basis, taking into account regional specificities of the marine environment. This “outsourcing” of normative developments has been characterised as a delegation of public law powers under the “constitutional” provisions of UNCLOS.⁵⁶¹ Several international organisations have already adjusted to their new responsibilities under the Convention, while many new institutions have been established at the global and regional level.⁵⁶²

At the global level, UNCLOS has assigned essential functions to the IMO.⁵⁶³ Even though some of its members have contested the organisation’s authority concerning the regulation of offshore energy activities,⁵⁶⁴ the IMO retains a considerable potential to contribute to the progressive development of environmental rules for offshore energy production activities given its competence concerning maritime safety.⁵⁶⁵ In that respect, the IMO has adopted some significant instruments relating to offshore energy activities,⁵⁶⁶ which attest to the fact that the regulation of offshore energy activities partly falls within its mandate.⁵⁶⁷ In 2009 the IMO, acting on the recommendations of the Maritime Safety Committee on the need for new regulation to accommodate the technological developments in the offshore energy industry, adopted a revised “*Code for the Construction and Equipment of Mobile Offshore Drilling Units*”⁵⁶⁸ The Code provides international guidelines to ensure the safety of the operation of offshore energy installations but does not address any environmental requirements for the drilling on the seabed, leaving a broad discretion to the coastal State.⁵⁶⁹ The IMO has issued resolutions on the removal of offshore installations,⁵⁷⁰ as well as the establishment of safety zones around offshore devices.⁵⁷¹ In addition, the IMO has adopted protocols on the suppression of unlawful acts against the safety of fixed platforms on the continental shelf⁵⁷² and instruments regarding liability

560 Article 197 of UNCLOS.

561 Hey (2004) *supra* n. 534, 88.

562 Satya Nandan (1991) ‘Existing Institutional Framework and mechanisms’, United Nations University website, available online at: http://archive.unu.edu/unupress/unupbooks/uu15oe/uu15oe08.htm#existing_institutional_framework_and_mechanisms.

563 IMO, Implications of the United Nations Convention on the Law of the Sea for the International Maritime Organization, Study by the Secretariat of the International Maritime Organization, 30 January 2014, LEG/MISC.8.

564 *Ibid*, 108, 112.

565 Roach (2014) *supra* n. 451, 107-108. See also, article 15(j) of the Convention on the International Maritime Organization regarding the functions of the IMO Assembly with respect to maritime safety.

566 See further discussion in chapter 3, sub-section 3.4.2.

567 For instance, the IMO is the competent organisation to adopt standards for offshore installations under article 60(5) of UNCLOS.

568 IMO, Resolution A.1023(26) Code for the Construction and Equipment of Mobile Offshore Drilling Units (2009 MODU Code), adopted on 2 December 2009.

569 See Preamble to the 2009 MODU Code, para 6.

570 IMO, Resolution A.672(16), Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone, adopted on 19 October 1989.

571 IMO, Guidelines for Safety Zones and the Safety of Navigation around Offshore Installations and Structures, adopted on 7 December 2010.

572 1988 Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf, 2005 Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf.

and compensation for, *inter alia*, pollution arising from offshore installations.⁵⁷³ Even though most of these instruments are primarily relevant to offshore oil and gas installations, they can also apply *mutatis mutandis* to marine renewable energy devices, at least as far as the safety standards are concerned.⁵⁷⁴

The UNEP also qualifies as a competent international organisation for the implementation and the further elaboration of environmental rules concerning offshore energy activities.⁵⁷⁵ In the 1970s, the UNEP had already attempted to draft international standards for marine oil and gas exploitation.⁵⁷⁶ UNEP submitted its Environmental Guidelines on Offshore Mining and Drilling to the GA,⁵⁷⁷ which called upon States to consider them when formulating domestic legislation or during further negotiations for international treaties. Despite their “soft law” nature, these Guidelines offer normative guidance for the implementation of the duty to protect the marine environment and can be useful as an interpretative tool of the relevant provisions of UNCLOS. Besides, under certain conditions, these guidelines can also qualify as international standards applicable under article 208(3) of UNCLOS.⁵⁷⁸ The UNEP has recently highlighted the inconsistency of environmental standards for offshore energy activities across different marine regions and has committed to developing international guidance by 2020.⁵⁷⁹ Time will tell whether this plan will soon come to fruition.

As further discussed in chapter 5,⁵⁸⁰ Part XII of UNCLOS encourages “regionalism” as a significant regulatory approach as far as tackling pollution from seabed sources is concerned.⁵⁸¹ At the time of UNCLOS’ negotiations, States were fully aware of the considerable parallel developments at the regional level, for instance under the UNEP Regional Seas Programme. The increasing emphasis on regionalism was the necessary compromise between the pursuit of globally relevant solutions and the mostly ineffective unilateral responses to environmental problems of the oceans.⁵⁸² Part XII of UNCLOS establishes the legal basis for the adoption of

573 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage and its 1992 Protocol, International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea and its 2010 Protocol, International Convention on Civil Liability for Bunker Oil Pollution Damage. For further information, see IMO website on liability and compensation: <http://www.imo.org/en/ourwork/legal/pages/liabilityandcompensation.aspx>.

574 UNICPOLOS (2012) report, *supra* n. 207.

575 Harrison (2017) *supra* n. 347, 37.

576 Vinogradov and Wagner (1998) *supra* n. 440, 113, Harrison (2017) *supra* n. 347, 215.

577 UNEP (1982) ‘Environmental Law Guidelines and Principles N. 4: Offshore Mining and Drilling’, Conclusions of the Study of Legal Aspects Concerning the Environment Related to Offshore Mining and Drilling within the Limits of National Jurisdiction, reprinted in M Tolba, and I Rummel-Bulska (eds) *Global Environmental Diplomacy: Negotiating Environmental Agreements for the World 1973-1992* (MIT, 1988).

578 See also chapter 3, sub-section 3.4.

579 18th Global Meeting of the Regional Seas, Conventions and Action Plans, UN Doc UNEP/WBRS.18/5 16 September 2016, T3.2, “A global guideline for extraction of oil in marine and coastal environment is developed”.

580 See chapter 5, section 3.

581 McConell, and Gold (1991) *supra* n. 346, 85.

582 Kwiatkowska (1989) *supra* n. 188, 167-168, de Mestral (1979) *supra* n. 437, 517-518, Vinogradov and Wagner (1998) *supra* n. 440, 100. See also, on the UNEP’s mandate, Birnie Boyle, and Redgwell (2009) *supra* n. 334, 65-69.

regional sea conventions and shapes their content,⁵⁸³ although some of them were negotiated irrespective of the Convention.⁵⁸⁴ Since 1972, a remarkable number of regional agreements and protocols have evolved to deal with the protection of the marine environment against a wide range of offshore activities, including offshore energy exploitation. Institutions under these regional agreements have demonstrated an unparalleled potential in performing different functions relevant to the regulation of offshore energy production.⁵⁸⁵

This brief discussion illustrates that UNCLOS has resulted in the development of a somewhat fragmented “system” of institutions concerning the regulation of offshore energy production. Given the lack of coherent connections among the different institutions, Treves has argued that “*the law of the sea system of institutions*” is a rather “*asystematic system*”, created only for the normative development of UNCLOS.⁵⁸⁶ However, the seeming lack of coherence among the co-existing institutions might not necessarily be problematic.⁵⁸⁷ The specialisation of the international organisations and treaty bodies can offer a solution to the problems related to the creation of a centralised authority dealing with all relevant aspects of the law of the sea.⁵⁸⁸

Interim conclusions

The brief historical overview has revealed how the compelling interest of States in exploiting offshore energy resources has significantly influenced the legal development of the modern law of the sea. The Grotian principle of the freedom of the seas incrementally eroded to give way to the claims of sovereignty over marine energy resources by coastal States. Over time, the interests concerning the uses of the oceans underwent considerable changes. Eventually, the compelling economic interest in the exploitation of offshore energy resources had to be balanced with other – previously predominant – uses of the oceans and the emerging environmental protection concerns. Several provisions of UNCLOS mirror the tug-of-war between these energy exploitation-related interests with other environmental and economic interests at sea.

UNCLOS lays down the ground rules for the international regulation of offshore energy production. It spells out a robust jurisdictional framework for all the activities related to offshore energy production. Coastal States’ rights have expanded seawards, allowing the exploitation of energy resources further off the coasts. Within the territorial sea, the coastal State enjoys sovereignty, which is qualified by the right of innocent passage and other international obligations of the State. Moving further seawards, the coastal State obtains functional sovereign rights over offshore energy resources on the continental shelf and, once proclaimed, within the EEZ. The coastal State has exclusive rights over all activities related to the production of both traditional and renewable forms of marine energy. However, the exercise of these

583 As is further discussed in chapter 6 many of the general environmental provisions of UNCLOS are substantiated in regional sea agreements and their protocols.

584 S Watson (2020) *supra* n. 375, 185.

585 See chapter 6, section 4.

586 Treves (1998) *supra* n. 473, 340.

587 Harrison (2015) *supra* n. 471, 391.

588 On the discussion before the ILC regarding the establishment of a centralised authority to regulate on all matters relevant to the law of the sea, see *supra* n. 474-475.

rights requires a balance with third States' rights and the duty to protect the marine environment.

A constant balancing exercise between competing interests lies at the heart of UNCLOS. The Convention prescribes the obligation to pay "due regard" as a balancing tool among the rights and duties of coastal and third States. However, the lack of guidance on its lawful implementation and its inconsistent application on a case-by-case basis can result in legal uncertainty in light of emerging uses of the oceans. Notably, the full-scale introduction of renewable energy installations has the potential to alter the balance previously struck among different ocean uses. In this complicated legal equation, marine spatial planning can provide valuable solutions. All in all, UNCLOS offers a flexible jurisdictional framework to address new challenges posed by offshore energy production. Nonetheless, its resilience will depend upon the interpretation and implementation of its rules in good faith by States in their exercise of rights and duties. Legal certainty concerning rights and duties over offshore energy resources also significantly depends upon the precise delimitation of maritime areas.

Part XII of UNCLOS also makes it clear that the exercise of sovereignty and sovereign rights over the marine energy resources are subject to the obligation of States to protect and preserve the marine environment. States need to take all necessary measures to prevent, control and minimise pollution from offshore energy production. These measures are not subject to the unfettered discretion of States but need to be reasonably appropriate in achieving the objective of marine environmental protection. The test of "reasonableness" can be operationalised to evaluate States' compliance with their duty to take all necessary measures. Moreover, the procedural aspects of the duty to protect the marine environment give more content to the seemingly elusive standard of care under the Convention. However, UNCLOS does not include specific environmental standards concerning any offshore activities for fear of establishing outdated standards. Instead, it establishes due diligence obligations and creates the legal basis for the further development of environmental rules and standards at the global and regional levels.

Noticeably, UNCLOS treats pollution from "seabed activities" as a matter that requires international regulation and, to that end, it requires States to conform with minimum international rules standards. In that respect, the importance of the rule of reference under its article 208(3) cannot be overemphasised. The Convention incorporates by reference extraneous norms as benchmarks for evaluating the conduct of its parties concerning their environmental protection duties. In this way, it facilitates normative interactions between UNCLOS as the overarching framework for the regulation of offshore energy activities and specialised instruments. Additionally, UNCLOS obliges States to cooperate towards the formulation of more detailed international norms and standards, primarily through competent international organisations and diplomatic conferences. Therefore, the content of the obligation to protect and preserve the marine environment in relation to offshore energy production requires further elaboration through the adoption of specialised instruments. These "external" rules and standards can inform the interpretation of UNCLOS' rules and shape the normative content of the duty to protect the environment in the context of offshore energy activities.

Unlike the 1958 Geneva Conventions on the law of the sea, UNCLOS comes with an institutional framework, which can theoretically contribute to its further development. However, it appears that its institutions have a somewhat limited role in developing and updating UNCLOS when compared with the significant role of treaty bodies under second-generation environmental agreements in updating their norms. For instance, the dispute settlement mechanisms under UNCLOS play an incidental role, which is further limited by their jurisdictional constraints and the arguments invoked by the parties to a dispute before them. The ISA also seems to have an indirect role in providing normative guidance to States, which are responsible for the adoption of rules and regulations applicable to offshore energy activities within national jurisdiction.⁵⁸⁹ Without underestimating their contribution in updating and adapting the rules under UNCLOS to new legal and environmental challenges in the context of offshore energy production, it is safe to conclude that the institutional framework under UNCLOS has a considerably circumscribed role in that respect.

The development and monitoring of the implementation of UNCLOS have also relied upon the UN institutions and specialised bodies. Specifically, the GA has undertaken a role equivalent to that played by the CoPs under most modern environmental treaties. Its resolutions on the law of the sea and ocean affairs have the potential to catalyse legal developments in the regulation of offshore energy. Coupled with the role of several other UN bodies, the resulting picture is one of the multiple institutional bodies dealing incidentally with different aspects of offshore energy production activities.⁵⁹⁰ However, that is not necessarily problematic. Due to the lack of a central decision-making body under UNCLOS, States have attempted to address the challenges of offshore energy production activities within other specialised agreements, both at the global and regional levels. In that respect, global and regional organisations have also contributed to the normative development, interpretation and implementation of the Convention's rules in respect of offshore energy production. For that reason, the following chapter turns to examine the relevant environmental rules at the global level, and their potential to interact with and enrich the normative content of the duty to protect the marine environment in the context of offshore energy production activities under UNCLOS.

589 See also Bojang (2017) *supra* n. 38, 299.

590 In that respect, Harrison argues that the fragmented institutional framework under UNCLOS might result in some environmental concerns falling between the cracks and, thus, not being adequately addressed, see Harrison (2017) *supra* n. 347 276.

CHAPTER 3

The global environmental regulation of offshore energy production: in search of environmental standards in ocean governance

Introduction

Recent developments in international law and policy, such as the adoption of the Paris Agreement and Sustainable Development Goal 7 on access to sustainable energy,¹ have stimulated a significant momentum for the promotion of offshore renewable energy. According to the Intergovernmental Panel on Climate Change (IPCC), ocean energy can eventually generate enough power to cover the current global needs and contribute to the greenhouse gases (GHG) reduction in the long term.² However, the foreseeable expansion of marine renewable energy generation, even considering the progressive nationally determined commitments under the Paris Agreement, cannot wholly replace the exploitation of traditional forms of energy at sea.³ Since the era of fossil fuels appears to be far from over,⁴ when discussing the environmental regulation of energy production at sea, it is necessary to address the distinct challenges faced by the international legal framework concerning the different sources of marine energy that contribute to the global energy mix.

Offshore oil and gas exploitation activities are associated with a variety of extremely high environmental, social and economic risks.⁵ Pollution from oil and gas exploitation at sea can be either operational or accidental.⁶ The former type refers to pollution caused during the exploitation process, including drill cuttings, leakages

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- 1 UN GA Resolution, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1.
 - 2 IPCC, *Renewable Energy Sources and Climate Change Mitigation: Special Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2012) 501.
 - 3 H Jessen, 'Sustainable Energy Generation from the Oceans', in Markus Kotzur, et al., *Sustainable Ocean Resource Governance: Deep Sea Mining, Marine Energy and Submarine Cables* (Brill, 2018) 76.
 - 4 IEA, *World Energy Outlook 2017*, where the future for renewables is described as bright, while at the same time it is noted that the era of oil is not yet over <www.iea.org/weo2017/>. See also, GBI Research (2012) 'Offshore Drilling Industry to 2016 – Rapidly Rising Demand for Hydrocarbons Expected to Boost Offshore Drilling in Ultra-Deepwater and Harsh-Weather Environments', <http://www.gbiresearch.com/report-store/market-reports/archive/offshore-drilling-industry-to-2016-rapidly-rising-demand-for-hydrocarbons-expected-to-boost-offshore-drilling-in-ultra-deepwa/contents>.
 - 5 M Gavouneli, *Pollution from Offshore Installations* (Graham & Trotman/ Martinus Nijhoff, 1995) 40, G E Kwadzo Dzah (2015) 'Re-conceptualizing Environmental Governance in Ghana's Offshore Oil and Gas Development', *Ocean Yearbook*, 230-232, N Liu, 'Protection of the Marine Environment from Offshore Oil and Gas Activities, in R Rayfuse (ed) *Research Handbook on International Marine Environmental Law* (Edward Elgar, 2015) 190, S Patin, 'Offshore Oil and Gas Production and Transportation' in M Solomon, and T Markus (eds) *Handbook on Marine Environment Protection, Science, Impacts and Sustainable Management* (Springer, 2018) 154-156.
 - 6 S Vinogradov, and J P Wagner, 'International Legal Regime for the Protection of the Marine Environment Against Operational Pollution from Offshore Petroleum Activities', in Z Gao, *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998) 93-94. The authors argue that intentional pollution is rather unlikely because it would run against any commercial interests of the industry. See also, Gavouneli, *supra* n. 5, 40.

of hydrocarbons and muds, some of which contain toxic chemical compounds.⁷ The environmental impact of operational pollution varies depending on the sensitivity of the marine area, the technology used and the age of the installation. Accidental pollution, primarily resulting from massive blow-outs and collisions with offshore structures, poses grave threats to the oceans, as recent major environmental disasters (Deepwater Horizon, Montara, Penglai) have demonstrated.⁸ The deeper the location of installations, the more difficult remedying such an accident becomes.⁹

By comparison, marine renewable energy production has been considered to be benign to the marine environment.¹⁰ That perception is partly owed to the fact that, except for offshore wind energy,¹¹ marine renewables, such as tidal, wave and ocean thermal energy, are still at a nascent stage of development and, therefore, scientific awareness about their environmental externalities is limited. Nonetheless, the gradual expansion of the marine renewable industry has drawn scientists' attention to their potential ecological impacts.¹² Research has indicated that such devices can have significant effects, including the alteration of electromagnetic fields, the introduction of noise, changes in water salinity, the disturbance of the habitat structure of fish, mammals and birds or even some species' mortality.¹³ However, for the time being, the primary challenge concerning the environmental regulation of marine renewables remains the lack of scientific certainty about their ecological consequences.¹⁴

That said, even the exploitation of different types of fossil fuels at sea can pose disparate environmental risks. For instance, the results of an offshore oil spill endure for much longer compared with those stemming from a gas leak due to the different physical properties of oil and gas. While gas will naturally evaporate into

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- 7 J Warren Kindt (1985), 'The Law of the Sea: Offshore Installations and Marine Pollution', *Pepperdine Law Review*, 382, Vinogradov and Wagner, *supra* n. 6, 94, 96-97, K De Smedt et al (2013) 'Civil Liability and Financial Security for Offshore Oil and Gas Activities', *Report of the European Institute for Transnational Legal Research, Maastricht University*, 89.
 - 8 S Vinogradov (2013) 'The Impact of Deepwater Horizon: The Evolving International Regime for Offshore Accidental Pollution Prevention, Preparedness and Response', *Ocean Development and International Law*, 350, S Bosma (2012) 'The Regulation of Marine Pollution Arising from Offshore Oil and Gas Facilities – An Evaluation of the Adequacy of the Current Regulatory Regimes and the Responsibility of States to Implement a New Liability Regime', *Australia and New Zealand Maritime Law Journal*, 89, D Olawuyi (2012) 'Legal and Sustainable Development Impacts of Major Oil Spills', *Consilience: Journal of Sustainable Development*, 1-15.
 - 9 J Rochette, M Wemaere, L Chabason, and S Callet, 'Seeing Beyond the Horizontong for Deepwater Oil and Gas: Strengthening the International Regulation of Offshore Energy Exploration and Exploitation', *IDDRI Studies No 01/14*, 8.
 - 10 D Leary, and M Esteban (2011) 'Recent Developments in Offshore Renewable Energy in the Asia-Pacific Region', *Ocean Development & International Law*, 119.
 - 11 Report of the Secretary-General (2012) 67th Session, UN Doc. A/67/79, 5, A Kannen et al. 'Renewable Energy and Marine Spatial Planning: Scientific and Legal Implications' in M Nordquist, J Norton Moore, A Chircop, and R Long (eds) *The Regulation of the Continental Shelf Development. Rethinking International Standards* (Martinus Nijhoff, 2013) 157-158.
 - 12 D Wilhemson, et al. (2010) *Greening Blue Energy: Identifying and Managing the Biodiversity Risks and Opportunities of Offshore Renewable Energy*, IUCN, 13-15. See also, Group of Experts of the Regular Process, *First Global Integrated Marine Assessment: World Ocean Assessment I* (New York and Cambridge University Press, 2015) 357-358.
 - 13 Report of the Secretary-General, *supra* n. 11, 220. For an analysis of the impacts of offshore wind energy production on benthos, fish and birds, see J Ludeke (2018) 'Exploitation of Offshore Wind Energy' in Solomon and Markus *supra* n. 5, 168-174.
 - 14 Wilhemson et al, *supra* n. 12, 27.

the air, the oil will float and spread quickly through the marine environment.¹⁵ The diversified risks posed to the marine environment by the exploitation of different energy sources, as well as the varying level of scientific certainty about those risks, are mirrored in the piecemeal approach of offshore energy production regulation under marine environmental law. Notably, the existing international environmental rules regarding pollution from offshore hydrocarbon extraction have largely evolved on a sectoral basis,¹⁶ and often they are not directly relevant for marine renewables. On that account, except for the general marine environmental protection rules and specific rules on nature conservation, which apply to both fossil and renewable forms of offshore energy, hydrocarbon extraction and marine renewable energy generation activities are subject to different environmental instruments and are the concern of diverse international actors.¹⁷

Marine environmental law “*lies in an area of overlap between the law of the sea and international environmental law, containing elements of each and belonging to both*”.¹⁸ As discussed, the environmental regulation of all types of offshore energy production activities is anchored to UNCLOS.¹⁹ However, the environmental framework of UNCLOS cannot operate in isolation from normative developments in international marine environmental law. For that reason, UNCLOS mandates States to develop detailed international instruments²⁰ and includes various legal mechanisms to adapt to legal, environmental, and technological changes.²¹ The Convention is complemented by a multitude of global and regional environmental treaties and norms, which add flesh to the bare bones of the duty to protect and preserve the marine environment in the context of offshore energy activities.²² Customary rules of international environmental law, such as the obligation to conduct an EIA before any planned activity which might cause significant transboundary harm,²³ also supplement the treaty-based environmental obligations at the global level. In that respect, UNCLOS has fostered a remarkable symbiotic relationship with international environmental law.

When it comes to the international environmental regulation of offshore energy generation, one needs to be aware that, besides States and international organisations,

15 R L Johnstone, *Offshore Oil and Gas Development in the Arctic under International Law: Risk and Responsibility* (Brill, 2014) 13.

16 Z Gao, ‘Environmental Regulation of Oil and Gas in the Twentieth Century and Beyond: An Introduction and Overview’, in Gao (1998) *supra* n. 6, 29.

17 On the multitude of actors engaged in the governance of marine renewable energy see F Guerra (2018) ‘Mapping Offshore Renewable Energy Governance’, *Marine Policy*, 24-31.

18 L de La Fayette (2001) ‘The Marine Environment Protection Committee: The Conjunction of the Law of the Sea and International Environmental Law’, *International Journal of Marine and Coastal Law*, 158.

19 A shorter version of this chapter has been published as an article, see N Giannopoulos (2019) ‘Global Environmental Regulation of Offshore Energy Production: Searching for Legal Standards in Ocean Governance’, *Review of European, Comparative and International Environmental Law*,

20 Article 208(5) of UNCLOS.

21 See chapter 2, sub-section 2.2.

22 The ICJ in the *Gabčíkovo-Nagymaros* case stressed that “*new norms have to be taken into consideration and ...new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past*”, *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* Judgment (on the merits) of 25 September 1997, ICJ Rep 7, para 140.

23 ICJ, *Pulp Mills on the River Uruguay (Argentina v Uruguay)* Judgment (on the merits) of 20 April 2010, ICJ Reports 2010, ICGJ 425, para 205.

there is a plurality of non-State actors, which are not only relevant as recipients of rights and obligations²⁴ but also contribute importantly to shaping and implementing the relevant international legal framework.²⁵ Several non-binding environmental guidelines, standards and instruments of corporate social responsibility,²⁶ are developed by international organisations, CoPs to environmental agreements, expert treaty bodies and private actors (e.g. forums of domestic regulators, professional energy associations of the offshore industry).²⁷ These non-binding guidelines and standards purport either to guide States' conduct or to directly address the behaviour of the offshore energy industry to prevent, reduce and control marine pollution.²⁸ For instance, IRENA collaborates with specialised professional associations in the development of standards of operation tailored explicitly for offshore renewable energy devices.²⁹ In general, these standards are not binding on either States or the industry. However, their embeddedness in the international legal framework may enhance their normative value. Depending on their institutional source, and on the form and procedure through which they are adopted, these non-binding pronouncements may become legally relevant as interpretative guidance or evidence that a State has exercised due diligence in protecting the marine environment.

Within this fragmented ocean governance framework, the present chapter examines whether normative developments in international environmental law can enhance the duty of States under UNCLOS to protect the marine environment in the context of offshore energy production, and, thus, allow the Convention to adapt to new challenges. Zooming in on the global level, it first examines the content and nature of environmental duties concerning the offshore energy production in areas within national jurisdiction. Following a short mapping exercise of the customary and treaty-based obligations which have implications for those activities, the chapter explores how environmental duties under agreements of global remit can interact with and inform the relevant obligations under UNCLOS. Then, it also reflects upon the relevance of non-binding instruments in defining the content of the duty to protect the marine environment in relation to offshore energy production. Specifically, it examines the potential for interactions between UNCLOS and non-binding instruments with implication for the offshore energy sector, since the latter can be a source of normative guidance for the interpretation or the implementation of

24 For instance, the International Convention on Oil Pollution, Preparedness, Response and Cooperation imposes the obligation of emergency planning also on operators of offshore energy installations, article 3 (2) of OPRC.

25 S Trevisanut (2014) 'The Role of Private Actors in Offshore Energy: Shifting Models of Participation', *The International Journal of Marine and Coastal Law*, 651-660.

26 For instance, IRENA has produced several technical recommendations which directly address the marine renewable industry and cooperates with offshore energy industry associations like the International Regulator's Forum (IRF), see IRENA website: http://www.irena.org/-/media/Files/IRENA/Agency/Publication/2013/Inventory_renewable_energy_standards.pdf?la=en&hash=9E18027869BB956421143C768963EE945FAE7926.

27 H Jessen, 'Offshore Oil and Gas Exploitation' in Solomon and Markus (2018) *supra* n. 5, 691.

28 A Bonfanti, and F Romanin Jacur (2014) 'Energy from the Sea and the Protection of the Marine Environment: Treaty-Based Regimes and Ocean Corporate Social Responsibility', *International Journal of Marine and Coastal Law*, 632.

29 IRENA (2013) 'International Standardization in the Field of Renewable Energy', http://www.irena.org/-/media/Files/IRENA/Agency/Publication/2013/Inventory_renewable_energy_standards.pdf?la=en&hash=9E18027869BB956421143C768963EE945FAE7926.

the Convention's obligations. The hypothesis is that synergies among environmental duties and their interaction with non-binding standards can enhance the normatively modest environmental framework under UNCLOS, and particularly the duty to protect and preserve the marine environment from risks related to marine energy production.

1. Global environmental rules with implications for offshore energy production activities

Customary international law provides the solely universally applicable international rules with implications for the environmental regulation of offshore energy production activities.³⁰ These customary rules set the lowest common denominator concerning the duty of care (due diligence) that States must exercise to comply with their obligation to prevent, control and reduce significant harm to the marine environment.³¹ At the global level, this due diligence obligation to prevent damage to the marine environment potentially caused by activities within their jurisdiction is complemented, informed, and shaped by the relevant obligations of States under further international agreements, which operate alongside the legal framework of UNCLOS. In that respect, this section first examines the normative contours and the limitations of customary law obligations as far as offshore energy generation activities are concerned. Then, it discusses the content and nature of the relevant duties under environmental agreements of global remit to assess their shortcomings in regulating all aspects of offshore energy production activities.

1.1. The customary prevention obligations and offshore energy production activities

According to the principle of permanent sovereignty over natural resources,³² every State is free to exploit the natural resources within its jurisdiction and pursue its own environmental and developmental policies.³³ This fundamental principle, which is reiterated in a remarkable number of environmental instruments, is also reflected in the provisions of UNCLOS, which grant the coastal States sovereignty over the territorial sea, and sovereign rights over the natural resources within the EEZ and

30 Arguably, Part XII of UNCLOS acquired customary status shortly after its conclusion partly because its rules were codifying and progressively developing already existing global and regional rules. That pre-existing widespread State practice catalysed by these pre-existing rules is one of the elements, which were considered to pronounce the customary status of Part XII, see J Schneider (1981) 'Codification and Progressive Development of International Environmental Law at the Third United Nations Conference on the Law of the Sea: The Environmental Aspects of the Treaty Review', *Columbia Journal of Transnational Law*, 253, A Boyle (1985) 'Marine Pollution Under the Law of the Sea Convention', *American Journal of International Law*, 350.

31 E D Brown, *Sea-Bed Energy and Mineral Resources and the Law of the Sea, Vol 1 The Areas within National Jurisdiction* (Graham & Trotman, 1984) I.12 8-9.

32 See UN GA Res 1803 (XVII), UNGA Res 3281 (XXXIX). The principle was regarded as a rule of customary international law by the ICJ in the *Armed Activities Case*, see N Schrijver (2015) 'Fifty Years Permanent Sovereignty over Natural Resources: The 1962 UN Declaration as the *Opinio Iuris Communis*', in M Bungenberg, S Hobe (eds) *Permanent Sovereignty over Natural Resources* (Springer, 2015) 27.

33 Principle 2 of the United Nations Rio Declaration on Environment and Development (1992). See also, N Schrijver, *Sovereignty over Natural Resources: Balancing Rights and Duties* (Cambridge University Press, 1997) 227.

the continental shelf, accordingly.³⁴ However, the exclusive sovereign right of coastal States over their energy resources at sea is limited by both their obligation to protect the marine environment under UNCLOS and their duty to protect the rights and interests of third States under customary international law.³⁵ Therefore, coastal States' discretion to carry out or permit offshore energy generation activities is by no means absolute.³⁶ The exercise of sovereignty in the marine environment cannot be unfettered.

Under Principle 2 of the Rio Declaration "*States have, in accordance with the Charter of the United Nations and the principles of International Law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction*". This principle³⁷ has been recognised consistently as part of customary international law in the jurisprudence of the ICJ,³⁸ ITLOS³⁹ and various arbitral tribunals.⁴⁰ Notably, the customary no-harm or prevention obligation (*sic utere tuo ut alienum non laedas*) requires States to use all the means at their disposal to prevent activities occurring within their jurisdiction or under their control from causing significant harm to the environment of other States or on areas beyond national jurisdiction.⁴¹ The no-harm rule does not create an obligation of result; instead, it imposes a duty of conduct on the State of origin of the environmental harm.⁴² In other words, it does not establish an absolute obligation to succeed in

34 Articles 2, 56, 77 and 193 of UNCLOS.

35 The inherent connection between the permanent sovereignty principle and the no harm principle is reflected also in the 2001 ILC Draft Articles on Prevention of Transboundary Harm, see Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, UN Doc A/56/10, Preamble para 2.

36 ILC Draft Articles on Prevention, *supra* n. 35, Preamble para 3.

37 The principle was for the first time acknowledged in the *Trail Smelter* Arbitration, see Trail Smelter, III UNRIAA, Award of 11 March 1941, 1965: "No state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence".

38 ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, ICJ Rep 226, para 29, *Pulp Mills on the River Uruguay*, Judgement, ICJ Reports 2010, para 101, *Certain activities carried out by Nicaragua in the Border Area, Construction of a road in Costa Rica along the river San Juan*, Judgment of 16 December 2015, para 104, 118.

39 ITLOS, *Dispute Concerning the Delimitation of the Maritime Boundary between Ghana and Cote d' Ivoire in the Atlantic Ocean*, ITLOS Case No 23, Provisional Measures of 25 April 2015, 71, 73, ITLOS Seabed Disputes Chamber, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Advisory Opinion of 11 February 2011, 110, 117-120.

40 PCA, *In the matter of the Indus Waters Kishenganga Arbitration before the Court of Arbitration constituted in accordance with the Indus Waters Treaty 1960 between the Government of India and the Government of Pakistan signed on 19 September 1960*, Partial Award of 18 February 2013, para 448-450, *In the matter of the South China Sea Arbitration before an Arbitral Tribunal constituted under Annex VII of the United Nations Convention on the Law of the Sea*, PCA Case No 2013-19, Award of 12 July 2016, 941.

41 ICJ, *Construction of a Road/Other Activities*, *supra* n. 38, para 118. See also, P Birnie, A Boyle, and C Redgwell, *International Law & the Environment* (Oxford University Press, 3rd edition, 2009) 137.

42 *Pulp Mills*, *supra* n. 38, para 187, *Construction of a Road/Other Activities*, *supra* n.38, para 110, ITLOS, *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion of 2 April 2015, para 129. See also, J E. Viñuales (2017) 'La Protección Ambiental en el Derecho Consuetudinario Internacional', *Revista Española de Derecho Internacional*,

preventing any transboundary environmental damage. It merely requires that the State displays due diligence in taking all the necessary steps to prevent it.⁴³ Indeed, the imposition of an obligation of result would place an unacceptable burden on the freedom of States to exercise their sovereign rights over their natural resources,⁴⁴ because of the existence of external, sometimes unforeseeable, factors beyond States' control which can affect their capacity to achieve the required result.

Parallel to their substantive obligation to prevent significant transboundary environmental harm, States bear procedural commitments to cooperate in good faith in mitigating transboundary environmental risks, mainly through notification, consultation, the conduct of EIAs and continuously monitoring the effects of hazardous activities on the environment.⁴⁵ In the 2015 *Costa Rica v Nicaragua* Judgment, the ICJ acknowledged the inherent connection between the substantive obligation of States to prevent and minimise harm and their procedural environmental duties. In the words of the ICJ,

“to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is risk of significant transboundary harm. The State planning to undertake the activity is required, in conformity with its due diligence obligation, to notify and consult in good faith with the potentially affected State where that is necessary to determine the appropriate measures to prevent or mitigate that risk.”⁴⁶

The Court affirmed that the due diligence obligation requires States to assess whether there is a risk of significant harm before embarking on any activity which can potentially result in transboundary environmental damage. In such a case, the risk triggers the procedural obligations to carry out an EIA and to cooperate, through notification and consultation, with the potentially affected State(s).⁴⁷ When it comes to long-term activities, such as the exploitation of offshore energy resources, the Court has also stressed the importance of the duty to monitor these activities and take steps to minimise potentially significant impacts.⁴⁸

The duty to take all appropriate measures to prevent environmental harm calls for States to meet the standard of due diligence.⁴⁹ The standard of due diligence refers to the conduct to be expected by good government, as it requires the adoption of laws

81, I Plakokefalos (2013) 'Prevention Obligations in International Environmental Law', *Amsterdam Law School Research Paper No 2013-37*, 36-38.

43 In the view of the ILC, the no harm rule is a “clear directive to States to employ their best possible efforts to prevent transboundary damage”, see First Report on Prevention of Transboundary Damage from Hazardous Activities, by Pemmaraju Sreenivasa Rao, Special Rapporteur, Doc A/CN.4/487 and Add.1, 186, para 32.

44 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 151.

45 Y Tanaka (2017) 'Case Note: Costa Rica v Nicaragua and Nicaragua v Costa Rica: Some Reflections on the Obligation to Conduct an Environmental Impact Assessment', *Review of European Community & International Environmental Law*, 92-96, Plakokefalos (2013) *supra* n. 42, 4-36, who argues that the obligations of prior notification, EIA, exchange of information, consultation and negotiation, and emergency notification constitute customary primary rules of prevention.

46 *Certain Activities/Construction of a Road*, *supra* n.38, para 104.

47 *Ibid*, para 104, 106.

48 *Pulp Mills*, *supra* n. 38, para 205.

49 ILC, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, *Yearbook of the International Law Commission*, Vol II, Part II (2001) 154.

and measures at the domestic level applicable to public and private entities, which can prevent or limit transboundary environmental harm.⁵⁰ States are responsible for the conduct attributable to them and are not required to achieve the prevention of environmental damage if that is not feasible or falls outside their sphere of influence. For instance, in the context of marine energy generation, States are responsible for their failure to regulate and vigilantly monitor these activities.

The required level of diligence depends on several factors. According to the ILC, it needs to be appropriate and proportional to the degree of risk of transboundary harm in each case.⁵¹

“For example, activities which may be considered ultra-hazardous require a much higher standard of care in designing policies and a much higher degree of vigor on the part of the State to enforce them. Issues such as the size of the operation; its location, special climate conditions, materials used in the activity, and whether the conclusions drawn from the application of these factors in a specific case are reasonable, are among the factors to be considered when determining the due diligence requirement in each instance.”⁵²

Therefore, the content of the standard of due diligence is not static but may change in the light of legal, factual and technological developments.⁵³ The standard of care is dynamic to keep up with technological changes and scientific developments and, at the same time, consider the capacity of each State.⁵⁴

However, the standard of due diligence is also informed by objective elements. Due diligence is not a self-standing obligation. It is the standard of care that States must display in the implementation of obligations of conduct under international law.⁵⁵ In that respect, the required standard of care is shaped objectively by the normative content of the relevant primary duties of States.⁵⁶ When it comes to due diligence concerning the implementation of the no-harm rule, the standard of care is measured against both the substantive and the procedural aspects of the underlying customary prevention duty.⁵⁷ The State is required, at the domestic level, to adopt reasonable measures and safeguard their effective implementation and simultaneously, at the international level, to cooperate with the other potentially affected States. In this context, the procedural environmental obligations of the State remain autonomous, but they also consist of the primary objective elements of the no-harm rule.⁵⁸

The role of due diligence as the standard of conduct in the context of environmental obligations was connoted in the *Pulp Mills* case. Relevantly, the ICJ

50 *Ibid*, 153-154.

51 *Ibid*, 154, para 11.

52 *Ibid*.

53 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 148-149, Plakokefalos (2013) *supra* n. 42, 39-40, Viñuales (2017) *supra* n. 42, 82.

54 Some scholars argue that due diligence must be assessed only against objective criteria, and, thus, the particularities of each State should not be taken into consideration, R Pisillo Mazzeschi (1992) ‘Due Diligence and the International Responsibility of States’, *German Yearbook of International Law*, 42-43.

55 Viñuales (2017) *supra* n. 42, 81.

56 Plakokefalos (2013) *supra* n. 42, 40.

57 ILA Study Group on Due Diligence in International Law, First Report, 7 March 2014, 28.

58 Plakokefalos (2013) *supra* n. 42, 41, ICJ, *Certain Activities/Construction of a Road*, Separate Opinion of Judge Dugard, paras 8-9.

ruled that “*due diligence, and the duty of vigilance and prevention that it implies, would not be considered to have been exercised, if a party planning works liable to affect the regime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works*”.⁵⁹ Still, the relationship between the substantive obligation to prevent harm and the relevant procedural obligations remains a point of contestation in the case-law of the ICJ.⁶⁰ For instance, Judges Owada and Donoghue have posited that the duties to conduct an EIA, notify and consult are just procedural elements of the primary obligation to take all necessary measures to prevent harm.⁶¹ In Judge Dugard’s view, the duty of prevention is the overarching substantive obligation, and due diligence is a standard of conduct which flows from it, alongside the autonomous procedural duties of EIA, notification and consultation.⁶²

As far as offshore energy generation activities are concerned, the customary prevention obligation prescribes that States need to take all appropriate measures to ensure that activities within their jurisdiction or under their control do not cause significant transboundary harm. Primarily, it triggers an obligation of establishing an adequate legal and institutional framework to regulate such activities, following the accepted international standards.⁶³ In addition, the State needs to show a certain level of vigilance in the effective implementation of this regulatory framework.⁶⁴ Concerning the procedural extensions of the obligation to prevent and minimise transboundary harm, the ICJ has clarified that the State must first make a preliminary assessment of whether the planned activity can pose a risk of significant transboundary damage.⁶⁵ The ascertainment of such risk then triggers the obligation to conduct an EIA. In the case where the EIA confirms the imminence of such risk of significant transboundary harm, States bear the duty to cooperate, through notification and consultation, with the potentially affected State⁶⁶ and monitor the operation of the activity to prevent adverse environmental impacts.

Nevertheless, the no-harm rule does not prohibit States from carrying out or authorising private actors to engage in offshore energy generation activities, which are potentially harmful or risky for the marine environment.⁶⁷ It merely requires the exercise of due diligence. As discussed, the normative content of due diligence is variable.⁶⁸ There is no single standard of due diligence fitting all offshore energy activities around the world. The standard of care that must be exercised in each case

59 ICJ, *Pulp Mills*, *supra* n.38, para 204.

60 R Yotova (2016) ‘The Principles of Due Diligence and Prevention in International Environmental Law’, *Cambridge Law Journal*, 447.

61 ICJ, *Certain Activities/Construction of a Road*, Separate Opinion of Judge Owada, para 21, Separate Opinion of Judge Donoghue, para 10.

62 *Ibid*, Separate Opinion of Judge Dugard, para 7-8.

63 R L Johnstone, *Offshore Oil and Gas Development in the Arctic under International Law: Risk and Responsibility* (Brill, 2014) 44.

64 *Pulp Mills*, *supra* n. 38, para 45.

65 *Certain Activities/Construction of a Road*, *supra* n. 38, para 104.

66 *Ibid*, 106.

67 N Bremer (2017) ‘Post-Environmental Impact Assessment Monitoring of Measures or Activities with Significant Transboundary Impact: An Assessment of Customary International Law’, *Review of European Community and International Environmental Law*, 86-87, ILC, *Draft Articles with commentaries*, *supra* n. 49, 152-153.

68 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, para 117.

depends on a series of factors: the content of the primary obligations of the State concerned, the level of risk posed by the activity, the technological and scientific developments⁶⁹ in the sense of best environmental practices and techniques and the capacity of the concerned State. While the exploitation of oil and gas at sea would undoubtedly pose a risk of significant transboundary damage, the same conclusion does not appear so indisputable concerning marine renewable energy. That is mostly due to the lack of scientific certainty regarding the precise environmental impact of most forms of marine renewables.⁷⁰ This remark serves as an illustrative example of the limits of the customary environmental rules in the protection of the marine environment against all types of energy production activities at sea.

1.2. The limitations of customary prevention obligations in regulating offshore energy production

In light of the above, it follows that the customary prevention obligations are somewhat weak in protecting the marine environment from risks posed by offshore energy generation activities, as their vague normative content allows States a broad discretion in their implementation. For instance, in the *Pulp Mills* case, the ICJ found that the customary rules do not prescribe the exact scope and content of an EIA. Therefore, in the absence of other treaty-based commitments, it is for each State to determine these in its domestic legislation,⁷¹ as long as the resulting EIA is appropriate and conducted diligently before the commencement of a project. However, the ICJ did not clarify which EIA standard is considered appropriate. Moreover, even when an EIA is carried out before the authorisation of potentially significantly harmful offshore energy activities, the State only bears the duty to duly consider the results of the EIA in its decision-making process. However, if the State proceeded with authorising the said activities even though the results of an EIA indicate a potentially significant environmental risk, it would violate its duty to exercise due diligence.

Similarly, the customary no-harm obligation allows considerable leeway for the States to decide, considering their capabilities, which are the most appropriate measures to prevent transboundary damage.⁷² Therefore, it becomes difficult to define that obligation's precise normative contours in each specific case. The procedural environmental duties also grant the State of origin of the potential harm broad discretion in their implementation.⁷³ The obligation to consult with the potentially affected State provides a vivid example because the State can still proceed with the

69 Pisilo Mazzeschi (1992) *supra* n. 54, 41-45.

70 In the commentary on draft article 2 on prevention of transboundary damage of the ILC, it is noted that “*a particular deprivation at a particular time might not be considered significant because at the specific time scientific knowledge or human appreciation for a particular resource had not reached a point at which much value was ascribed to that particular resource. But sometime later that view might change, and the same harm might then be considered significant*”, *supra* n. 49, 153.

71 *Pulp Mills*, *supra* n. 38, para 205. The same opinion is reflected in the ILC commentary on draft articles on prevention, where with respect to article 7 it is mentioned that “*the specifics of what ought to be the content of the assessment is left to the domestic laws of the State conducting such assessment*”, see ILC Draft articles, *supra* n. 49, 158-159.

72 Y Tanaka (2018) ‘State Responsibility for Marine Pollution from Seabed Activities within National Jurisdiction in the Marine Arctic’, *University of Copenhagen Faculty of Law Legal Studies Research Paper Series*, paper no 2018-56, 3.

73 Plakokefalos (2013) *supra* n. 42, 41, Johnstone (2014) *supra* n. 15, 177-178.

harmful activity regardless of the views of the third State.⁷⁴ In general, the customary obligation to prevent transboundary environmental harm is elusive in the sense that it leaves broad discretion to the State of origin of harm. The lack of a clear standard of care makes it easier for a State to comply with its customary duty to prevent transboundary environmental harm. Consequently, given the uncertainty about the required standard of diligence, it becomes difficult to monitor the implementation of the customary prevention obligation and more so to establish the international responsibility for its breach.⁷⁵

Furthermore, the procedural prevention obligations only require States to engage in certain conduct (perform an EIA, cooperate, consult, and notify the potentially affected State) towards achieving the prevention or control of transboundary environmental harm. These procedural obligations also shape the objective part of the due diligence standard in the context of the substantive prevention obligation. In other words, insofar as a State complies with its somewhat lenient procedural obligations under customary law, it meets the standard of due diligence required by the customary prevention obligation.⁷⁶ Therefore, the customary law restrictions imposed on a coastal State's sovereign rights over the exploitation of the energy resource are characterised by a high level of generality,⁷⁷ especially compared with the relevant treaty-based rules. The weakness of the customary prevention obligation is not associated with its character as a duty of conduct. Instead, it is due to the fact that the customary rule does not provide any international benchmark against which to assess States' compliance.

While the vagueness of the customary obligation to prevent transboundary harm equips it with the required flexibility to adapt to new environmental circumstances and challenges, its generalised and vague formulation significantly moderates its normative specificity.⁷⁸ However, as argued below in section 2.3, internationally accepted standards of conduct prescribed under customary international law and other relevant environmental agreements or non-binding instruments can enrich UNCLOS, offering the duty to protect the marine environment a more concrete normative content.⁷⁹ For instance, the interpretation of the content of customary international law can guide the interpretation of the duty to carry out an EIA under UNCLOS.⁸⁰ In the same vein, the various environmental agreements that have implications for the regulation of offshore energy production activities could provide the parameters to

74 Nonetheless, through the process of consultation the State becomes aware of all the relevant parameters. The awareness of the potential impacts of the proposed activity on third States bears implications for the level of diligence the State must exercise. Failure to take these into account can lead to the invocation of its international responsibility.

75 *Ibid.*

76 As is further explained in sub-section 1.3.3., that is only the case when the State is not bound by other relevant treaty-based environmental duties, which also shape the standard of diligence expected of it.

77 Plakokefalos (2013) *supra* n. 42, 41.

78 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 149, Gavouneli (1995) *supra* n. 5, 87.

79 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 149-150.

80 Given that the provision of article 206 of UNCLOS lacks normative specificity, the interpretation of the customary duty could offer guidance in the interpretation of the article. For instance, any interpretation of article 206 of UNCLOS should consider that an EIA must be conducted prior to the implementation of a project and that once operations have started, continuous monitoring of its effects on the environment must be undertaken.

elucidate further the standard of diligence that is reasonably expected of States.⁸¹ The importance of more specific environmental rules prescribing the conduct of States concerning offshore energy production activities cannot be overstated, considering the technical expertise such activities require.⁸² Still, the contribution of treaty-based rules in clarifying the necessary level of diligence depends on whether States consider and build upon the general environmental obligations under UNCLOS during the drafting of these more specific rules and inevitably on the political will of States to enter into specialised commitments concerning the regulation of such activities.⁸³

1.3. The treaty-based environmental obligations and offshore energy production activities

As discussed in chapter 2, UNCLOS offers a quasi-universally applicable legal framework establishing the responsibilities of States for the protection of the marine environment.⁸⁴ Article 192 UNCLOS encompasses the broadest treaty-based duty to protect and preserve the oceans. At the same time, its laconic formulation allows varying degrees of activity concerning its implementation.⁸⁵ UNCLOS does not create a self-contained regime for the regulation of all offshore activities. On that account, it mandates States to complement it with specific rules, which elaborate the necessary measures to protect and preserve the marine environment, *inter alia*, concerning seabed activities.⁸⁶ Sub-section 1.3. provides a brief overview of the plethora of global environmental agreements, whose focus is not primarily offshore energy, but which contain regulations applicable to offshore energy production activities or have indirect implications for their management.

Even though the exploitation of oil and gas at sea has been regarded as an expanding source of marine pollution calling for international action,⁸⁷ limited progress has been made concerning the adoption of specific rules at the global level.⁸⁸ As expected, specific global environmental rules and standards are even more scarce – if indeed there are any – when it comes to marine renewables. By and large, the global environmental agreements that have implications for the regulation of offshore energy activities could fit into two broad categories: a) those that address different sources of marine pollution, such as shipping or dumping (usually under the auspices of the IMO),⁸⁹ and b) those relating to nature conservation and the protection of (marine) biological diversity. While offshore oil and gas activities seem to fall under the scope of application of both categories of global agreements, the

81 Gavouneli (1995) *supra* n. 5, 76, 87.

82 V Frank, *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (Martinus Nijhoff, 2007) 24.

83 Plakokefalos (2013) *supra* n. 42, 49.

84 Boyle (1985) *supra* n. 30, 353-357.

85 Gavouneli (1995) *supra* n. 5, 68.

86 Article 208(5) of UNCLOS.

87 Agenda 21, para 17.30(c), see also Vinogradov and Wagner (1998) *supra* n. 6, 103, U Beyerlin (1995) 'New Developments in the Protection of the Marine Environment: Potential Effects of the Rio Process', *ZaöRV*, 570-573.

88 T IJlstra (1990) 'Pollution from Offshore Installations: the Kuwait Protocol', *Marine Pollution Bulletin*, 8, M Kashubsky (2006) 'Marine Pollution from the Offshore Oil and Gas Industry: Review of Major Conventions and Russian Law, Part 1', *Maritime Studies*, 1-11.

89 Y Lyons (2011) 'Offshore Oil and Gas in the SCS and the Protection of the Marine Environment', *Report – Centre for International Law NUS*, 11-12.

environmental impacts of marine renewables are mostly (indirectly) addressed by the second category of treaties because they do not emit traditional types of pollutants.

1.3.1. Global IMO conventions relating to pollution from offshore oil and gas installations

Under the first category, the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) is a typical example of an IMO agreement,⁹⁰ whose primary focus is the prevention and control of discharges from ships⁹¹ but which is also partly applicable to pollution caused by offshore oil and gas installations.⁹² MARPOL contains an expansive definition of the term “ships” to encompass “fixed or floating platforms”⁹³ and, therefore, it applies to offshore installations for the exploitation of hydrocarbons.⁹⁴ With a few exceptions, it prohibits offshore platforms from discharging oil or oily mixtures, garbage disposal and discharges,⁹⁵ such as platform drainage.⁹⁶ Regulation 21 of MARPOL specifically requires offshore installations engaging in the exploration, exploitation and associated offshore processing of seabed mineral resources to be equipped, as far as practicable, with equivalent pollution-control devices to those required for ships of 400 gross tonnes and above.⁹⁷

In addition, its Annex V relating to the protection of the marine environment against pollution by garbage also applies to offshore energy installations.⁹⁸ Due to the broad scope of the definition of garbage, drill cuttings and other solid waste produced during the operation of offshore oil and gas installations appear to fall under its general prohibition.⁹⁹ The pollution prevention duties established under this Annex concerning fixed offshore installations are much stricter than the ones applicable to

90 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 (MARPOL 73/78) (entry into force 2 October 1983). As of May 2018, the Convention has 156 contracting parties, the combined merchant fleets of which constitute approximately 99.42% of the gross tonnage of the world’s merchant fleet. See IMO, Comprehensive Information on the status of multilateral conventions and instruments in respect of which the International Maritime Organization or its Secretary-General performs depositary or other functions, 14 May 2018.

91 Article 2(3) of MARPOL.

92 Annex I of the MARPOL Convention, as amended by the Protocol of 1978, also applies to pollution by oil and contains special requirements for fixed and floating drilling rigs and platforms, floating production, storage, and offloading vessels (FPSOs) and floating storage units (FSUs) used for the offshore storage of produced oil.

93 Article 2(4) of MARPOL.

94 MARPOL Reg 39 on the Special Requirement for Fixed or Floating Platforms clarifies that it applies “to fixed or floating platforms including drilling rigs, floating production, storage and offloading facilities (FPSOs) used for the offshore production and storage of oil, and floating storage units (FSUs) used for the offshore storage of produced oil”.

95 MARPOL, Reg 21 (b) and (c), see also Regulation 4 of Annex V MARPOL prohibiting disposal of all such wastes to the sea by installations located more than 12 nm away from the shore, Guidelines for the Application of the Revised MARPOL Annex I requirements to Floating Production, Storage and Offloading Facilities (FPSOs) and Floating Storage Units (FSUs), IMO, Marine Environment Protection Committee, Resolution MEPC.139(53), adopted 22 July 2005.

96 IMO (1991) *Articles, Protocols, Annexes, Unified Interpretation of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto*, Regulation 21 reprinted in Gao (1998) *supra* n. 5, 15-16.

97 MARPOL, Annex I, Reg. 21 “Special Requirements for drilling rigs and other platforms”.

98 MARPOL, Annex V, Reg 4.

99 Y Lyons (2012) “Transboundary Pollution from Offshore Oil and Gas Activities in the Seas of Southeast Asia”, in R Warner, and S Marsden (eds) *Transboundary Environmental Governance in Inland, Coastal and Marine Areas* (Routledge, 2012) 185.

vessels, because such installations are forbidden to dispose of any materials regulated therein subject to more limited exceptions.¹⁰⁰ The most recent amendment to MARPOL Annex VI on the Prevention of Air Pollution from Ships¹⁰¹ also explicitly applies to fixed and floating drilling rigs and other platforms.¹⁰² However, this amendment only covers vessel-based operational emissions from seabed activities.¹⁰³

Nevertheless, the MARPOL seems to be an inadequate source of standards concerning offshore energy production activities because it only regulates the non-operational oil discharges, which are similar to those released from ships.¹⁰⁴ The main disadvantage of the MARPOL concerning the regulation of pollution from offshore installations is the explicit exclusion of “*harmful substances directly arising from the exploration, exploitation and associated offshore processing of seabed mineral resources*” from its scope.¹⁰⁵ As a result, the MARPOL does not regulate pollution directly emanating from the operation of offshore energy structures, such as drilling muds and fluids, produced water or oil leakages.¹⁰⁶ Similarly, according to its unified interpretations,¹⁰⁷ its Annex VI excludes, from its scope of application, emissions directly arising from the exploitation and offshore seabed resources and thus does not cover the venting and flaring of produced gas.¹⁰⁸ Regrettably, its Annex II on pollution by noxious liquid substances does not apply to offshore oil and gas exploitation activities despite the significance of regulating such discharges.¹⁰⁹

However, certain operational discharges related to the operation of offshore installations arguably still fall within the broad term of “operational pollution” under MARPOL.¹¹⁰ For instance, regulation 39 of the revised Annex I explicitly covers five categories of discharges that may be associated with the operation of such platforms when engaging in the exploration or exploitation of mineral resources.¹¹¹ Annex I

100 Vinogradov and Wagner (1998) *supra* n. 6, 107, Gavouneli (1995) *supra* n. 5, 57, V Radovich, ‘Governance of Oil and Gas Exploration and Exploitation at Sea: towards Coastal Marine Biodiversity Preservation’ in E Couzens, A Paterson, S Riley, and Y Fristikawati (eds) *Protectin Forest and Marine Biodiversity: The Role of Law* (Edward Elgar, 2017) 243.

101 Vinogradov and Wagner (1998) *supra* n. 6, 109, Bonfanti and Romanin Jacur (2014) *supra* n. 28, 628-629.

102 Amendment to MARPOL Annex VI on Regulation for the Prevention of Air Pollution from Ships by Inclusion of New Regulations on Energy Efficiency for Ships, adopted on 15 June 2011 (entry into force 1 January 2013) Chapter 2, Regulation 5(1).

103 *Ibid*, S M Watson (2020) ‘Greenhouse Gas Emissions from Offshore Oil and Gas Activities – Relevance of the Paris Agreement, Law of the Sea, and Regional Seas Programmes’, *Ocean and Coastal Management*, 8.

104 Pursuant to Article 2(3)(a) of MARPOL discharge means “*any release whatsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying*”.

105 E D Brown, *The International Law of the Sea*, Vol 1 (Dartmouth Publishing, 1994) 353, Vinogradov and Wagner (1998) *supra* n. 6, 103-104, Gavouneli (1995) *supra* n. 5, 57, E Karataeva (2014) ‘Can the Caspian Sea Survive its Own Oil? Environmental Regulation of the Offshore Oil and Gas Industry in the Caspian Sea’, *International Journal of Marine and Coastal Law*, 431, C J Moreno (2009) ‘Oil and Gas Exploration and Production in the Gulf of Guinea: Can the New Gulf Be Green?’, *Houston Journal of International Law*, 433, Radovich (2017) *supra* n. 100, 243.

106 Vinogradov and Wagner (1998) *supra* n. 6, 104.

107 IMO Secretariat, ‘Unified Interpretations’, Annex 4.6.

108 Annex VI, Regulation 19 on the Requirements for Platforms and Drilling Rigs, para 2, Moreno (2009) *supra* n. 105, 434.

109 Similarly, Annex IV on the regulation of pollution from sewage does not apply to offshore oil and gas platforms.

110 Annex VI, 104-106.

111 Annex I, Unified Interpretation of Regulation 39, 56 “Requirements for fixed or floating platforms”.

requires these platforms to maintain a record of all operations involving oil or oily mixture discharges and prohibits their discharge.¹¹² In general, MARPOL provides for highly technical substantive obligations compared with the general duties under UNCLOS, and its standard-setting approach and compliance mechanisms increase the importance of MARPOL when it comes to prevention of different types of pollution caused by offshore oil and gas installations.¹¹³ Besides, as further discussed in section 3.4.2., IMO resolutions provide an essential mechanism for the adaptation of its pollution prevention obligations to new technological and scientific developments in the offshore energy sector.

The 1972 London Dumping Convention is another major global environmental agreement, which covers some aspects of offshore oil and gas activities under its scope of application.¹¹⁴ Article 1 of the Dumping Convention provides for a due diligence obligation since States are required to take all practicable steps to prevent the pollution of the sea by the dumping of waste and other matter that may harm marine life. Its subsequent provisions further elaborate on the content of the duty. According to the agreement, dumping means “(i) any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea; (ii) any deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures at sea”.¹¹⁵ Its 1996 London Protocol has embraced the precautionary principle,¹¹⁶ which requires that appropriate preventative measures are adopted when “there is reason to believe that waste or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to provide a causal relation between inputs and their effects”.¹¹⁷ Under the Protocol, dumping of such substances is prohibited subject to the exceptions specified in its reverse list under Annex I or the force majeure exceptions enumerated in article 8.¹¹⁸ With regard to offshore platforms, Annex I prescribes that dumping may be permissible only if that material capable of creating floating debris or contributing to the pollution of the marine environment has been removed to the maximum extent, and poses no obstacle to fishing or navigation.¹¹⁹

During the negotiations of the 1996 Protocol, States debated whether the definition of dumping should be expanded to include the discharge of wastes or other matter resulting from the exploration and exploitation of offshore oil and gas. However, for fear that such expansion would undesirably widen the scope of

112 The regulation also applies to the oil discharged in drill cuttings, see Annex I, Regulation 15.

113 Liu (2015) *supra* n. 5, 194.

114 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, concluded on 29 December 1972 (entry into force 30 August 1975) superseded by the 1996 Protocol, 7 November 1996 (entry into force 24 March 2006).

115 Article 4(a) of the London Convention.

116 The London Convention and the London Protocol remain legally separate instruments and bind a different number of contracting parties, see G Hoon Hong, and Y Joo Lee (2015) ‘Transitional Measures to Combine Two Global Ocean Dumping Treaties into a Single Treaty’, *Marine Policy*, 47-56, S Trevisanut (2018) ‘Decommissioning of Offshore Installations: A Fragmented and Ineffective International Regulatory Framework’ in C Banet (ed) *The Law of the Seabed: Access, Uses and the Protection of Seabed Resources* (Brill, 2020) 443, K Makuch, and R Pereira, *Environmental and Energy Law* (John Wiley & Sons, 2012) Chapter 9.5.4.

117 Article 3(1) of 1996 London Protocol.

118 Annex I of the 1996 London Protocol, also Moreno (2009) *supra* n. 105, 431.

119 Annex I of 1996 London Protocol, clause 2.

application of the Dumping Convention, most States opposed the proposal by the Netherlands to delete the clause which excluded operational discharges from offshore installations.¹²⁰ Therefore, as in the case of MARPOL, the London Protocol excludes from its scope of application “*the disposal or storage of wastes or other matter directly arising from or related to the exploration, exploitation and associated offshore processing of seabed mineral resources*”.¹²¹ Equally, the prohibition against incineration of wastes at sea does not encompass “*the incineration of wastes or other matter on board a vessel, platform, or other man-made structure at sea if such wastes or other matter were generated during the normal operation of that vessel, platform or other man-made structure at sea*”.¹²² Thus, the application of the Dumping Convention/Protocol to operational pollution from offshore hydrocarbon exploitation installations is limited compared with the regulations under MARPOL. Nonetheless, the Dumping Convention remains particularly important regarding the decommissioning of offshore installations.¹²³ In response to various proposals to expand the scope of the London Convention concerning offshore oil and gas activities,¹²⁴ its 1996 Protocol has clarified that any abandonment of a structure at sea, either totally or partially, qualifies as dumping, by expanding the definition of dumping to cover “*any abandonment or toppling at the site of platforms or other man-made structures at sea, for the purpose of deliberate disposal*”.¹²⁵ Nevertheless, it is deplorable that the broad definition of dumping under the Protocol failed to consider the potential conversion of a disused installation to another environmentally-friendly use.¹²⁶

The 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation Convention (OPRC), which deals with oil-related casualties at sea, is of paramount significance to the prevention, preparedness and response to accidental pollution from offshore oil and gas installations.¹²⁷ The OPRC provides that States undertake, individually or jointly, to take all appropriate measures (due diligence obligation) for following its rules and the technical details under its Annex to prepare for and respond to oil pollution incidents.¹²⁸ The OPRC expressly applies to both fixed and floating offshore installations engaged in gas or oil exploration and exploitation activities.¹²⁹ It establishes obligations both for States and the offshore oil and gas industry. In particular, States must develop international oil spill preparedness and response plans to ensure the operational efficiency of international cooperation

120 A Sielen (2009) ‘The New International Rules on Ocean Dumping: Promise and Performance’, *Georgetown International Environmental Law Review*, 308-309.

121 Article 1(4)(3) of the 1996 London Protocol.

122 Article 1(5)(2) of the 1996 London Protocol.

123 Z Gao, ‘International Law on Offshore Abandonment: Recent Developments, Current Issues and Future Directions’ in Gao (1998) *supra* n. 6, 147.

124 Sielen (2009) *supra* n. 120, 310.

125 Article 1(4) of the 1996 London Protocol.

126 In view of the possibility that the conversion of an offshore installation to an artificial reef could be used to legitimise dumping at sea, the IMO has drafted the 2009 Guidelines for the Placement of Artificial Reefs, IMO London Convention and Protocol/UNEP Guidelines for the Placement of Artificial Reefs. See D Greaves, and G Inglesias, *Wave and Tidal Energy* (John Wiley & Sons, 2018) 22.

127 International Convention on Oil Pollution Preparedness, Response, and Co-operation and Final Act of the Conference, 30 November 1990, 30 I.L.M. (1991), 733 (entry into force on 13 May 1995). As of 14 May 2018, the OPRC had in total 112 contracting parties. See, Preamble on its relevance to offshore installations.

128 Article 1(1) of OPRC.

129 Article 2(4) of OPRC.

agreements.¹³⁰ They also bear duties to cooperate, by reporting accidents to the competent international organisation and notifying any other potentially affected States. In addition, the operators of offshore installations must formulate oil pollution emergency plans,¹³¹ and are obliged to report any discharge of oil immediately.¹³² The OPRC requires the use of specific equipment, as well as the conduct of exercises and training in the preparedness for and response to acute oil pollution incidents.¹³³ The IMO is given a special role in providing technical services and assistance to State parties and the industry when preparing contingency plans for oil pollution.¹³⁴

Although its preamble stresses the importance of precautionary measures and prevention, the OPRC primarily emphasises the response to accidental pollution rather than its prevention.¹³⁵ However, its focus on response to pollution does not negate the fact that the OPRC is the most crucial global agreement addressing the issue of accidental (rather than operational)¹³⁶ oil pollution from offshore energy installations.¹³⁷ Offshore oil-producing States have widely ratified the OPRC, which has resulted in the development of domestic contingency plans¹³⁸ and the adoption of regional binding instruments on prevention of, preparedness for and response to acute oil pollution.¹³⁹ Indeed, the OPRC does not address regional specificities but instead promotes the adoption of bilateral and regional agreements.¹⁴⁰ Given the exponential increase in offshore oil and gas production activities since the conclusion of UNCLOS,¹⁴¹ the OPRC gives more content to the substantive and procedural environmental protection obligations under the former,¹⁴² by introducing specific duties which clarify the appropriate and necessary measures (e.g. pollution emergency plans) to control and minimise accidental oil pollution from offshore installations.¹⁴³

130 Article 10 of OPRC.

131 Article 3(2) of OPRC.

132 Article 4(1)(b)(ii) of OPRC.

133 Article 6(1) and (2) of OPRC.

134 A Chircop, 'The International Maritime Organization' in D Rothwell, A Oude Elferink, K Scott, and T Stephens (eds) *The Oxford Handbook of the Law of the Sea* (Oxford University Press, 2015) 434, Vinogradov (2013) *supra* n. 8, 342. In this context, the IMO has established an OPRC Working Group, as well as a non-binding IMO Manual on Oil Pollution as guidance for States and the offshore industry.

135 H Mayrand (2015) 'Arctic Community of Practice and Offshore Oil and Gas Activities: Determining the Legal and Political Dimensions of the Obligation to Prevent, Reduce and Control Pollution', *McGill International Journal of Sustainable Development Law and Policy*, 270-271.

136 For instance, Article 4(c) of the OPRC limits the reporting obligation only to oil discharges or possible oil discharges and, therefore, does not cover other noxious substances that are discharged during the operation of offshore oil and gas installations.

137 H Esmaili, *The Legal Regime of Offshore Oil Rigs in International Law* (Routledge, 2016) 189.

138 Y Lyons, 'Regulation of Offshore Hydrocarbon Exploration and Exploitation under International Law' in R Warner, S Kaye (eds) *Routledge Handbook of Maritime Regulation and Enforcement* (Routledge, 2015) 199.

139 Chapter 6, sub-section 3.2.

140 Article 10 of OPRC.

141 P Park, *International Law for Energy and the Environment* (CRC Press, 2nd edition, 2013), 95.

142 See also articles 198 and 199 UNCLOS, discussed in chapter 2, sub-section 2.2.3.

143 The OPRC also requires specific tools and equipment to be developed, including oil spill combating equipment, detailed plans and communication capabilities as well as a mechanism to coordinate the response to a pollution incident, Article 6(2) of OPRC.

1.3.2. *Global nature conservation conventions with implications for offshore energy production*

The operation of offshore energy installations, regardless of the type of energy resources they exploit, can also cause severe damage to marine ecosystems and biodiversity. While the global nature conservation agreements do not contain specific rules for offshore energy activities, they impose environmental duties for the protection of specific marine areas or species, which can incidentally shape the regulation of offshore energy production activities. These conventions seek to restrict, limit, or even prohibit hazardous activities that pose potentially grave risks to the marine environment and its biodiversity. Towards achieving that goal, nature conservation agreements set goals, which are significantly relevant to the planning, siting and operation of offshore energy generation projects.¹⁴⁴ In that respect, this section reviews the key obligations under global nature conservation agreements with implications for offshore energy production activities.

At the global level, the 1992 UN Convention on Biological Diversity (CBD) is the most crucial quasi-universal nature conservation agreement.¹⁴⁵ The CBD aims at striking a balance between the conservation and sustainable use of biological diversity resources instead of solely promoting conservation measures.¹⁴⁶ On that account, it emphasises the sovereign right of States to exploit their biological resources in following their environmental policies.¹⁴⁷ As far as offshore energy production activities are concerned, the CBD seems to be of incidental relevance to their regulation, because it prescribes the adoption of conservation measures which might prohibit or subject the conduct of such activities to stricter environmental conditions, at least in sensitive areas.¹⁴⁸ Among others, the CBD prescribes the conservation of marine ecosystems and species in areas within national jurisdiction,¹⁴⁹ which are significantly affected by offshore energy production activities.

The CBD primarily requires its parties to take, as far as possible and appropriate, action to halt the destruction of species, habitats and ecosystems.¹⁵⁰ This general conservation obligation is substantiated by its provisions calling for the adoption of positive measures for the *in situ* and *ex situ* conservation of biological diversity.¹⁵¹ States must “*identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation or sustainable use of biological diversity*”, and when such effects are determined, they shall “*regulate and manage*”

144 Lyons (2012) *supra* n. 99, 188.

145 The Convention on Biological Diversity, concluded on 5 June 1992 (entry into force 29 December 2003). As of present, the CBD has 196 contracting Parties, making it one of the most widely ratified global environmental conventions.

146 Articles 1, 2 and 4 of CBD. See also, R Rayfuse (2016) ‘Climate Change, Marine Biodiversity and International Law’ in M Bowman, P Davies, and E Goodwin (eds) *Research Handbook on Biodiversity and Law* (Edward Elgar, 2016) 130, E Morgera, and E Tsioumani (2011) ‘Yesterday, Today, and Tomorrow: Looking Afresh at the Convention on Biological Diversity’, *Yearbook of International Environmental Law*, 3.

147 Article 3 of CBD.

148 Vinogradov and Wagner (1998) *supra* n. 6, 111-112.

149 Article 4(a) of CBD.

150 Article 7(1) of CBD.

151 Articles 8 and 9 of CBD.

such activities.¹⁵² *Inter alia*, measures to protect biodiversity *in situ* from hazardous processes and activities, such as offshore energy projects, include the establishment, as far as possible and as appropriate, of a system of protected areas or the development of specific regulation for the protection of threatened species and populations.¹⁵³ In addition, the CBD creates an obligation for States to identify essential components of biological diversity, which may require special measures for their protection.¹⁵⁴ Going beyond the duty of conservation, the CBD requires States, as far as possible and appropriate, to also take positive steps for the rehabilitation and restoration of degraded ecosystems.¹⁵⁵ The preamble to the CBD explicitly refers to the weak formulation of the precautionary principle as enshrined in Rio Principle 15.¹⁵⁶ In particular, it restates that when there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat.¹⁵⁷

Nonetheless, the CBD itself does not provide detailed normative guidance either on the content of the primary conservation obligation or the standard of due diligence expected of States in preventing damage to biological diversity.¹⁵⁸ In contrast with other nature conservation agreements, the CBD does not contain any list of species or habitats that are to be subjected to protective measures.¹⁵⁹ Instead, it mandates States to develop national strategies, plans and programmes to ensure that loss of biological diversity is prevented.¹⁶⁰ In that spirit, the CBD repeats the obligation of States to prevent transboundary harm¹⁶¹ and imposes a general duty to prevent damage to biological diversity, which seems to be qualified by the individual capabilities of States,¹⁶² following the principle of common but differentiated responsibilities.¹⁶³ For that reason, scholars have criticised the CBD for falling short of establishing normatively specific environmental obligations, which go beyond what is already prescribed by the no-harm rule.¹⁶⁴ Its focus on measures at the

152 Articles 7(1)(c) and 8(l) of CBD.

153 Article 8 of CBD.

154 Article 7(a) of CBD.

155 Article 8(f) of CBD. See also COP Decision XIII/5, Annex, para 4 which defines restoration as “*the process of managing or assisting the recovery of an ecosystem that has been degraded, damaged or destroyed as a means of sustaining ecosystem resilience and conserving biodiversity*”.

156 Compare with the more elaborate versions of the precautionary principle in specific regional sea agreements, see chapter 6, sub-section 1.4.

157 The lack of mention of the precautionary principle in the operational provisions of the CBD is attributed to the lack of agreement among States during its negotiations, see P Sands, J Peel, A Fabra, and R Mackenzie (eds) *Principles of International Environmental Law* (Cambridge University Press, 2018) 390.

158 J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 46.

159 Compare with the examples of Ramsar and the CMS in this sub-section. However, Annex I lays down an indicative list of criteria to assist States in identifying categories of ecosystems and habitats which must be subject to conservation measures and monitoring.

160 S Harrop (2008) ‘Biodiversity Conservation Priorities, the Law and Responses to Global Change’, *Environmental Law and Management*, 234.

161 Article 3 of CBD.

162 Article 6 of CBD.

163 R Verheyen, *Climate Change Damage and International Law: Prevention Duties and State Responsibility* (Brill, 2005) 210-211.

164 S O Nliam (2014) ‘International Oil and Gas Environmental Legal Framework and the Precautionary Principle: The Implications for the Niger Delta’, *African Journal of International and Comparative*

national level and the extensive use of vague terms and qualifiers (“*is likely to have significant adverse impacts, as far as possible and appropriate, introduce appropriate procedures/arrangements*”) allow States broad discretion in the implementation of their obligations.¹⁶⁵ Moreover, there have been no direct measures initiated through the CBD to prevent or reduce the negative impacts of hydrocarbon extraction activities on marine species, habitats and ecosystems.¹⁶⁶

In terms of process, the CBD urges its parties to take measures to conduct both EIAs and Strategic Environmental Assessments (SEAs) to minimise the adverse impacts of planned projects on the components of biodiversity and, where appropriate, to allow for public participation.¹⁶⁷ Its article 14(1) requires the introduction of appropriate EIA procedures before planned projects as well as the implementation of proper arrangements to ensure that the environmental consequences of programmes, which are likely to have significant negative impacts on biological diversity, are taken into account by its parties.¹⁶⁸ The weakness of this provision is that it leaves much to the individual judgment of States in its implementation. Relevantly, the ICJ has upheld that article 14 of the CBD does not establish an autonomous duty to carry out an EIA before undertaking an activity that might have a significant adverse impact on biodiversity.¹⁶⁹ Overall, the CBD operates as a framework convention.¹⁷⁰ However, as discussed further in sub-sections 2.5. and 3.1., subsequent resolutions, initiatives, and scientific reports adopted in the context of the CBD increase its dynamism by adding content to its normatively vague obligations. Through interpretation, the CBD can also contribute to clarifying the content of the relevant obligations under UNCLOS,¹⁷¹ with particular implications for the regulation of offshore energy production activities.

The Convention on the Conservation of Migratory Species (CMS)¹⁷² is another significant nature conservation agreement which – at least indirectly – addresses the regulation of offshore energy production. The CMS is concerned with the protection of migratory species and explicitly applies to several marine species

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- Law*, 31-32, Verheyen (2005) *supra* n. 163, 211, Birnie, Boyle and Redgwell (2009) *supra* n. 41, 617.
- 165 S Harrop, and D Pritchard (2011) ‘A Hard Instrument Goes Soft: The Implications of the Convention on Biological Diversity on Biological Diversity’s Current Trajectory’, *Global Environmental Change*, 474, M Yzquierdo (2017) ‘The 1992 Convention on Biological Diversity’ in M Fitzmaurice, A Tanzi, and A Papantoniou (eds) *Multilateral Environmental Treaties* (Edward Elgar, 2017) 13.
- 166 Liu (2015) *supra* n. 5, 194.
- 167 According to the ICJ, the obligation to introduce appropriate procedures for the environmental assessment under article 14(1)(a) CBD is rather a procedural obligation and does not impose an independent obligation on States to conduct an EIA. ICJ, *Certain Activities/Construction of a road*, *supra* n. 38, para 164. Scholars have expressed similar concerns, see Birnie, Boyle and Redgwell (2009) *supra* n. 41, 621.
- 168 S McDonald, D VanderZwaag (2015) ‘Renewable Ocean Energy and the International Law and Policy Seascape: Global Currents, Regional Surges’, *Ocean Yearbook*, 306.
- 169 *Certain Activities / Construction of a Road*, *supra* n.38, paras 163-164.
- 170 D McGraw (2002) ‘The CBD – Key Characteristics and Implications for Development’, *Review of European, Comparative and International Environmental Law*, 18.
- 171 For instance, article 194(5) of UNCLOS can be interpreted in the light of the rules of CBD, see further discussion in sub-section 2.3. Similarly, regional instruments containing measures to address potential adverse impacts on marine biodiversity can inform the interpretation of UNCLOS, see chapter 6, sub-section 1.2.
- 172 Convention on the Conservation of Migratory Species of Wild Animals (entry into force 1 November 1983). As of 1 December 2017, the Convention had 126 Parties.

falling under its Annexes, regardless of whether they are located within or beyond national jurisdiction.¹⁷³ The CMS distinguishes species threatened with extinction, listed under Appendix I, from species having unfavourable conservation status, listed under Appendix II.¹⁷⁴ The range States of species contained in Appendix I are under a duty to “endeavour to conserve these species and habitats”, as well as “to the extent feasible and appropriate, to prevent, reduce or control factors” which are likely to endanger these particular migratory species.¹⁷⁵ They are also obliged to take measures to prevent any migratory species from becoming endangered.¹⁷⁶ These obligations of conduct do not describe in precise terms the necessary conduct for their implementation. Instead, they require range States to exercise due diligence in conserving the endangered species and their habitats and in preventing, reducing or controlling factors, such as the impact of offshore energy activities, which are likely to pose risks to those species. For instance, the adoption of environmental measures to prevent or reduce the impacts of offshore energy generation on the conservation of endangered species and their marine habitats could fulfil these duties. However, the use of vague language (‘shall endeavour’), coupled with the introduction of the qualifiers of feasibility and appropriateness, allow broad discretion to States and, therefore, considerably weaken the normative value of these obligations.¹⁷⁷ In that respect, they only offer generic protection to migratory species against the adverse impacts of offshore energy activities.

With regard to endangered species, range States have an unqualified obligation to prohibit the taking of the listed species, although exceptions are allowed under the criteria laid down in the CMS.¹⁷⁸ The CMS defines “taking” broadly to include the harassment of migratory species and, thus, this has served as the legal basis for considering measures against marine renewable devices, which have impacts on the marine biodiversity.¹⁷⁹ As far as species under Annex II are concerned, the CMS stipulates the development of further international agreements for their conservation.¹⁸⁰ Five of the seven regional agreements adopted for the conservation of migratory species concern species which are affected by the operation of offshore energy installations, such as cetaceans, seals, bats and waterbirds, and are discussed in chapter 6.¹⁸¹ Besides the adoption of binding agreements, parties to the CMS have also sought to protect migratory species through non-binding Memoranda of Understanding, such as the one signed in 2010 on the conservation of migratory sharks.¹⁸²

173 Article 1(a) and (h) of CMS.

174 Articles 3 and 4 of CMS.

175 Article 3(4) of CMS.

176 Article 3 of CMS.

177 R Caddell (2005) ‘International Law and the Protection of Migratory Wildlife: An Appraisal of Twenty-Five Years of the Bonn Convention’, *Colorado Journal of International Environmental Law and Policy*, 117-118, M Bowman, P Davies, and C Redgwell, *Lyster’s International Wildlife Law* (Cambridge University Press, 2nd edition, 2010) 549.

178 Article 3(5) of CMS.

179 Harrison (2017) *supra* n. 158, 52.

180 Article 4(1) of CMS.

181 Chapter 6, sub-section 3.3.2.

182 Memorandum of Understanding on the Conservation of Migratory Sharks, amended in December 2018, available online at: <https://www.cms.int/sharks/en/page/sharks-mou-text>.

Several resolutions have been adopted by the CoP to the CMS and Guidelines have been endorsed concerning the mitigation of the effect of marine renewables on migratory species.¹⁸³ For instance, Resolution 10.24 on 'Further Steps to Abate Underwater Noise Pollution for the Protection of Cetaceans and Other Biota' urged CMS Parties to integrate migratory species considerations in their EIAs and recommended the application of BAT and BEP, including the application of noise reduction techniques for offshore energy installations. Following the recognition of the need to mainstream the interest in the conservation of migratory species across the energy sector by the CMS COP Resolution 11.27 'Renewable Energy and Migratory Species,' CMS established in 2014 a multi-stakeholder platform, the Task Force on Reconciling Selected Energy Sector Developments with Migratory Species Conservation. This initiative was launched to assist parties and signatories to the CMS, its regional sub-agreements, as well as other relevant conservation-related agreements.¹⁸⁴ The Energy Task Force aims at reconciling the developments in renewable energy, including marine renewable technologies, with the obligations under the participating agreements, which require States to avoid or mitigate possible negative impacts of renewable energy generation devices on migratory species.¹⁸⁵ According to its mandate, the Task Force is also responsible for monitoring the implementation of relevant guidelines and submitting reports to the governing bodies of the participating agreements.¹⁸⁶ This initiative exemplifies the need for environmental agreements to foster synergies and cooperate with other sector-specific instruments and actors in order to achieve their conservation objectives.¹⁸⁷ Therefore, while the CMS provides rather general obligations with implications for offshore energy production activities, it has been significant as a framework for the development of instruments, which address aspects of these activities.

The Convention on Wetlands of International Importance¹⁸⁸ (Ramsar Convention) and the International Convention for the Regulation of Whaling¹⁸⁹ can also have implications for the regulation of offshore energy production. The Ramsar

183 CMS Res 7.5 'Wind Turbines and Migratory Species' 24 September 2002, repealed in part by Doc.21.1.10, 18 May 2017, CMS Res 9.19 'Adverse Anthropogenic Marine/Ocean Noise Impacts on Cetaceans and Other Biota', 5 December 2008, CMS Res 10.24 'Further Steps to Abate Underwater Noise Pollution for the Protection of Cetaceans and Other Migratory Species', 25 November 2011, CMS Res 10.19 'Migratory Species Conservation in the Light of Climate Change', 7 February 2017.

184 Among them, the Agreement on the Conservation of African – Eurasian Migratory Waterbirds (AEWA), the Agreement on the Conservation of Populations of European Bats (EUROBATS), the Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS), the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptor MoU), the Berne Convention on the Conservation of European Wildlife and Natural Habitats, and the Ramsar Convention. For more information, see CMS website: <https://www.cms.int/en/taskforce/energy-task-force> accessed 26 May 2018.

185 CMS Res 11.27, 9 November 2014, annex.

186 CMS Res 11.27, 5(4).

187 Harrison (2017) *supra* n. 158, 53.

188 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 2 February 1971, as amended by the Protocol of 3 December 1982 and the Amendments of 28 May 1987 (entry into force 16 May 1976).

189 International Convention for the Regulation of Whaling (Whaling Convention), (entry into force on 10 November 1948) amended by the Protocol of 19 November 1956 (entry into force 4 May 1959).

Convention provides a framework for national action and international cooperation for the conservation and, as far as possible, the wise use of wetlands as regulators of water regimes and as habitats supporting characteristic flora and fauna, especially waterfowl. In terms of geographical coverage, the Ramsar Convention seems to have limited impact on the regulation of offshore energy production activities because it only applies to wetlands, which are defined to include “*areas of marine water, the depth of which at low tide does not exceed 6 metres*”.¹⁹⁰ However, the Ramsar Convention can still affect the planning of offshore energy generation devices in marine areas near protected wetlands. States must promote the conservation and wise use of wetlands by designating wetlands for their inclusion in the List of Wetlands of International Importance.¹⁹¹ States also have a general duty to conserve wetlands, regardless of their inclusion in the List of Wetlands of International Importance.¹⁹² Nevertheless, they bear far more demanding responsibilities concerning the listed wetlands, such as the obligation of monitoring and reporting, which might trigger their duty to take additional measures to deal with a threat or damage to wetlands of international importance.¹⁹³

Nonetheless, the obligation to promote the conservation of such areas is rather weak given that States maintain broad discretion in deciding which wetlands to designate for listing and in determining the appropriate conservation measures to protect them.¹⁹⁴ Besides, the treaty does not allow much room for the involvement of third States or treaty bodies in the designation process. However, once a wetland is listed, States are required to compensate for any of wetland resources if they decide to delete or limit the boundaries of a designated wetland.¹⁹⁵ The Ramsar Convention does not contain any prohibition or specific limitations on activities which can adversely impact the listed wetlands. On the contrary, it allows their wise use; in other words, the exploitation of listed wetlands.¹⁹⁶ Relevantly to the exploitation of marine energy resources, the Convention stresses that “*the inclusion of a wetland in the List does not prejudice the exclusive sovereign rights of the Contracting Party in whose territory the wetland is situated*”.¹⁹⁷ Moreover, in contrast with the CMS, the Ramsar Convention does not expressly prohibit the taking of species, even though that could adversely affect the ecological characteristics of wetlands.

Notwithstanding the limited impact of the Ramsar Convention on the regulation of offshore energy activities, the CoP to the Ramsar Convention has been concerned with the effect of such activities, including fossil fuel exploitation and

190 Article 1 of Ramsar.

191 Articles 2(1) and 3 of Ramsar.

192 Article 4(1) of Ramsar.

193 Article 3(2) of Ramsar. The ICJ has interpreted the duties restrictively, upholding that States only have an obligation to notify the Secretariat when they undertake projects, which bring about changes to the ecological character of wetlands or are likely to do so. In addition, it found that the Ramsar Convention does not establish a duty of States to consult with their neighbouring States before any particular project under article 5. see *Certain Activities/Construction of a Road*, *supra* n. 38, paras 109-110.

194 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 673.

195 Article 4(2) Ramsar.

196 See Resolution IX.1, which adopted a ‘Conceptual Framework for the Wise Use of Wetlands and the Maintenance of their Ecological Character’, see Birnie, Boyle, Redgwell, *supra* n. 41, 674.

197 Article 2(4) of Ramsar.

tidal and wave energy projects on wetlands.¹⁹⁸ Notably, Resolution XI.10 on Wetlands and Energy Issues addresses the potential impacts of energy generation activities by providing guidelines for the integration of wetland conservation measures in the energy sector.¹⁹⁹ *Inter alia*, this Resolution recommends the rigorous application of SEAs and EIAs to planned energy projects which are likely to affect the ecological character of wetlands adversely, and urges the adoption of a precautionary approach (though the precautionary approach is not enshrined in the Ramsar Convention) when there is a lack of complete scientific certainty with regard to the impacts of such projects.²⁰⁰ The adoption of such a precautionary approach can be beneficial in the case of marine renewables, due to the lack of solid scientific knowledge regarding their environmental impacts. However, such resolutions are often regarded as being paper tigers as their importance mostly depends on their voluntary implementation by States.²⁰¹

Finally, the Whaling Convention, aiming primarily at the conservation of cetaceans, can also incidentally inform the standard of care that must be exercised by States in the regulation of offshore energy activities, mainly marine renewables. Under the Whaling Convention, the International Whaling Commission (IWC) regulates whaling by drafting and amending the Schedule.²⁰² The Schedule forms an integral part of the Whaling Convention and introduces standards on the conservation and utilisation of whale species.²⁰³ According to the Whaling Convention, any amendments to the Schedule must be based on scientific knowledge,²⁰⁴ highlighting the role of the Scientific Committee of the IWC in the regulation of whaling. Though neither the Convention nor the Schedule includes any rules relating directly to the regulation of offshore energy activities, the Scientific Committee has, on several occasions, addressed the issue of interactions between marine renewable energy projects and cetaceans. Remarkably, the matter of anthropogenic noise associated with offshore renewable energy installations has been on the research agenda of the Committee since at least 1996.²⁰⁵ In 2010 the Scientific Committee recommended that State parties should cooperate to limit the adverse effects of marine renewable energy generation devices on marine mammals.²⁰⁶ In 2012 the Scientific Committee held a workshop relating to the impact of offshore renewable energy projects, including offshore wind farms, tidal-stream driven devices and wave energy converters on whale species.²⁰⁷ *Inter alia*, the workshop identified several measures to address the

198 With regard to the exploitation of fossil fuels and its impact on wetlands, the COP has adopted Resolution X.26 'Wetlands and Extractive Industries' 4 November 2008.

199 Ramsar COP, Res XI.10 'Wetlands and Energy Issues, July 2012.

200 McDonald, VanderZwaag (2015) *supra* n. 168, 310-311.

201 N Matz-Lück (2005) 'Chaos or Coherence? Implementing and Enforcing the Conservation of Migratory Species through Various Legal Instruments', *ZaöRV*, 202.

202 Articles 3(1) and 5(1) of the Whaling Convention.

203 Articles 1(1) and 5 of the Whaling Convention.

204 Article 5(2)(b) of the Whaling Convention.

205 J Firestone, and C Jarvis (2007) 'Response and Responsibility: Regulating Noise Pollution in the Marine Environment', *Journal of International Wildlife Law and Policy*, 133, H Dotinga, and A Oude Elferink (2000) 'Acoustic Pollution in the Oceans: The Search for Legal Standards', *Ocean Development & International Law*, 168, McDonald and VanderZwaag (2015) *supra* n. 168, 311.

206 IWC Scientific Committee, SC/62 'Report of the Scientific Committee'.

207 IWC (2012) 'Report of the IWC Scientific Committee Workshop on Interactions between Marine Renewable Projects and Cetaceans Worldwide', SC/64/Rep6 Rev1.

impact of noise and collisions associated with marine renewable energy units. The adoption of the precautionary approach was also recommended, taking into account lessons learned from other developments and offshore activities which affect whales. Nonetheless, despite the endorsement of the recommendations by the Scientific Committee, they are not legally binding on parties to the Whaling Convention.

1.3.3. The limitations of global environmental agreements in regulating offshore energy production activities

The global legal framework that addresses some aspects of the risks posed by offshore energy production activities to the marine environment and the components of marine biodiversity stands out as being mostly sectoral and recommendatory. The IMO instruments are primarily concerned with specific sources of marine pollution emanating from offshore oil and gas installations and exclude from their scope most of the harmful operational discharges. The nature conservation agreements mainly have indirect implications for the adverse effects of offshore energy production activities on the conservation of marine species and their habitats. In general, these agreements contain normatively modest obligations of conduct. States bear no duty to achieve a specific result, but they must take all appropriate and necessary measures towards achieving the prevention of harm to the marine environment. Due diligence plays a crucial role as the required standard of care. Nevertheless, these environmental agreements mostly fail to provide clear normative guidance on the standard of diligence that States are expected to exercise for the protection of the marine environment concerning offshore energy production.

The generalised use of obligations of conduct in environmental agreements reflects the cornerstone principle of permanent sovereignty over natural resources. Creating vague duties of conduct is opted for as a matter of deference to the sovereign rights of States. In essence, it allows them a broad discretion in complying with their duty to protect the environment and, at the same time, it does not impose a blanket prohibition on economic activities, such as offshore energy production. Furthermore, the negotiation of global environmental agreements is usually influenced by the tension between attracting universal participation and creating clear and precise legal commitments. In that sense, the vague wording of their texts reflects the compromises struck during the lawmaking process. They are also moderated by the use of qualifiers, such as “as far as possible and as appropriate”.²⁰⁸ Therefore, global instruments seem to fail in offering concrete environmental standards for offshore energy production activities.

2. Normative interactions between UNCLOS and global environmental rules: updating the duty to protect the marine environment concerning offshore energy production

Despite the weaknesses of the global legal framework, the interplay between UNCLOS and other environmental agreements, general environmental principles as well as non-binding instruments might lead the way forward. As discussed, the Convention incorporates different mechanisms to adapt to legal developments. In

208 A Trouwborst et al (2017) ‘International Wildlife Law: Understanding and Enhancing its Role in Conservation’, *BioScience*, 784.

that respect, it could be claimed that UNCLOS is the ‘mother’ of all interactions with ‘external’ normative developments. In addition, rules on treaty interpretation can play a decisive role in governing intra-systemic interactions between UNCLOS and other international environmental law instruments. Following a discussion of the relevance of (customary) environmental principles, focusing on the precautionary principle, in defining the content of the relevant obligations under UNCLOS, this section examines legal rules that govern the interactions of global environmental rules with the duty to protect the marine environment under UNCLOS, which may result in better defining the normative contours of that duty concerning offshore energy production.²⁰⁹

2.1. The relevance of environmental principles in identifying the level of protection of the marine environment against pollution from marine energy production

Principles of international environmental law are often distinguished from rules because they are operating primarily as guidance in the interpretation of particular rules. Due to their open-ended and highly abstract nature, their stand-alone invocation does not result in a predictable outcome.²¹⁰ However, the normative abstraction of principles is an advantage rather than a drawback: it equips them with the required flexibility to adapt to various situations and deal with complex problems of social, economic and environmental conflicts. Indeed, the precautionary principle exemplifies the critical role of principles in shaping international environmental law. In that respect, this section discusses how the precautionary principle can be read into UNCLOS and its relevance for offshore energy production.

According to Principle 15 of the 1992 Rio Declaration on Environment and Development,

“in order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”.

This weak version of the precautionary principle appears to recognise the right of States to adopt preventive measures in the absence of full scientific certainty about the impact of planned activities, without creating any obligation to take such steps.²¹¹ In that sense, it has been described simply as a “*license to regulate*”.²¹² The normative weight of the principle, as formulated in the Rio Declaration, is further diluted by the introduction of a series of qualifiers: “*according to their capabilities*”, “*threats of serious or irreversible damage*”, “*cost-effective measures*”. In contrast, article 6 of the

209 Report of the Study Group of the ILC on “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law”, A/CN.4/L.702, 18 July 2016, para 98, where it is posited that the supplementary implementation of special and general rules is not devoid of normative consequences.

210 Y Tanaka, ‘Principles of International Marine Environmental Law’, in R Rayfuse (2015) *supra* n. 5, 31.

211 The World Charter for Nature, which is considered to reflect a stronger version of the precautionary principle, reads: “Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed”, UNGA Resolution 37/7, 1982, para 11(b).

212 D Bodansky, ‘Deconstructing the Precautionary Principle’ in D Caron, and H Scheiber (eds) *Bringing New Law to Ocean Waters* (Martinus Nijhoff, 2004) 385.

1995 Straddling Fish Stocks Agreement offers an example of a more “comprehensive circumscription of the precautionary approach”.²¹³

2.1.1. Reading the precautionary principle into UNCLOS

Although a growing number of international agreements relating to the protection of the marine environment have explicitly incorporated the precautionary principle,²¹⁴ it is not mentioned in UNCLOS because at that time it had not been received into international law.²¹⁵ However, the principle has progressively penetrated the international legal framework for the protection of the marine environment. Consequently, it can influence the interpretation of the relevant obligations under UNCLOS. As mentioned in chapter 2, ITLOS was one of the first judicial bodies which referred to the precautionary principle when it accepted the need to prescribe provisional measures in the *Bluefin Tuna* case.²¹⁶ The parties to the dispute argued that there was a lack of scientific certainty with regard to the most suitable means to ensure the long-term viability of Bluefin tuna stocks.²¹⁷ ITLOS avoided using the wording of the precautionary principle explicitly, but instead it used the phrase “*prudence and caution*” to characterise the measures that the parties had to take under those circumstances to prevent “*serious harm*”.²¹⁸ Therefore, the tribunal implicitly interpreted the due diligence standard as requiring States to take precautionary measures.²¹⁹ Nonetheless, the significance of the precautionary principle concerning the provisional measures should not be overemphasised because such a preemptive approach to environmental risk is inherent in the procedure for interim measures under article 290(1) UNCLOS.²²⁰

Several years later, the Seabed Dispute Chamber of ITLOS in its Advisory Opinion took a step forward when it unanimously recognised the precautionary principle as an “*integral part of the general obligation of due diligence of sponsoring States*”, which is generally applicable even outside the scope of the Seabed Regulations.²²¹ The Chamber identified that the incorporation of the precautionary principle in numerous international environmental agreements had initiated a trend towards its crystallisation as a rule of customary international law.²²² It found that this trend was

213 R Wolfrum, ‘The Regulations of the Seabed Authority’ in M Lodge, and M Nordquist (eds) *Peaceful Order in the World’s Oceans: Essays in Honor of Satya N. Nandan* (Martinus Nijhoff, 2014) 244-245.

214 See *inter alia* article 2(2)(a) of OSPAR, article 3(1) of the 1996 London Protocol, article 3(2) of Helsinki Convention, Preamble to the CBD.

215 See also chapter 2, sub-section 2.2.1.

216 Trevisanut (2009) ‘La convention des Nations Unies sur le droit de la mer et le droit de l’environnement: développement intrasystémique et renvoi intersystémique’ in H Ruiz Fabri, et L Gradoni, *La Circulation des Concepts Juridiques* (Société de législation comparée, 2009) 423, S Marr, *The Precautionary Principle in the Law of the Sea: Modern Decision Making in International Law* (Martinus Nijhoff, 2003) 214-125.

217 ITLOS, *Southern Bluefin Tuna* case (*New Zealand v Japan/ Australia v Japan*) Provisional Measures of 27 August 1999, ICGJ 337, para 79-80.

218 *Ibid*, para 77.

219 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, para 132.

220 Provisional measures under UNCLOS are not restricted to the protection of the respective parties to a dispute, but they can also be prescribed under Article 290(1) of the Convention “*to prevent serious harm to the marine environment*”, see T Mensah (2002) ‘Provisional Measures in the International Tribunal for the Law of the Sea (ITLOS)’, *ZaöRV*, 45-46.

221 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, para 131.

222 *Ibid*, para 135.

reinforced by the incorporation of the principle in international instruments, such as the Seabed Authority's Regulations. To support its conclusion, the Chamber explicitly mentioned the *Pulp Mills* case, where the ICJ considered the precautionary principle to be a relevant norm for the interpretation of the bilateral treaty between the parties to the dispute.²²³ The acknowledgement of the potentially customary nature of the principle by the Chamber is crucial, given that the precautionary principle is already explicitly referred to in the Nodules Regulations and the Sulphides Regulations.²²⁴ The precautionary principle already exists as an autonomous legal duty for the Sponsoring States in the Area under these ISA Regulations, but cannot be found under UNCLOS and, thus, was not generally applicable concerning other offshore activities in areas within national jurisdiction.²²⁵ By associating the precautionary principle with the general due diligence obligation of States in preventing harm to the marine environment, the Chamber declared that the precautionary principle is a component of the general prevention obligation under UNCLOS.²²⁶

Remarkably, the Chamber adopted a stronger version of the precautionary principle than the one enshrined in Rio Principle 15 when it upheld that a State “*would not meet its obligation of due diligence if it disregarded*” the potential risks of the planned activities.²²⁷ “*Such disregard would amount to a failure to comply with the precautionary principle.*”²²⁸ It thus expressed the view that States do not have merely a “license to regulate” but are under an obligation to take measures in situations “*where scientific evidence concerning the scope and potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks*”.²²⁹ By referring to plausible indications of potential risks, the Chamber appears to have significantly reduced the threshold for triggering the precautionary principle as enshrined in Rio Principle 15, which refers to “*threats of serious or irreversible damage*”.

The Chamber also clarified that the reference under Rio Principle 15 to the different capabilities of States for the implementation of the precautionary principle means that “*the requirements for complying with the obligation to apply the precautionary approach may be stricter for the developed than for the developing sponsoring States*”.²³⁰ However, it did not accept that, in the context of deep seabed activities, developing States enjoy a lower due diligence standard in taking all the necessary measures, because “*what counts in a specific situation is the level of scientific knowledge and technical capability available to a given State in the relevant scientific and technical fields*”.²³¹ In other words, this qualifier cannot operate as blanket permission

223 *Ibid.*

224 See Regulation 31(2) of Nodules Regulations, Regulation 33(2) of Sulphides Regulations, which expressly refer to the Principle 15 of the Rio Declaration.

225 See, however, its prescription under the UN Fish Stocks Agreement, *supra* n. 213 with corresponding text.

226 E Kelly (2018) *The Precautionary Approach in the Advisory Opinion Concerning the Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* in ITLOS, *The Contribution of the International Tribunal for the Law of the Sea to the Rule of Law: 1996-2016* (Brill, 2018) 52.

227 *Seabed Chamber's Advisory Opinion*, *supra* n. 39, para 131.

228 *Ibid.*

229 *Ibid.*

230 *Ibid.*, para 161.

231 *Ibid.*, para 162.

for developing States to water down their standard of care.²³² Developing States are not expected to exercise a lower standard of care when, in specific cases, they acquire the expertise because, for instance, it is provided by the sponsored private actors that engage in the activities. Furthermore, the Chamber clarified that this qualifier is not applicable with regard to the requirement, under the Sulphides Regulation, to use best environmental practices which, according to the Chamber, supplements the obligation to apply the precautionary principle.²³³

2.1.2. *The relevance of the precautionary principle for offshore energy production activities*

Given the contested nature of the precautionary principle as a crystallised norm of customary international law and the inconsistent practice of States, it seems difficult to conclude that the precautionary principle at the present stage of development of international law offers much in the environmental regulation of offshore energy production activities.²³⁴ At least when it comes to offshore oil and gas activities, the weak version of the precautionary principle does not bring any added value given the exclusive right of the State to regulate such activities. The duty of prevention seems sufficient since there is scientific certainty regarding the risks associated with the extraction of fossil fuels from the sea. The stricter approach to the precautionary principle followed by the Seabed Chamber appears more relevant concerning the regulation of marine renewable activities, because of the lack of sufficient scientific evidence regarding their environmental impacts.²³⁵ At least, it would operate as a presumption in favour of taking measures to protect the marine environment even when significant harm is not expected with absolute certainty.

In any event, the conduct of a preliminary EIA could assist States to determine whether precautionary actions are necessary.²³⁶ Such an assessment is the first step to detect potential risks which may trigger the precautionary principle, before engaging in any activity that is likely to pose a significant risk to the marine environment.²³⁷ If the EIA and the precautionary principle are inherently connected,²³⁸ then, following the reasoning of the Seabed Chamber, a State that has not undertaken an EIA would be in breach of its due diligence obligation even in the absence of scientific certainty regarding the potential effects of the planned activity.²³⁹ In this sense, the

232 ISA (2017) ‘The Implementation of the Precautionary Approach by the International Seabed Authority’, Discussion Paper No 5, suggesting ways to operationalise the precautionary principle in the Area.

233 Kelly (2018) *supra* n. 226, 56.

234 A Gillespie (2007) ‘The Precautionary Principle and the 21st Century: A Case Study of Noise Pollution in the Ocean’, *International Journal of Marine and Coastal Law*, 71, Johnstone (2014) *supra* n. 15, 131.

235 I Papanicolopulu (2011) ‘On the Interaction Between Law and Science: Considerations on the Ongoing Process of Regulating Underwater Acoustic Pollution’, *Aegean Review of Law of the Sea*, 250-252.

236 Y Tanaka (2013) ‘Reflections on Time Elements in the International Law of the Environment’, *ZaōRV*, 170.

237 *Certain Activities/Construction of a Road*, *supra* n. 38, para 104, where it is similarly held that the prevention rule requires the State to conduct a preliminary assessment to evaluate whether there is a risk of significant harm that would trigger the obligation to conduct an EIA.

238 Tanaka (2013) *supra* n. 236, 170.

239 This conclusion seems more reasonable if the precautionary principle is incorporated as a direct obligation of a State under a certain international agreement, since the Seabed Chamber also

precautionary principle expands the duty of prevention to apply to a time-scale where there is no absolute scientific proof meeting the threshold of risk that triggers that duty.²⁴⁰ In this regard, precaution and prevention cannot be separated.²⁴¹ As explained below, the precautionary principle can play a significant role in defining the standard of due diligence. Still, it is not clear what kinds of measures are required under the precautionary principle.²⁴² The requirement of precautionary measures to be “cost-effective” makes their identification even more complicated.²⁴³

Some scholars have argued that, in the context of dispute settlement, the precautionary principle calls for the burden of proof regarding the risk of the planned activities to be reversed.²⁴⁴ However, this seems to be a *de lege ferenda* interpretation, as no international judicial body has deduced such an impact of the precautionary principle on the burden of proof.²⁴⁵ Still, the acceptance that the precautionary principle forms part of the due diligence standard lowers significantly the standard of proof that needs to be provided by the applicant State. It would not be necessary for the claimant to prove that there was a risk of significant environmental harm, but that the concerned State had not taken all precautionary measures to become aware of the possibility of such risk, to assess the gravity and, accordingly, adopt the necessary measures to prevent it from occurring.²⁴⁶

Although environmental principles developed after the conclusion of UNCLOS can, to a certain extent, enrich and update the normative content of the prevention obligations under the Convention, their relevance appears limited due to their high level of abstraction. As illustrated by the example of the precautionary principle, unless a rather strict interpretation is adopted, which creates a duty to take preventive measures in the absence of scientific certainty, its application in the context of offshore energy production activities would have marginal added value. However, the preceding analysis demonstrated the existence of a whole raft of global environmental agreements, which directly or indirectly apply to different aspects of offshore energy production activities. These agreements impose obligations on States to show particular diligence in implementing their commitments to protect the marine environment against risks stemming from offshore energy activities. Therefore, at the current stage of development of the international legal framework, questions arise regarding the formal inter-relationship between the applicable treaties and the obligations thereunder.

relied upon the fact that there is such an obligation for Sponsoring States under the Authority's Regulations.

240 B Sage-Fuller, *The Precautionary Principle in Marine Environmental Law, With Special Reference to High Risk Vessels* (Routledge, 2013) 81.

241 *Ibid.*, 68.

242 Johnstone (2014) *supra* n. 15, 133.

243 See further discussion in chapter 6, sub-section 1.4.

244 M Ambrus (2012) 'The Precautionary Principle and a Fair Allocation of the Burden of Proof in International Environmental Law', *Review of European Community and International Environmental Law*, 270, A Trouwborst, *Precautionary Rights and Duties of States* (Brill, 2006) 219-222.

245 ILA, First Report, *supra* n. 57, 26.

246 Trouwborst (2006) *supra* n. 244, 227, ILA, First Report, *supra* n. 57, 26.

2.2. “Cannot trim the foot to fit the shoe”: normative interactions and rules of conflict

Traditionally, international lawyers have been primarily preoccupied with the interaction between treaties only when they (are likely to) create normative conflicts.²⁴⁷ In the words of the ILC Report on Fragmentation, “*conflict ascertainment and conflict-resolution are a part of legal reasoning, that is of the pragmatic process through which lawyers go about interpreting and applying formal law*”.²⁴⁸ However, in the context of (marine) environmental protection, the applicable environmental treaties, even when they use different approaches, seem to converge in their goal to prevent harm to the (marine) environment and protect the components of biological diversity. Given their sectoral approach and cross-cutting nature, they purport to supplement and complement rather than trump each other.²⁴⁹ When it comes to interactions between successive treaties that do not aim to supplant their predecessors, the conflict rules quickly show their limits: they do not, by their nature and function, aim to provide for the harmonisation or coordination of the rules of different international treaties.²⁵⁰

In the case of normative interactions between simultaneously applicable environmental rules, the application of conflict resolution techniques, such as the *lex specialis* rule which allows for one rule to prevail at the expense of another, would undermine the general objective of environmental agreements to protect the marine environment. Under most environmental agreements, States are required to act diligently to prevent or at least minimise environmental harm. It becomes clear that allowing States to derogate from these obligations would impede the effectiveness of environmental conventions.²⁵¹ As the arbitral tribunal recognised in the *Southern Bluefin Tuna* case, both UNCLOS and the 1993 Convention on the Conservation of the Southern Bluefin Tuna applied to the case, since the latter Convention, as *lex specialis*, did not exclude the application of UNCLOS, as argued by Japan. Notably, the tribunal upheld that:

“it is a commonplace of international law and State practice for more than one treaty to bear upon a particular dispute. There is no reason why a given act of a State may not violate its obligations under more than one treaty. There is frequently parallelism of treaties, both in their substantive content and in their provisions for the settlement of disputes arising thereunder. The current range of international legal obligations benefits from a process of accretion and cumulation; in the practice of States, the conclusion of an implementing convention does not necessarily

247 R Wolfrum, and Nele Matz-Lück, *Conflicts in International Environmental Law* (Springer, 2003) S A Sadat-Akhavi (2004) *Methods of Resolving Conflicts between Treaties* (Martinus Nijhoff, 2004) J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to other Rules of International Law* (Cambridge University Press, 2003) D Pulkowski, *The Law and Politics of International Regime Conflict* (Oxford University Press, 2014) K Blome, A Fischer-Lescano, H Franzki, N Markand, and S Oeter (eds) *Contested Regime Collisions: Norm Fragmentation in World Society* (Cambridge University Press, 2016).

248 ILC Fragmentation Report, *supra* n. 209, para 27.

249 M Young, *Trading Fish, Saving Fish: The Interaction between Regimes in International Law* (Cambridge University Press, 2011) 298-299.

250 Wolfrum and Matz (2003) *supra* n. 247, 129.

251 B Sjoestedt, ‘The Reconciliatory Approach: How Multilateral Environmental Agreements Can Harmonize International Legal Obligations’, in A Jakubowski, and K Wierczynska (eds) *Fragmentation vs the Constitutionalisation of International Law: A Practical Enquiry* (Routledge, 2016) 268-269.

vacate the obligations imposed by the framework convention upon the parties to the implementing convention.²⁵²

A rule may be *lex specialis* in respect of another rule as an elaboration of the more general rule or its implementation in a particular context, i.e. a regional sea area. In such a case, the special rule supplements the normative specificity of the general rule, in the sense that it provides further normative guidance on how the general rule is to be implemented in a specific case.²⁵³ Recalling the dictum of the arbitral tribunal in the *Southern Bluefin Tuna* case, when there is no contradiction between the *lex specialis* and the *lex generalis*, the former should not trump the latter, but instead, they work together. Therefore, both rules should be interpreted in light of each other.²⁵⁴ The general rule continues to provide principles and objectives that underlie and guide the interpretation and implementation of the more specific rule.²⁵⁵ In that respect, there is a normative cross-fertilisation between them.

Furthermore, it seems questionable whether the *lex posterior* rule with regard to successive treaties on the same subject matter applies to the relationship between marine environmental agreements insofar as it would enable States to disregard their previously undertaken environmental obligations.²⁵⁶ Besides the fact that different environmental agreements would not easily qualify as “subsequent” treaties on “the same subject-matter” for the application of article 30 VCLT, the inadequacy of the *lex posterior* rule in regulating their interrelationships also relates to the nature of environmental obligations. In particular, environmental agreements do not purport to establish a series of bilateral duties based on reciprocity because their success in protecting the common interest of environmental protection depends upon the diligent compliance by all States parties. According to the view expressed by the Special Rapporteur, Sir Gerald Fitzmaurice, in his draft for the Law of Treaties, environmental obligations would qualify as non-reciprocal obligations because they, “by reason of the character of the treaty, are necessarily dependent on a corresponding performance by all the other parties”.²⁵⁷ In that respect, it has been argued that treaties containing non-reciprocal or interdependent obligations,²⁵⁸ such as environmental agreements, should be subject to different conflict rules from those under article 30

252 Annex VII Arbitral Tribunal, *Southern Bluefin Tuna* case (*New Zealand v Japan/ Australia v Japan*) Award (on jurisdiction and admissibility) of 4 August 2000, para 38.

253 ILC, Report on Fragmentation, *supra* n. 209, para 98, Wolfrum and Matz (2003) *supra* n. 247, 155.

254 Pauwelyn (2003) *supra* n. 247, 410. The ILC Report on Fragmentation has also supported the view that, in such cases, the *lex specialis* rule only partially replaces the more general one, while the more general remains in the background providing interpretative direction to the special one, ILC, Report on Fragmentation, *supra* n. 209, para 99.

255 ILC, Report on Fragmentation, *supra* n. 209, para 99. See also, para 102, citing the example of the *Oil Platforms* case, where the general law concerning the use of forces was applied to give meaning to a wide standard of “necessity” in the relevant *lex specialis*, which in that case was the 1955 Treaty of Amity between Iran and the United States. In that case the *lex specialis* received its meaning from the *lex generalis*.

256 M Fitzmaurice, and O Elias, *Contemporary Issues in the Law of Treaties* (Eleven, 2005) 331. The authors enumerate the unresolved issues with respect to the interpretation of Article 30 of VCLT, Wolfrum and Matz (2003) *supra* n. 247, 148-150.

257 Fitzmaurice and Elias (2005) *supra* n. 256, 325-330, citing the Draft Code on the Law of Treaties by Fitzmaurice, Second Report, YILC (1957), Vol II, 53, Sadat-Akhavi (2004) *supra* n. 247, 67-69.

258 The VCLT seems to deal with such obligations in its articles 41(1)(b), 58(1)(b) and 60(2)(c).

VCLT.²⁵⁹ This position was further supported by the Special Rapporteur, Sir Humphrey Waldock, who advocated that a treaty is not automatically void if it overlaps with an earlier treaty which contains interdependent or non-reciprocal obligations.²⁶⁰

Nonetheless, the ILC did not address environmental obligations explicitly during its work on the codification of the law of treaties.²⁶¹ Similarly, the VCLT does not seem to consider such nuanced classification of legal obligations in regulating the relationship between treaties. Indeed, insofar as the law of treaties is concerned with the interrelationship between international treaties, it primarily aims to establish which one is applicable or enjoys priority for a State regarding another State under specific circumstances. This approach of conflict resolution, which results in one treaty trumping the others, may work well concerning agreements which establish reciprocal, bilateralised obligations because it is only concerned with the performance of a State towards another State.²⁶² This approach, however, disregards the fact that environmental agreements establish interdependent obligations, because their goal to protect common interests shared by all States parties depends on the compliance by all of them.²⁶³

For instance, given the significance of a healthy marine environment for life, under and beyond water, the protection of the marine environment is conceptualised as a common interest of the international community.²⁶⁴ Most of the substantive rules that aim to prevent harm to the marine environment do not create reciprocal commitments and, therefore, the approach adopted by the VCLT seems to be rather inadequate to address the interactions among obligations under different environmental agreements. Still, this critique should not act as a total ban on the relevance of the law of treaties in promoting synergies between environmental agreements. If rules under the various applicable environmental agreements can be interpreted harmoniously in a fashion that coordinates their normative content, there is no need to apply the rules on conflict resolution.²⁶⁵ As explained in the following section, the rules on treaty interpretation can provide the legal basis for the synergetic interaction of simultaneously applicable environmental duties.²⁶⁶ That argument does not suggest any special method of interpretation, but it is grounded in the customary interpretation rules reflected in the VCLT.

2.3. Normative interactions through the rules on treaty interpretation

Like any other international agreement, once UNCLOS was concluded, its text became frozen in time, unless further amended or implemented,²⁶⁷ as by, for

259 Pauwelyn (2003) *supra* n. 247, 410-415, Fitzmaurice and Elias (2005) *supra* n. 256, 331.

260 Sadat-Akhavi (2004) *supra* n. 247, 68-69.

261 Fitzmaurice, Elias (2005) *supra* n. 256, 343.

262 Wolfrum and Matz (2003), *supra* n. 247, 130, 131-132.

263 L Boisson de Chazournes, 'Features and Trends in International Environmental Law' in Y Kerbrat, and S Maljean-Dubois (ed) *The Transformation of International Environmental Law* (Hart and Pedone, 2011) 11, Wolfrum and Matz (2003) *supra* n. 247, 132.

264 Y Tanaka (2011) 'Protection of Community Interests in International Law: The Case of the Law of the Sea' in A von Bogdandy, and R Wolfrum (eds) *Max Planck Yearbook of United Nations Law*, Vol 15, 337.

265 ILC, Report on Fragmentation, *supra* n. 209, para 412.

266 Wolfrum and Matz (2003) *supra* n. 247, 133.

267 Tanaka (2013) *supra* n. 236, 141.

example. the Fish Stocks Agreement or the currently negotiated instrument on the protection of biodiversity in areas beyond national jurisdiction. However, the Convention needs to keep up with new realities to protect the marine environment. Through the process of interpretation, the environmental provisions of UNCLOS can interact with the relevant environmental obligations and enable the Convention to keep abreast of legal developments, without a formal amendment.²⁶⁸ These normative interactions, which are partly the merit of UNCLOS' provisions, illustrate the Convention's character as a "living" treaty.²⁶⁹ This observation particularly applies to Part XII and other provisions of UNCLOS, which are scattered in different parts of the Convention, on the protection of the marine environment. Those environmental rules must be read according to the rules of treaty interpretation, which, *inter alia*, require them to be "interpreted and applied within the framework of the entire legal system prevailing at the time of the interpretation".²⁷⁰ Under the customary rules of interpretation, as reflected in the VCLT, the interpreter of UNCLOS is required to consider the evolution of the content of its provisions, by means of its interpretation in light of the object and purpose, considering subsequent agreements and practice as well as the relevant rules of international law applicable between the parties.²⁷¹ The order in which different techniques of interpretation are examined below does not imply the existence of any hierarchical structure, as article 31 of the VCLT consists of a "single combined operation".²⁷² Therefore, all means of interpretation have the same importance in the interpretative process.²⁷³

2.3.1. Normative interactions through (and beyond) the principle of systemic integration

The conception of international law as a system of rules facilitates the normative interactions between UNCLOS and other rules of marine environmental law. For instance, through the principle of systemic integration, the interpreter of UNCLOS can seek additional interpretative guidance concerning the environmental duties under the Convention in the content of "external" environmental rules.²⁷⁴ Article 31(3)(c) of the VCLT reflects the principle of systemic integration, according to which international obligations are to be interpreted by reference to their

268 J Barrett, 'UNCLOS: A Living Treaty?' in J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a Living Treaty* (BIICL, 2016) 25.

269 Barrett and Barnes (2016) *supra* n. 268.

270 ICJ, *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276*, Advisory Opinion of 21 June 1971, ICGJ 220, para 31.

271 Article 31 of the VCLT.

272 "All the elements [of article 31 of the VCLT], as they were present in any given case, would be thrown into a crucible, and their interaction would give the legally relevant interpretation", see ILC Report (1996) Yearbook of International Law Commission, 218.

273 G Nolte, 'Subsequent Practice as a Means of Interpretation in the Jurisprudence of the WTO Appellate Body' in E Canizaro (ed) *The Law of Treaties Beyond the Vienna Convention* (Oxford University Press, 2011) 138. *Contra*, D Tladi (2018) 'Is the International Law Commission Elevating Subsequent Agreements and Subsequent Practice?', available online at: <https://www.ejiltalk.org/is-the-international-law-commission-elevating-subsequent-agreements-and-subsequent-practice/>.

274 N Matz-Lück (2009) 'Harmonization, Systemic Integration and Mutual Supportiveness as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation', *Finnish Yearbook of International Law*, 44.

normative environment.²⁷⁵ Although the ILC Fragmentation Report attached particular significance to the principle of systemic integration²⁷⁶ as a legal basis for the “evolutionary” interpretation of treaties in the light of further normative developments,²⁷⁷ it seems that it has been only rather cautiously relied upon by international courts and tribunals.²⁷⁸ That is probably because its precise content remains obscure.²⁷⁹ The debates within the ILC aptly illustrate the considerable disagreement among its members as to the range of external rules of international law that are to be considered during the process of interpretation.²⁸⁰ The thorniest issues appear to have been the intertemporality (whether the interpreter needs to consider only rules which were in force at the time that the concerned treaty was concluded, or whether it is allowed to engage in an evolutionary interpretation)²⁸¹ and whether, particularly in the case of multilateral treaties with broad participation, there is a requirement of parallel membership among the agreements that must be taken into account by the interpreter.²⁸²

In the case of multilateral treaties of quasi-universal participation, an important caveat of the rule of article 31(3)(c) of the VCLT is that it requires the interpreter to read a rule in the light of other rules “*applicable between the parties*”. The provision is phrased in these terms because the drafters of the VCLT had in mind its application to international obligations of reciprocal or “synallagmatic” nature.²⁸³ As was mentioned in the ILC Fragmentation Report, the application of article 31(3)(c) of the VCLT does not have the same normative consequences when the interpreted agreement is a multilateral treaty creating obligations *erga omnes partes* compared with the situation where it concerns a bilateral or even multilateral treaty which creates reciprocal obligations. As already explained, the obligations to prevent harm to the marine environment are not reciprocal, and they do not create bilateral relationships between parties to UNCLOS. In other words, a party of UNCLOS bears the duty to protect the marine environment within and beyond its national jurisdiction, irrespective of the conduct of other States. The normative content of that duty should, therefore, be informed, by the relevant obligations of a State under

275 C McLachlan (2005) ‘The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention’, *International and Comparative Law Quarterly*, 279-320.

276 During the debates in the ILC on the significance of article 31(3)(c), Xue Hanquin suggested that the provision functions like a “master key” to the house of international law, see ILC, Report on Fragmentation, *supra* n. 209, para 420.

277 ILC, Report on Fragmentation, *supra* n. 209, paras 410-480.

278 A Boyle (2005) ‘Further Development of the Law of the Sea Convention: Mechanisms for Change’, *International and Comparative Law Quarterly*, 567, D French (2006) ‘Treaty Interpretation and the Incorporation of Extraneous Legal Rules’, *International and Comparative Law Quarterly*, 300.

279 P Merkouris, *Article 31(3)(c) VCLT and the Principle of Systemic Integration: Normative Shadows in Plato’s Cave* (Brill, 2015) McLachlan (2005) *supra* n. 275, 279, P Merkouris (2007) ‘Debating the Ouroboros of International Law: The Drafting History of Article 31(3)(c) of the Vienna Convention’, *International and Comparative Law Quarterly*, 1-31, Pulkowski (2014) *supra* n. 247, 272-298, H van Gellecum, (2015) ‘Environmental Law in the Context of Article 31(3)(c) of the Vienna Convention on the Law of Treaties. Reconciling Treaty Interpretation and Progressive Environmental Norms: The Pulp Mills Case and Beyond’, available at SSRN: <https://ssrn.com/abstract=1989468>.

280 ILC Report on Fragmentation, *supra* n. 209, paras 429-432.

281 *Ibid*, paras 475-478, M Fogdestam Agius (2014) *Interaction and Delimitation of International Legal Orders* (Brill, 2014) 295-298.

282 *Ibid*, paras 470-472.

283 *Ibid*, para 472.

other applicable environmental agreements, regardless of whether these agreements also bind the other parties to UNCLOS. Notably, even though the ILC Fragmentation report considers this provision as to be a partial codification of the broader principle of systemic integration,²⁸⁴ it remains silent with regard to the obligation of a State to interpret a rule by reference to its normative environment irrespective of whether the contextual rules are simultaneously binding upon all the parties to the interpreted agreement.

So far, international law literature has focused on the use of article 31(3)(c) of the VCLT as a norm of interpretation by international courts and tribunals, which have competence for treaty interpretation when a dispute arises. Also, the ILC report reflects upon the rule as a tool to resolve the vexed problem of fragmentation in international law.²⁸⁵ These approaches, though, seem to neglect the fact that the parties to a treaty are the primary competent agents of interpretation and, in practice, most usually engage in the interpretation of their treaty-based obligations.²⁸⁶ Interpretation is a precondition for them to implement their rights and obligations under treaties.²⁸⁷ Furthermore, the ILC Report does not clarify what the legal nature of the general principle of systemic integration is and whether or not that principle imposes an obligation upon the interpreter to always take into account the normative environment when engaging in the interpretation of a treaty.

In practice, international courts and tribunals rarely find it necessary to explicitly rely upon article 31(3)(c) because the other rules on interpretation under article 31 of the VCLT also call for the interpreter to consider the normative environment of a rule.²⁸⁸ For example, in the *Whaling in the Antarctic* case, the parties to the dispute partly relied on the concept of systemic integration to argue that the Whaling Convention should be read in combination with the CBD and CITES, as well as the general principles of international environmental law, such as the precautionary principle.²⁸⁹ Despite the arguments advocated by the parties, the judgement did not refer to the principle of systemic integration under article 31(3)(c) VCLT.²⁹⁰ In his separate opinion, Judge Trindade expressed the view that the Whaling Convention is a “living instrument”. Instead of relying on article 31(3)(c) of the VCLT, he referred to the concept of “systemic outlook” in the following terms: “[w]ith the growth in recent decades of international instruments related to conservation, not one single one of them is approached in isolation from the others: not surprisingly, the co-existence

284 *Ibid*, paras 413, 423.

285 *Ibid*, para 479 “They call upon a dispute-settlement body – or a lawyer seeking to find out what the law is- to situate the rules that are being invoked by those concerned in the context of other rules and principles that might have bearing upon a case”.

286 Matz-Lück (2009) *supra* n. 274, 51.

287 On the debate concerning the difference between interpretation and application of rules, see A Gourgourinis (2011) ‘The Distinction between Interpretation and Application of Norms in International Adjudication’, *Journal of International Dispute Settlement*, 31-57.

288 U Linderfalk (2015) ‘Cross-Fertilisation in International Law’, *Nordic Journal of International Law*, 428.

289 M Fitzmaurice, *Whaling and International Law* (Cambridge University Press, 2015) 223, M Fitzmaurice, ‘The Whaling Convention and Thorny Issues of Interpretation’ in M Fitzmaurice, and D Tamada (eds) *Whaling in the Antarctic: The Significance and the Implications of the ICJ Judgment* (Brill, 2016) 96-106.

290 J Smith (2014) ‘Evolving to Conservation? The International Court’s Decision in the Australia/Japan Whaling Case’, *Ocean Development and International Law*, 318.

of international treaties of this kind has called for a systemic outlook, which has been pursued in recent years”.²⁹¹

Given the convoluted issues of interpretation related to article 31(3)(c) of the VCLT, international jurisprudence has often interpreted narrowly the requirements under which a judicial body can consider external normative developments in the process of interpretation.²⁹² In the case of UNCLOS, the less frequent invocation of article 31(3)(c) of the VCLT may also be explained because UNCLOS already refers to the application of other relevant rules of international law by courts and tribunals having jurisdiction to hear disputes under the Convention.²⁹³ Therefore, courts and tribunals may not indeed feel the need to take extrinsic norms into account by explicitly referring to the principle of systemic integration since they already have that competence by reference to rules of UNCLOS.²⁹⁴ Under article 293 of UNCLOS “[a] court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention”. This provision enhances the interaction of UNCLOS with other international rules by enabling judicial bodies to take into account as applicable law other rules of international law, as long as such rules are not incompatible with the Convention.²⁹⁵

In addition, article 297(1)(c) UNCLOS provides that:

“[d]isputes concerning the interpretation or application of this Convention with regard to the exercise by a coastal State of its sovereign rights or jurisdiction provided for in this Convention shall be subject to the procedures provided for in section 2 in the following case: ... (c) when it is alleged that a coastal State has acted in contravention of specified international rules and standards for the protection and preservation of the marine environment which are applicable to the coastal State and which have been established by this Convention or through a competent international organization or diplomatic conference in accordance with this Convention”.

The arbitral tribunal in the *Chagos Arbitration* interpreted the limitations on the compulsory jurisdiction for the settlement of disputes under article 297(1)(c) UNCLOS as being merely indicative.²⁹⁶ The award suggests that the reference to specific rules and standards for the protection and preservation of the marine environment is expanding the scope of jurisdiction of courts and tribunals over disputes relating to the interpretation of these rules and standards.²⁹⁷ Therefore, the provision enables judicial bodies to engage in normative interactions through the

291 ICJ, *Whaling in the Antarctic* case, Separate Opinion of Judge Trindade, paras 25, 33.

292 Boyle (2005) *supra* n. 278, 567.

293 Fogdestam Agius (2014) *supra* n. 281, 305.

294 Treves has provided another explanation for the absence of references to article 31(3)(c) when it comes to judgments of ITLOS, noting that statements regarding the interpretative methodology chosen by the Tribunal are rare because of the rather summary nature of most cases referred to it, see T Treves, ‘The International Tribunal for the Law of the Sea: Applicable Law and Interpretation’ in A Yanovich, and J Bohanes (eds) *The WTO at Ten: The Contribution of the Dispute Settlement System* (Cambridge University Press, 2006) 496.

295 Trevisanut (2009) *supra* n. 216, 420.

296 PCA, *Chagos Marine Protected Area Arbitration (The Republic of Mauritius v The United Kingdom of Great Britain and Northern Ireland)* Award of 18 March 2015, para 314.

297 *Ibid.*, para 316.

interpretation of UNCLOS in conjunction with international environmental rules and standards, which are not themselves subject to compulsory jurisdiction.²⁹⁸

The reasoning of the award in the *South China Sea Arbitration* offers a fine example of the interpretation of UNCLOS embedded in the normative environment formed by relevant international environmental agreements, without explicitly relying upon article 31(3)(c) of the VCLT.²⁹⁹ The tribunal considered that the normative sophistication and diversification of agreements related to marine environmental protection renders their harmonious interpretation necessary.³⁰⁰ It declared that article 192 of UNCLOS imposes a duty to protect and preserve the marine environment “*the content of which is informed by the other provisions of Part XII and other applicable rules of international law*”.³⁰¹ The tribunal relied on article 237 of UNCLOS to determine the content of the duty under its article 192, suggesting that the relevant environmental obligations of States under other environmental agreements, prior or after the conclusion of the Convention, form “*the corpus of international law relating to the environment*” within which the former provision needs to be interpreted.³⁰² Remarkably, the tribunal interpreted article 237 of UNCLOS as providing for a positive linkage between the general environmental obligations of its Part XII with other more specific environmental obligations,³⁰³ rather than treating it as a conflict rule which merely acknowledges the parallel existence of several marine environmental agreements.³⁰⁴ As further discussed in section 3.2., the tribunal adopted a positive attitude towards the systemic interpretation of the general rules of Part XII UNCLOS and, thus, managed to accommodate subsequent developments in international environmental law to inform the interpretation of UNCLOS and give shape to the general environmental obligations of the Convention.³⁰⁵

The tribunal also interpreted the obligation to conduct an EIA under article 206 of UNCLOS, considering the evolution of the content of the corresponding obligation under customary international law.³⁰⁶ In the tribunal’s view, the vague wording of article 206 of UNCLOS allows “*an element of discretion*”, since it requires States only to conduct an EIA, “*as far as practicable*” when they have “*reasonable*” grounds for believing that a planned activity under its jurisdiction or control may cause substantial pollution or significant and harmful changes to the marine

298 B Oxman, ‘Judicial Application of Environmental Standards under the Law of the Sea Convention’ in J Crawford, A Koroma, S Mahmoudi, and A Pellet (eds) *The International Legal Order: Current Needs and Possible Responses. Essays in Honour of Djamchid Momtaz* (Brill, 2017) 455-458.

299 *South China Sea Arbitration*, *supra* n. 40, para 941. However, the Award on Jurisdiction makes reference to the relevance of article 31(3)(c) concerning the combined interpretation of UNCLOS and the CBD, see Annex VII tribunal, *Arbitration between the Republic of Philippines and People’s Republic of China*, Award (on jurisdiction and admissibility) of 29 October 2015, para 956.

300 M M Mbengue (2016) ‘The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations’ *American Journal of International Law*, 286.

301 *Ibid.*

302 C Kojima (2015) ‘South China Sea Arbitration and the Protection of the Marine Environment: Evolution of UNCLOS Through Interpretation and the Duty to Cooperate’, *Asian Yearbook of International Law*, 172.

303 Kojima (2015) *supra* n. 302, 172.

304 J Harrison (2019) ‘The Protection of Species, Ecosystems and Biodiversity in light of the South China Sea Arbitration: an Emergent Duty of Marine Ecosystem Restoration?’, University of Edinburgh, *Research Paper Series 2019/20*, 6.

305 *Ibid.*

306 *South China Sea Arbitration*, *supra* n. 40, para 948.

environment.³⁰⁷ Despite those qualification to the requirement to conduct an EIA, the tribunal upheld that, according to article 205 of UNCLOS, States have an absolute obligation to communicate reports of the results of these assessments.³⁰⁸ Consequently, the tribunal found that China's assertions that it had undertaken environmental assessments following its domestic law were not sufficient proof that it had diligently complied with its duties under UNCLOS, particularly in the absence of their communication.³⁰⁹ While the ICJ in the *Costa Rica v Nicaragua* case upheld that the procedural obligations of States to notify and consult other States are only triggered and thus are conditional upon the assessment by a State that a planned activity creates risk for significant transboundary harm,³¹⁰ the tribunal in the *South China Sea Arbitration* seems to have adopted a stricter approach with regard to the duty to communicate the results of an EIA. The wording of UNCLOS supports the contention that the obligation to communicate the results of the EIA is triggered regardless of whether the risk of significant harm is ascertained.³¹¹

Equally importantly, the tribunal assessed whether China's alleged environmental impact assessments had met the international standards.³¹² According to the ICJ, the explicit content of an EIA is not prescribed by international law but remains within the domain of domestic law which, however, needs to consider the risk of certain activities for the environment.³¹³ The tribunal in the *South China Sea Arbitration* concluded that China's report fell short of its national standards and was "far less comprehensive" than EIAs reviewed by other international courts and tribunals, comparing it with the respective assessments in the *Pulp Mills* case.³¹⁴ Remarkably, the Tribunal deduced the existence of an international standard of "comprehensiveness" from the wording of article 206 of UNCLOS read in light of the customary obligation.³¹⁵ This finding of the Tribunal has been characterised as another example of the evolutionary interpretation of UNCLOS.³¹⁶

2.3.2. Normative interactions through other techniques of treaty interpretation

It follows from the foregoing analysis that the principle of systemic integration is not the exclusive legal basis for the normative interaction of UNCLOS with other environmental agreements. It is not the "master key" to resolve the riddle of normative interactions.³¹⁷ Other interpretation techniques can also govern

307 L Kong (2011) 'Environmental Impact Assessment under the United Nations Convention on the Law of the Sea', *Chinese Journal of International Law*, 658-659.

308 *South China Sea Arbitration*, *supra* n. 40, para 948.

309 *Ibid*, para 991.

310 ICJ, *Certain activities/Construction of a Road*, *supra* n. 38, para 104.

311 Y Tanaka (2018) 'The South China Sea Arbitration: Environmental Obligations under the Law of the Sea Convention', *Review of European, Comparative and International Environmental Law*, 4-5.

312 *South China Sea Arbitration*, *supra* n. 40, para 990. See also, Kojima (2015) *supra* n. 302, 177.

313 *Pulp Mills*, *supra* n. 38, para 205.

314 *South China Sea Arbitration*, *supra* n. 40, para 990.

315 Mbengue (2016) *supra* n. 300, 287.

316 Kojima (2015) *supra* n. 302, 177, M Gavouneli 'Protection Standards for the Marine Environment: Updating Part XII of the Law of the Sea Convention?' in S Minas, and J Diamond (eds) *Stress-Testing the Law of the Sea: Dispute Resolution, Disasters and Emerging Challenges* (Brill, 2018) 265-266.

317 That metaphor is used in the ILC in the Fragmentation report to depict the role of the systemic integration under article 31(3)(c) of the VCLT in resolving conflicts between different international

the harmonious interpretation of UNCLOS and other relevant environmental agreements. For instance, normative interactions, giving rise to the evolutionary interpretation of UNCLOS, are more feasible in light of the ordinary meaning and object and purpose of the Convention. Also, subsequent agreements and subsequent practice, as means of interpretation under articles 31 and 32 of the VCLT, may assist in identifying whether the presumed intention of the parties was to give a term an evolutionary character.³¹⁸ In its 2018 draft conclusions on the role of subsequent practice and agreements for treaty interpretation, the ILC argues that “*subsequent agreements and subsequent practice, as any other means of treaty interpretation, can support both a contemporaneous and an evolutive treaty interpretation (or, as it is often called, evolutionary interpretation), where appropriate*”.³¹⁹

Such evolutionary interpretation is also partly the merit of the Convention’s provisions. The use of generic terms in the text of a treaty is a key element opening the door to the evolutionary interpretation of its own rules in light of other relevant normative developments.³²⁰ According to the ILC, attribution of evolutionary character should be restricted to technical, economic, and legal concepts which are phrased at a high level of abstraction.³²¹ The inclusion of “*by definition evolutionary*”³²² terms in a treaty has been regarded as an inter-temporal *renvoi*, which is arguably based on the presumed intentions³²³ of the parties to allow for such terms to be interpreted in light of new legal developments.³²⁴ Due to their open-ended wording, these terms are not interpreted as static concepts but are susceptible to being adapted, taking into account emerging rules of international law without a formal treaty amendment.³²⁵

According to Boyle, evolutionary interpretation of this kind is a relatively limited task, because it is based on the intention of the parties to give the term such

regimes, see ILC Report on Fragmentation, *supra* n. 209, para 420.

318 ILC Draft conclusions on subsequent agreements and subsequent practice in relation to the interpretation of treaties (2018), *Yearbook of the International Law Commission*, vol II, Part Two, para 83.

319 *Ibid.*

320 Tanaka (2013) *supra* n. 236, 150, J Arato (2010) ‘Subsequent Practice and Evolutive Interpretation: Techniques of Treaty Interpretation over Time and Their Diverse Consequences’, *The Law and Practice of International Courts and Tribunals*, 468, French (2006) *supra* n. 278, 295, Boyle (2005) *supra* n. 278, 567-568, ILC Report on Fragmentation, *supra* n. 209, para 478.

321 ILC Report on Fragmentation, *supra* n. 209, para 478.

322 ICJ, *Dispute Regarding Navigational and Related Rights (Costa Rica v Nicaragua)* Judgment of 13 July 2009, ICGJ 421, para 64.

323 In the words of the Special Rapporteur for the ILC in the study of the law of treaties, Sir Humphrey Waldock: “*whether the terms used were intended to have a fixed content or to change in meaning with the evolution of the law could be decided only by interpreting the intention of the parties*”. See J Noyes, ‘Memorializing UNCLOS III, Interpreting the Law of the Sea Convention, and the Virginia Commentary’ in Lodge and M Nordquist (2014) *supra* n. 213, 230 citing *Yearbook of the International Law Commission*, 1966, vol 1, UN Doc. A/CN.4/SER.A/1966.

324 French (2006) *supra* n. 278, 296, Tanaka (2013) *supra* n. 236, 153, ILC Report on Fragmentation, *supra* n. 209, para 478.

325 *Gabčíkovo-Nagymaros*, *supra* n. 22, para 112: “*By inserting these evolving provisions in the Treaty, the parties recognized the potential necessity to adapt the Project. Consequently, the Treaty is not static, and is open to adapt to emerging norms of international law.*” See also ICJ, *Dispute regarding navigational and related rights*, *supra* n. 322, para 66: “[W]here the parties have used generic terms in a treaty, the parties necessarily having been aware that the meaning of the terms was likely to evolve over time, ... the parties must be presumed, as a general rule, to have intended those terms to have an evolving meaning”.

an open-ended meaning.³²⁶ Boyle argues that the inclusion of terms susceptible to evolutionary interpretation does not enable a judicial body to engage in the process of constantly updating UNCLOS in the light of each new treaty that regulates similar matters.³²⁷ In his opinion, the evolutionary interpretation of generic terms must respect the ordinary meaning of the Convention according to its object and purpose. On that account, it must not result in the “rewriting or revision” of UNCLOS.³²⁸ Although the interpreter must respect the integrity of the Convention and act within the confines of the exercise of interpretation, sometimes it is difficult to draw the line between dynamic interpretation of generic rules and their modification in practice.³²⁹ However, the distinction between interpretation and modification is indispensable since it is the only way to safeguard legal stability and predictability.³³⁰ In an opposing view, Nolte has suggested that evolutionary terms include “*an inherent adaptation mechanism, from the very beginning allowing even apparently divergent subsequent practice to be read into the drafters’ intentions in order to permit a treaty to evolve, resulting from the treaty being regarded as an element of the interpretative process, rather than as a reflection of a tacit modifying agreement*”³³¹

In that respect, Arato posits that the determination by a tribunal that a certain term is evolutionary has a significant impact on the normative content of that rule that goes beyond the single act of that interpretation because it can further influence its future interpretation.³³² In Arato’s view, an inherently evolutionary term of a treaty is expected to adapt to changes in the international legal system often external to the practice and the intention of the parties to the treaty.³³³ He suggests that the – at least presumed – intention of the parties remains the decisive element because it is the assumption that the parties meant to interpret the term in light of the respective developments in international law and not in a static manner that provides the legal justification for the evolutionary interpretation. In the words of the ICJ “[t]here are situations in which the Parties’ intention upon conclusion of the treaty was, or may be presumed to have been, to give the terms used – or some of them- a meaning or content capable of evolving, not fixed once and for all, so as to make allowance for, among other things, developments in international law”³³⁴

The ILC, in its draft conclusions, deals with the thorny matter of the presumed intentions of the parties to a treaty for its interpretation.³³⁵ In ILC’s view,

“although interpretation must seek to identify the intention of the parties, this must be done by the interpreter on the basis of the means of interpretation that are available at the time of the act of interpretation and that include subsequent

326 The intention of the parties is usually a legal fiction or at most a presumed intention, see Tanaka (2013) *supra* n. 236, 153, E Bjorge (2014) ‘Introducing the Evolutionary Interpretation of Treaties’, available at ejiltalk: <https://www.ejiltalk.org/introducing-the-evolutionary-interpretation-of-treaties/>, where Bjorge refers to the objectivized intention of the parties.

327 Boyle (2005) *supra* n. 278, 568.

328 *Ibid.*

329 Matz-Lück (2009) *supra* n. 274, 49.

330 M Milanovic (2009) ‘The ICJ and Evolutionary Treaty Interpretation’, available online at: <https://www.ejiltalk.org/the-icj-and-evolutionary-treaty-interpretation/>.

331 Nolte (2011) *supra* n. 273, 359.

332 Arato (2010) *supra* n. 320, 481.

333 *Ibid.*

334 *Dispute regarding navigational and related rights*, *supra* n. 322, para 64.

335 ILC (2018) Draft conclusions, *supra* n. 318, para 67.

agreements and subsequent practice of parties to the treaty. The interpreter thus has to answer the question of whether the parties can be presumed to have intended, upon the conclusion of the treaty, to give a term used a meaning that is capable of evolving over time³³⁶.

As implied by Boyle, an alternative legal basis for such evolutionary interpretation is grounded in the object and purpose of a treaty following article 31(1) of the VCLT.³³⁷ The object and purpose of a treaty can offer guidance for identifying whether the parties assumed rigid commitments or whether they agreed to regulate their relationships taking into consideration subsequent normative developments.³³⁸ For example, in light of the principle of stability, the final boundaries established under international treaties are not to be regarded as subject to changes over time.³³⁹ However, duties under several other international agreements, such as human rights treaties, can be assumed as having an evolutionary character.³⁴⁰ Similarly, it is arguable that many environmental agreements, whose primary object and purpose is the protection and preservation of the environment not only for the present but also for future generations, obtain an inter-temporal character, which calls for the evolutionary interpretation of their provisions.³⁴¹ Nonetheless, even in the case of environmental agreements, imputing evolutionary character by examining their object and purpose is not an easier task than seeking the presumed intention of the parties from the text. The object and purpose of treaties are not always clear, nor are they one-dimensional and static. For instance, most of the nature conservation treaties also encompass economic objectives, such as the sustainable or wise use of elements of biodiversity. In that respect, they often reiterate the principle of permanent sovereignty of States over their natural resources, reflecting the parallel need for the protection of economic interests of States. As the diverging separate opinions of the ICJ Judges in the *Whaling in the Antarctic* case illustrated, the object and purpose of environmental agreements can sometimes be found in the fine balance between conservation and sustainable utilisation of resources.³⁴²

In the case of marine environmental protection, it is highly likely that norms and standards evolve to keep up with technological and scientific developments. That necessitates the interpreter of treaties relating to the marine environment to interpret existing rules in an evolutive manner to safeguard their effectiveness. On that account, an argument that the environmental provisions of UNCLOS must be

336 *Ibid*, para 66.

337 In the *Iron Rhine Arbitration*, the Tribunal held that “[i]n the present case it is not a conceptual or generic term that is in issue, but rather new technical developments relating to the operation and capacity of the railway. But here, too, it seems that an evolutive interpretation which would ensure an application of the treaty that would be effective in terms of its object and purpose, will be preferred to a strict application of the intertemporal rule”, *Iron Rhine Arbitration (Belgium v Netherlands)* Award of 24 May 2005, ICGJ 373, para 80.

338 Tanaka (2013) *supra* n. 236, 154, ILC, Report on Fragmentation, *supra* n. 209, para 478.

339 Tanaka (2013) *supra* n. 236, 154.

340 G Letsas (2012) ‘The ECHR as a Living Instrument: Its Meaning and its Legitimacy’, available online at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2021836.

341 Tanaka (2013) *supra* n. 236, 155-156.

342 For a brief overview of the diverse views of the Judges on the object and purpose of the Whaling Convention, see M Young, and S Rioseco Sullivan (2015) ‘Evolution through the Duty to Cooperate: Implications of the *Whaling* Case at the International Court of Justice’, *Melbourne Journal of International Law*, 12-14, Fitzmaurice (2016) *supra* n. 289, 71-76.

subject to evolutionary interpretation seems plausible. Such argument is supported further by the fact that the Convention encompasses “inevitable dynamism” with regard to other environmental law developments and provides for different legal mechanisms to keep abreast of new realities to offer the appropriate standard of protection to the marine environment. Another argument in favour of the evolutive character of UNCLOS is linked to its objective to protect and preserve the marine environment for both present and future generations.³⁴³ It could, therefore, be suggested that inter-temporality is inherent in its object and purpose.³⁴⁴ In other words, it appears necessary to interpret the environmental provisions of UNCLOS in an evolutive manner to make the Convention effective in terms of its object and purpose.³⁴⁵

In addition, UNCLOS was not intended by its drafters to be interpreted as a static legal instrument, since many of its terms are “inherently evolutionary”.³⁴⁶ For instance, in the *Aegean Sea Continental Shelf* case, the ICJ interpreted the term “territorial status” used in Greece’s reservation to the General Act of 1928 in an evolutionary manner due to its generic wording.³⁴⁷ The ICJ also found that the generic term “commerce” in the perpetual treaty regime between Costa Rica and Nicaragua must be understood as having the meaning that it bears on its application by the parties, and not necessarily the original meaning intended by them.³⁴⁸ Similarly, Part XII of UNCLOS includes open-ended concepts, which justify and facilitate their evolutionary interpretation to adapt to subsequent legal developments. For instance, the broad definition of pollution of the marine environment under article 1(4) UNCLOS can be read in the light of subsequent specialised environmental agreements, like the abovementioned biodiversity-related conventions, which have developed recommendations on measures to mitigate the negative impact of marine noise caused by offshore renewable energy devices on the different marine species. That is significant, because at the time of its conclusion, the negotiators of UNCLOS mainly had in mind the sources and the definition of pollution found in the pre-existing IMO conventions.³⁴⁹

Analogously, in the *South China Sea Arbitration*, the tribunal interpreted the term “ecosystem” under article 194(5) UNCLOS drawing upon the “internationally accepted definition” under article 2 CBD,³⁵⁰ which defines an ecosystem as “a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit”. On that account, the tribunal

343 See article 136 of UNCLOS.

344 Tanaka (2013) *supra* n. 236, 155-156.

345 *Iron Rhine Arbitration*, *supra* n. 337, para 80, Arato (2010) *supra* n. 320, 473.

346 For instance, the terms “pollution” and “generally accepted international rules and standards”, see Boyle (2005) *supra* n. 278, 568-569, Noyes (2014) *supra* n. 323, 227, Kojima (2015) *supra* n. 302, 175.

347 ICJ, *Aegean Sea Continental Shelf* case (*Greece v Turkey*) Judgment of 19 December 1978, ICGJ 128, para 77 “Once it is established that the expression the territorial status of Greece was used in Greece’s instrument of accession as a generic term denoting any matters comprised within the concept of territorial status under general international law, the presumption necessarily arises that its meaning was intended to follow the evolution of the law and to correspond with the meaning attached to the expression by the law in force at any given time.”

348 *Dispute regarding navigational and related rights*, *supra* n. 322, paras 70-71.

349 I Papanicolopulu (2011) *supra* n. 235, 250, Firestone and Jarvis (2007) *supra* n. 205, 124-125, Trevisanut (2009) *supra* n. 216, 415.

350 *South China Sea Arbitration*, *supra* n. 40, para 945.

upheld that article 194(5) UNCLOS goes beyond the requirement to prevent, reduce and control marine pollution, also calling for positive steps to protect and preserve marine ecosystems.³⁵¹ Similarly, against the backdrop of article 8(f) CBD, article 192 UNCLOS can be interpreted as demanding that States restore and rehabilitate degraded ecosystems.³⁵² The normative cross-fertilisation between the two agreements results in mainstreaming the ecosystem-approach in UNCLOS. The added value of the ecosystem-approach, compared with the piece-meal approach to the protection of the marine environment against each source of pollution, is that it adopts a more holistic and integrated perspective to the protection of marine species and their habitats, since a threat to any single element of the ecosystem has potentially adverse impacts on all other components of marine biodiversity.³⁵³

Agreements on the conservation of marine species and their habitats are furthermore useful in giving precise content to the obligation to protect “*the habitat of depleted, threatened or endangered species and other forms of marine life*”.³⁵⁴ For instance, Appendix I of the CMS could serve as evidence that species enlisted therein are internationally accepted as threatened with extinction,³⁵⁵ and the list of the Ramsar Convention on wetlands of international importance would indicate habitats that necessitate specific conservation measures. In the *South China Sea Award*, the tribunal held that “*CITES forms part of the general corpus of international law that informs the content of Article 192 and 194(5) of the Convention*”.³⁵⁶ The example of the reference to CITES illustrates how the content of the obligation to protect the marine environment under UNCLOS can dynamically evolve and get precise normative shape by interacting with other environmental agreements.

However, to reach that conclusion, the tribunal stressed that CITES was “the subject of nearly universal adherence”.³⁵⁷ The quasi-universal participation that both the CBD and CITES enjoy seems to have been an essential factor considered by the tribunal to declare that their rules have a normative impact on the interpretation of UNCLOS. The level of parallel participation in the relevant environmental agreements weighed heavily in its reasoning. The tribunal has seemingly approached the issue of evolutionary interpretation with caution. Although it justified the normative impact of CBD and CITES on the fact that these agreements form part of the general corpus of international law that informs the content of articles 192 and 194 UNCLOS, it mentioned that the Philippines and China are contracting Parties to both those agreements. Still, its reasoning implies that those agreements would inform the content of UNCLOS regardless of the participation of the parties to the dispute. In that respect, the tribunal upheld that the Convention on the International

351 That argument is also supported by the broadly phrased obligation under article 192 of UNCLOS, which requires the protection and preservation of the marine environment and does not refer to the prevention of pollution.

352 Harrison (2019) *supra* n. 304, 11. By the same token, article 3(4)(a) of CMS further supports the interpretation of UNCLOS as imposing an obligation to improve the conservation status of endangered species.

353 Harrison (2017) *supra* n. 158, 30.

354 Article 194(5) of UNCLOS.

355 See respectively the use of CITES by the arbitral tribunal in the *South China Sea Arbitration*, *supra* n. 40, paras 956-957.

356 *South China Sea Arbitration*, *supra* n. 40, para 956.

357 *Ibid.*

Regulations for Preventing Collisions at Sea (COLREGS) was applicable through the rule of article 94 of UNCLOS as reflecting generally accepted rules of international law, although the Philippines was not a party to it before 2013.³⁵⁸ According to Boyle, an agreement lacking almost universal support could still offer interpretative guidance, but, in that case, its “persuasive force” as a basis for the evolutionary interpretation of UNCLOS would be weaker the fewer parties it has.³⁵⁹ Similarly, Harrison argues that in the absence of parallel membership between UNCLOS and CITES, the latter was not invoked by the tribunal as a binding rule, but rather “*as evidence of a generally accepted understanding of a concept by the international community at large*”.³⁶⁰ However, in the writer’s view, the tribunal invoked CITES as a binding duty (“part of the general corpus of international law”) which informs the standard of diligence that China had to exercise to comply with its relevant obligations under UNCLOS.

Therefore, the standard of care required of States in implementing their obligation under UNCLOS to protect and preserve the marine environment can be informed and strengthened by the normative developments in international environmental law.³⁶¹ These agreements enhance the standard of protection by giving more precise content to the general duty of States to protect the marine environment. In that case, the treaty’s object and purpose should dictate the outer limit of evolutionary interpretation.³⁶² In contrast, Harrison claims that the use of those conservation agreements should be limited only to providing interpretative guidance in identifying the content of open-ended terms such as ecosystems, species and habitats which require protection under the Convention and should not bind States concerning the necessary measures they must adopt.³⁶³ However, that view appears to overlook the fact that, for instance, the term “all appropriate and necessary measures” under article 194 is also open-ended and can be informed by the content of these external agreements. They can serve as significant benchmarks against which the diligence of States in complying with their obligations under UNCLOS can be assessed.

2.4. The limits of normative interactions between UNCLOS and other environmental agreements

Nonetheless, UNCLOS contains certain normative safeguards, which pose limits to the impact of subsequent normative developments on the fundamental principles forming the foundations of the Convention. Specifically, the Convention contains provisions that regulate its relationship with other both pre-existing and future international agreements, at the global and regional levels. Article 311(3) of UNCLOS stresses that States cannot modify the core principles of the Convention by subsequent agreements or practice.³⁶⁴ In that respect, States must interpret

358 *Ibid*, paras 1081-1082.

359 Boyle (2005) *supra* n. 278, 571.

360 Harrison (2019) *supra* n. 304, 8.

361 Nele Matz-Lück, and E van Doorn (2017) ‘Due Diligence Obligations and the Protection of the Marine Environment’, *L’Observateur des Nations Unies*, 169-187.

362 French (2006) *supra* n. 278, 301, Boyle (2005) *supra* n. 278, 568, Matz-Lück (2009) *supra* n. 274, 48.

363 Harrison (2017) *supra* n. 158, 63.

364 I Buga, ‘Between Stability and Change in the Law of the Sea Convention: Subsequent Practice, Treaty Modification, and Regime Interaction’ in Rothwell, Oude Elferink, Scott and Stephens (2015) *supra* n. 134, 64.

seemingly incompatible agreements, to the extent possible, in a way to ensure their compliance with the fundamental rules and principles of UNCLOS.³⁶⁵ In the case of conflict with later agreements, UNCLOS will prevail, regardless of the *lex posterior* norm. Emphasising the importance of UNCLOS as a package deal, its article 311(3) clarifies that any future agreements should not disrupt the balance established under the Convention among the rights and obligations of its parties.³⁶⁶ Such a restriction is equally important when other agreements serve as interpretative guidance in the implementation of the rights and duties of UNCLOS. Therefore, with the caveat of upholding the basic rights and duties under UNCLOS, the Convention is open to interpretation and implementation in light of further normative developments, both at the global and regional levels.³⁶⁷

Article 237 of UNCLOS deals specifically with the narrower matter of the relationship between Part XII of the Convention and other agreements on the protection and preservation of the marine environment. Arguably, article 237 is *lex specialis* and, as such, prevails over article 311 of UNCLOS.³⁶⁸ However, the argument that the special rule under article 237 needs to be interpreted in combination with the general provision of article 311³⁶⁹ of UNCLOS seems more persuasive, since the latter provision operates as a safeguard for the integrity of the Convention. According to its article 237, future agreements are allowed so long as they are not inconsistent with the general principles outlined in UNCLOS. Therefore, this provision aims to ensure that the environmental duties under UNCLOS set a common minimum standard of marine environmental protection on all its State parties, regardless of whether they become parties to specialised environmental agreements, which elaborate upon those standards. As for pre-existing environmental agreements, article 237 specifies that Part XII of UNCLOS is without prejudice to them, but the commitments under these conventions should be carried out consistently with the general principles and objectives of the Convention. It follows that, even though the general rules on the protection of the marine environment against risks from offshore energy activities in Part XII of UNCLOS could be considered *leges generali* with respect to the several specialised environmental agreements, the fundamental rules of the Convention are not set aside but prevail over any inconsistent prior or future obligations. As confirmed by the tribunal in the *South China Sea Arbitration*,³⁷⁰ article 237 provides a mechanism for normative interactions by facilitating the integration of substantive provisions of other environmental agreements within the overall framework of Part XII of UNCLOS.³⁷¹ It reflects the “inevitable dynamism” of UNCLOS, which incorporates by reference existing environmental instruments and integrates the respective developments in marine environmental law.³⁷²

365 Fitzmaurice and Elias (2005) *supra* n. 256, 334.

366 Sadat-Akhavi (2004) *supra* n. 247, 130-131, Fitzmaurice, Elias (2005) *supra* n. 256, 334.

367 Boyle (2005) *supra* n. 278, 578, Caddell (2012) *supra* n. 177, 16.

368 M Nordquist, N Grandy, S Rosenne, and A Yankov (eds) *United Nations Convention on the Law of the Sea 1982: A Commentary*, Volume IV (Brill/Martinus Nijhoff, 1991): Articles 192 to 278, Final Act, Annex VI, article 237.

369 Trevisanut (2009) *supra* n. 216, 414.

370 See *supra* n. 303 with corresponding text.

371 Nordquist, Grandy, Rosenne and Yankov (1991) *supra* n. 368, article 237, 237.1, Trevisanut (2009) *supra* n. 216, 414.

372 Trevisanut (2009) *supra* n. 216, 415.

The normative content of articles 197 and 237 of UNCLOS supports the nature of Part XII as a legal framework³⁷³ for all prior and future environmental agreements dealing with the protection of the oceans, *inter alia*, against harm by offshore energy production activities. For instance, the relationship between UNCLOS and the CBD illustrates how subsequent agreements with somewhat different objectives can contribute to the development of an integrated legal regime for the conservation of marine biodiversity.³⁷⁴ The two conventions exist in parallel, supplement and reinforce each other because each one is relevant for interpreting the other.³⁷⁵ Only insofar as the application of the CBD (e.g. the designation of a marine protected area based on the CBD) would result in infringing upon the rights and obligations of States under UNCLOS would the latter prevail.³⁷⁶ In other words, the outer limit of normative interactions between UNCLOS and other environmental agreements is found under article 311 of UNCLOS.³⁷⁷

In addition, the relevant conflict rules under the CBD further support the interrelationship between the two agreements. In particular, under article 22 of the CBD, States are required to implement the CBD “*consistently with the rights and obligations ... under the law of the sea*”. According to the same provision, while the rights and obligations under UNCLOS remain unaffected by the CBD, that only applies when “*the exercise of those rights and obligations would cause serious damage or threat to biological diversity*”. Therefore, while coastal States have sovereign rights over their energy resources in the EEZ and the continental shelf, the exercise of those rights is not allowed in a way that would cause severe damage to biological diversity. Such an interpretation is not incompatible with the basic principles of UNCLOS,³⁷⁸ because the protection of marine biodiversity, in the sense of the conservation of the living resources and the protection and preservation of marine ecosystems, is envisaged in several provisions of the Convention.³⁷⁹

Normative interactions through interpretation add normative layers in the prevention obligations under UNCLOS. The content of other environmental agreements has a normative impact on the interpretation and implementation of the relevant duties under UNCLOS, in the sense that they provide benchmarks of conduct against which to assess the compliance of States. Therefore, it is posited that, through normative interactions, the environmental obligations under UNCLOS get informed, shaped and enriched by the relevant rules of other environmental agreements.³⁸⁰ However, it is not always easy to determine the normative effects of such interactions upon the application of UNCLOS as the interpretation of UNCLOS in the light of other applicable environmental agreements does not necessarily provide

373 It is stressed that UNCLOS is not considered as a framework agreement in the sense applied to several environmental treaties, like the 1992 United Nations Framework Convention on Climate Change, which provide for the adoption of subsequent Protocols to substantiate their normative content.

374 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 245.

375 R Wolfrum, and N Matz (2000) ‘The Interplay of the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity’, *Max Planck Yearbook of United Nations Law*, 476.

376 Wolfrum and Matz (2000) *supra* n. 375, 477.

377 Gavouneli (2018) *supra* n. 316, 260.

378 Article 311(3) of UNCLOS.

379 See preambular para 4, articles 61, 64-67, and 194(5) of UNCLOS, Boyle (2005) *supra* n. 278, 579.

380 Gavouneli (2018) *supra* n. 316, 261-262.

a single meaning for the interpreted provisions. The rules on treaty interpretation “*are not step-by-step formulae for producing an irrefutable interpretation in each case*”.³⁸¹ That has significant consequences relating to legal certainty since such normative interactions can lead to diverse interpretations of the relevant obligations under UNCLOS among its parties.³⁸²

2.5. Normative interactions through the subsequent practice of treaty bodies under environmental agreements

Most of the environmental obligations under global agreements, which apply to offshore energy production activities, evolve through resolutions and decisions of their treaty bodies. Under many environmental agreements, the CoP is competent to decide upon binding understandings of the agreement’s provisions.³⁸³ However, several decisions and resolutions by CoPs and other expert treaty bodies, such as scientific committees, are not legally binding and their normative value as interpretative tools cannot be taken for granted. A typical example is the practice of the CoP to the CBD, which has preferred in many instances to issue non-binding decisions to provide recommendations on the measures its parties need to take in compliance with their obligations.³⁸⁴

Many of the treaty bodies to the nature conservation agreements under consideration have produced guidance on the conduct of EIAs and SEAs, which are particularly relevant for offshore energy projects. For example, in 2012, the CoP to the CBD adopted the Voluntary Guidelines for the Consideration of Biodiversity in Environmental Impact Assessments and Strategic Environmental Assessments in Marine and Coastal Areas under article 14 of the CBD.³⁸⁵ The guidelines stress the importance of applying a precautionary approach in decision-making when there is scientific uncertainty regarding the risks to marine biodiversity.³⁸⁶ Furthermore, they recommend including noise emissions in the screening criteria for determining the need for and the required content of EIAs,³⁸⁷ and they recall the necessity of continually monitoring the impact of the planned activities on the marine environment. Similarly, the Guidance addressing the implications for wetlands of policies, plans and activities in the energy sector, including tidal and wave energy projects adopted by the CoP to the Ramsar Convention in the same year,³⁸⁸ recommends *inter alia* conducting EIAs and SEAs for proposed energy production activities that may significantly affect the ecological character of wetlands and urges the need for adoption of a precautionary approach.³⁸⁹ Furthermore, the CoP to the CMS has adopted several resolutions and guidelines on how to avoid or mitigate impacts of marine renewable energy devices on migratory species.³⁹⁰

381 R Gardiner, *Treaty Interpretation* (Oxford University Press, 2nd edition, 2017) 10.

382 Tanaka (2013) *supra* n. 236, 159, Boyle (2005) *supra* n. 278, 569.

383 Matz-Lück (2009) *supra* n. 274, 51.

384 Harrop and Pritchard (2011) *supra* n. 165, 474-480.

385 CBD Decision X1/18, 5 December 2012, UNEP/CBD/COP/11/23, 21 August 2012.

386 McDonald, VanderZwaag (2015) *supra* n. 168, 307.

387 *Ibid.*

388 Ramsar, Res XI.10, *supra* n. 199, paras 13, 14 and 17.

389 G Goettsche-Wanli, ‘Sustainable Production of Offshore Renewable Energy: A Global Perspective’ in Kotzur et al (2018) *supra* n. 3, 26.

390 CMS Res 11.27, *supra* n. 185.

2.5.1. Decisions by treaty bodies as subsequent practice for the interpretation of environmental obligations

The normative weight of CoP decisions and resolutions may, *inter alia*, depend on whether they can qualify as subsequent agreements or practice for the interpretation of the rules under their respective agreements according to article 31(3)(a) and (b) of the VCLT.³⁹¹ The VCLT does not define what subsequent agreements or subsequent practice for the interpretation of a treaty are.³⁹² Concerning subsequent agreements, it is argued that they do not need to have the same formal status as the interpreted treaty, but there must be evidence, for instance, in the form of consistent practice, that parties have reached an agreement on its interpretation.³⁹³ Subsequent State practice³⁹⁴ is also an essential element of the general rule of interpretation since such practice provides evidence on how States interpret a treaty in applying it.³⁹⁵ Subsequent practice is wide enough to encompass any conduct,³⁹⁶ including official statements at a diplomatic conference, official communications to which the treaty gives rise, the enactment of domestic legislation or the conclusion of international agreements to implement the treaty.³⁹⁷ Nonetheless, subsequent practice is important only when it amounts to evidence of the intentional conduct of States, which illustrates their common understanding in the application of the treaty.³⁹⁸ Another important issue arises regarding which parties should participate in the practice for it to be considered consistent and, thus, have an impact on the treaty's interpretation.³⁹⁹ In a case where it is deemed necessary for all the parties to participate, it is questionable

391 Article 31(3)(a) of VCLT reads “Any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty”, and article 31(3)(b) reads “Any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation”.

392 ILC Draft conclusion 4 on Subsequent agreements and practice provide that “1. A ‘subsequent agreement’ as an authentic means of interpretation under article 31, paragraph 3 (a) is an agreement between the parties, reached after the conclusion of a treaty, regarding the interpretation of the treaty or the application of its provisions. 2. A ‘subsequent practice’ as an authentic means of interpretation under article 31, paragraph 3 (b) consists of conduct in the application of a treaty, after its conclusion, which establishes the agreement of the parties regarding the interpretation of the treaty. 3. Other ‘subsequent practice’ as a supplementary means of interpretation under article 32 consists of conduct by one or more parties in the application of the treaty, after its conclusion”, ILC, Sixty -Eighth Session, Doc A/CN.4/L.874.

393 Fitzmaurice (2016) *supra* n. 289, 106.

394 For a comprehensive discussion on issues regarding subsequent practice, see G Nolte (ed) *Treaties and Subsequent Practice* (Oxford University Press, 2013).

395 Arato (2010) *supra* n. 320, 458.

396 ILC (2013) Report on 65th Session, Chapter IV ‘Subsequent Agreements and Subsequent Practice in Relation to the Interpretation of Treaties’, Doc A/68/10, 35.

397 The ILC has attempted to establish a repertory of such practice to guide the interpretation of treaties, see introduction to working paper by the ILC on the subject, cited by G Nolte (2020) ‘Introductory Note to the Special Issue of ICLR on the Outcome of the ILC Work on Subsequent Agreements and Subsequent Practice in Relation to the Interpretation of Treaties’, *International Community Law Review*, 8.

398 Arato (2010) *supra* n. 320, 459, ILC (2013) Report *supra* n. 396, 20, 23.

399 J Arato (2013) ‘Treaty Interpretation and Constitutional Transformation: Informal Change in International Organizations’, *Yale Journal of International Law*, 309, ILC (2013) Report, *supra* n. 396, 36-37.

whether each one of them should actively engage in or support a certain practice or whether it suffices for them to acquiesce to such practice implicitly.⁴⁰⁰

In its advisory opinions regarding *Certain Expenses*⁴⁰¹ and *the Wall*,⁴⁰² the ICJ seems to have relied on decisions of the UN Security Council and Resolutions of the General Assembly to deduce subsequent practice of the UN with regard to the interpretation of the UN Charter.⁴⁰³ Remarkably, in the above advisory opinions, the ICJ relied on the UN GA resolutions even though they were adopted by majority vote and with strong opposition by some States.⁴⁰⁴ However, the Court seems to have taken a slightly different view concerning the requirements that need to be met by decisions of CoPs to treaties to qualify as subsequent practice for the interpretation of the agreement.⁴⁰⁵ In *Whaling in the Antarctic*, the ICJ acknowledged that non-binding recommendations made by the IWC could still be invoked in interpreting the rules of the Whaling Convention insofar as they were adopted by consensus or unanimous vote.⁴⁰⁶ Regarding resolutions adopted without the support of all States parties to the Whaling Convention, the Court declared that “*these instruments cannot be regarded as subsequent agreement to an interpretation of Article VIII, nor as subsequent practice establishing an agreement of the parties regarding the interpretation of the treaty*”.⁴⁰⁷

Bearing in mind the reasoning of the ICJ in the *Whaling* case, the CoP decisions in the context of the CBD, Ramsar and the CMS guiding the conduct of EIAs before offshore energy activities could only be considered as the subsequent practice of the States parties for the interpretation of those conventions when they cumulatively meet all the requirements mentioned above. However, even if they are adopted by a unanimous vote or by consensus, they do not appear to reflect a collective agreement of the parties on the interpretation of their respective treaties. Their hortatory wording appears to preclude the possibility for them to serve as authoritative subsequent practice on the interpretation of the agreements.⁴⁰⁸ Their potential to qualify as subsequent practice will also diminish if it is accepted that there needs to be an explicit expression of the agreement of the States concerning the interpretation of the respective treaty in the text of such decisions. However, that does not preclude

400 *Ibid.*

401 ICJ, *Certain Expenses of the United Nations*, Advisory Opinion of 20 July 1962, ICGJ 221, ICJ Reports 151.

402 ICJ, *Legal Consequences of the Construction of the Wall in the Occupied Palestinian Territory* Advisory Opinion of 9 July 2004, ICJG 131, ICJ Reports 136.

403 Arato (2013) *supra* n. 399, 318-327.

404 J Arato (2014) ‘Subsequent Practice in the Whaling Case, and What the ICJ Implies about Treaty Interpretation in International Organizations’, available online at: <https://www.ejiltalk.org/subsequent-practice-in-the-whaling-case-and-what-the-icj-implies-about-treaty-interpretation-in-international-organizations/>, Arato (2010) *supra* n. 320, 460-461.

405 That differentiation might be justified because in the case of the UN, the ICJ found that these decisions consist of the practice of the UN and not the States, whereas in the second case, the conduct of the treaty bodies would be perceived as State practice in the interpretation of the treaty.

406 *Whaling in the Antarctic (Australia and New Zealand v Japan)* Judgment of 31 March 2014, ICGJ 471, para 83.

407 *Ibid.*

408 With regard to the recommendatory nature of resolutions, in the *Whaling in the Antarctic* the ICJ declared that the relevant Resolutions and Guidelines of the IWC that had been approved by consensus just called upon Parties to take into consideration whether research objectives can be achieved by using non-lethal research methods, but they did not establish a binding prohibition of such methods, *supra* n. 406, para 83.

their potential to provide normative guidance in the interpretation of their respective agreements and, by extension, to the relevant obligation to conduct an EIA under UNCLOS. These decisions could still fall within the broader “family” of relevant practice,⁴⁰⁹ in the sense that they can catalyse specific State conduct and therefore initiate the process of subsequent practice development. Additionally, these decisions can serve as supplementary means for interpretation under article 32 VCLT.⁴¹⁰ In using such other practice, one needs to remain aware of the fact that the view of only part of the States parties to an agreement does not make international law.⁴¹¹ However, as Nolte has suggested, the difference between primary and secondary means of interpretation might be blurry, and the latter means might be important more often than not.⁴¹²

The recent draft conclusions of the ILC⁴¹³ on the issue of subsequent agreements and subsequent practice for the interpretation of treaties, have touched upon the particular role of CoP decisions and the output of other expert treaty bodies.⁴¹⁴ With regard to non-binding decisions adopted by CoPs, draft conclusion 11(3) recognises that they embody “*a subsequent agreement or subsequent practice under article 31, paragraph 4, in so far as it expresses agreement in substance between the parties regarding the interpretation of a treaty, regardless of the form and the procedure by which the decision was adopted, including by consensus*”. Against the reasoning of the *Whaling in the Antarctic* Judgment, which seems to have put much emphasis on the mode of adoption of such decisions (requiring the consensus of States),⁴¹⁵ this draft conclusion seems to stress that it is not only the form and the procedure by which a CoP decision is adopted that has to be ascertained for it to qualify as subsequent practice for interpretation. A purely recommendatory resolution cannot qualify as subsequent practice even if it is adopted by consensus:⁴¹⁶ it must also demonstrate agreement among the parties on the interpretation of the treaty. However, the draft conclusion does not clarify whether such agreement among the States can be implicit or whether an explicit statement of such agreement is necessary. On this issue, it should be recalled that ITLOS has occasionally referred to the subsequent practice

409 L Boisson de Chazournes, ‘Subsequent Practice, Practices, and Family-Resemblance: Towards Embedding Subsequent Practice in Its Operative Milieu – A Multi-Actor Perspective’, in Nolte (2013) *supra* n. 394, 53.

410 ILC (2013) Report *supra* n. 396 addresses such practice as “*other subsequent practice as a supplementary means of interpretation under article 32 consists of conduct by one or more parties in the application of the treaty, after its conclusion*”, 31.

411 *Ibid.*, 41.

412 Nolte (2013) *supra* n. 394, 342, see also discussion on the relevance of secondary means of interpretation in M Fitzmaurice (2020) ‘Subsequent Agreement and Subsequent Practice: Some Reflections on the International Law Commission’s Draft Conclusions’, *International Community Law Review*, 19-22.

413 Although the ILC draft conclusions and the accompanying commentary are not legally binding, “*they are practically relevant as authoritative commentaries or restatements for lawyers who are faced with concrete cases*”. Even though they do not prescribe certain solutions, relying on the ILC conclusions could be considered as proof of the quality of legal reasoning, see Nolte (2020) *supra* n. 397, 12.

414 Draft conclusions 11 and 13, ILC (2018) *supra* n. 318.

415 *Whaling in the Antarctic*, *supra* n. 406, para 46.

416 Fitzmaurice (2016) *supra* n. 289, 115.

of States parties to UNCLOS, without explaining whether such practice established actual agreement concerning the interpretation of the Convention.⁴¹⁷

2.5.2. *The relevance of the obligation to cooperate with expert treaty bodies*

Furthermore, in the *Whaling in the Antarctic* case, the ICJ reached another critical conclusion concerning the normative weight of decisions of treaty bodies under environmental agreements, which are not legally binding and do not enjoy the support of all States parties. The Court deduced from Article VIII of the Whaling Convention a general obligation of its parties to cooperate with the Whaling Commission and the Scientific Committee.⁴¹⁸ In the Court's view, this obligation to cooperate consists of a duty to give "due regard" to the decisions of treaty bodies even in the case where the concerned State had not explicitly consented to their content.⁴¹⁹ Arguably, such an obligation to pay due regard to non-binding resolutions by treaty bodies is a weak duty of conduct, because it is ill-defined and thus allows States a broad discretion to proceed with their planned activities.⁴²⁰ It is difficult to distinguish recommended actions, which a State is obliged to carry out, from those which it can, after considering them in good faith, refuse to follow.⁴²¹ Still, the finding of the Court concerning the duty to cooperate enhances the concreteness of legal obligations under environmental agreements, in the sense that States cannot simply ignore guidelines issued by treaty bodies on the application of the respective provisions.⁴²² It imposes a procedural duty on them to demonstrate that they have, in good faith, considered those recommendations in their decision-making and to offer appropriate justification when they choose to diverge from the suggested practice.⁴²³

Given the different legal mechanisms which justify considering non-binding instruments by treaty bodies to define due diligence, the normative value attached by the Court to non-binding resolutions does not pose a threat to the sovereignty of those parties that did not consent to their adoption; instead, it allows for a more nuanced and sophisticated understanding of sovereignty.⁴²⁴ Those States have consented to be bound by an environmental treaty, which is reasonably expected to evolve in the light of scientific and technological developments. By that token, they have consented to restrain their sovereign regulatory discretion in the light of such future normative developments. In particular, they have undertaken to delegate decision-making power to treaty bodies under those agreements. Depending on their

417 ITLOS, *M/V Saiga (No2) (Saint Vincent and the Grenadines v Guinea)* Judgment (on the merits) of 1 July 1999, ICGJ 336, paras 155-156, see ILC (2013) *Report, supra* n. 396, 39. However, certain SPLOS decisions have decided to spell out the common understanding of States regarding the interpretation of provisions of UNCLOS, see SPLOS/72 and SPLOS/183 concerning the interpretation of article 4 under Annex II of the Convention.

418 *Whaling in the Antarctic, supra* n. 406, paras 83, 137. While the ICJ suggests that Japan had consented to the duty to cooperate with the supervisory organs of the Whaling Convention, such a duty to cooperate might be presumed under any treaty regime that creates its institutional arrangements. See M Hayashi, 'The Whaling Judgment and the Challenges of Dynamic Treaty Regimes' in Fitzmaurice and Tamada (2016) *supra* n. 289, 231.

419 *Ibid.*

420 Fitzmaurice (2016) *supra* n. 289, 132-133.

421 Hayashi (2016) *supra* n. 418, 232.

422 Young and Rioseco Sullivan (2015) *supra* n. 342, 28.

423 *Ibid.*

424 *Ibid.*, 29.

institutional source and the form and procedure by which they are adopted, these non-binding instruments may become legally relevant as interpretative guidance or a standard of evidence that a State has exercised due diligence. This restriction does not necessarily impair sovereignty. It rather reinforces the concept of sovereignty because it is a self-imposed restriction. The example of Odysseus in Homer's *Odyssey* illustrates how self-restriction is, in fact, an expression of sovereignty. According to Homer, Odysseus decided to tie himself to the mast of his ship when it approached the legendary Sirens. His decision to restrain himself allowed him to listen to the song of the Sirens while, at the same time, ensuring that he would not be hypnotised and jump in the sea to his death. By analogy, it is the consent of States, grounded in their sovereignty, that makes the environmental obligations binding upon them and gives competence to the institutional machinery under environmental agreements to adopt decisions to elaborate the content of their obligations. If States do not wish to be in any way influenced by these subsequent developments, they maintain the sovereign right to opt-out or withdraw from the treaty.

Correspondingly, several articles of UNCLOS impose a duty to cooperate for the protection of the marine environment.⁴²⁵ The ITLOS has relevantly declared that “*the duty to cooperate is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law*”.⁴²⁶ In the context of marine environmental law, the obligation to cooperate serves as “*the driving force for the progressive development*” of environmental agreements, which evolve through additional binding instruments and other non-binding resolutions adopted by their institutional bodies.⁴²⁷ International courts and tribunals have considered the duty to cooperate as an evolving norm.⁴²⁸ In light of the above discussion, the obligation to cooperate under article 197 of UNCLOS could be read as imposing a procedural obligation for States to at least pay due regard to the non-binding resolutions of treaty bodies under environmental agreements, to which they are parties. Even when such decisions are not binding or cannot qualify as subsequent practice for the interpretation of their respective treaties, States are still under an obligation to consider these instruments and duly justify their decision when they opt to diverge from the recommended practices. Therefore, such an interpretation of the duty to cooperate in good faith with treaty bodies would further delimitate the discretion of States to take measures to protect the marine environment against, *inter alia*, risks from offshore energy activities. The possibility for a court or tribunal with jurisdiction under UNCLOS to review this obligation of States to give due regard to the non-binding decisions of treaty bodies to MEAs can “*lead to a more responsive*

425 See articles 64, 65, 117, 118, 123, 197, and 199 of UNCLOS.

426 ITLOS, *MOX Plant (Ireland v United Kingdom)*, Provision Measures of 3 December 2001, ICGJ 343, para 82, *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)* Advisory Opinion of 2 April 2015, ITLOS Reports 2015, para 140, *South China Sea Arbitration*, *supra* n. 40, para 946.

427 R Wolfrum (2012) ‘International Law of Cooperation’, *Max Planck Encyclopaedia of Public International Law*, online version, available at: <http://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1427>. However, it has been argued that the obligation to cooperate under UNCLOS is far too general and thus it cannot be interpreted as imposing invokable obligations on States, see Trevisanut (2009) *supra* n. 216, 422.

428 See for instance *South China Sea Arbitration*, *supra* n. 40, para 984-986, ITLOS, *Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v Singapore)* Provisional Measures of 8 October 2003, ICGJ 345, paras 92, 106.

and adaptive system of law”⁴²⁹ and further enhances the due diligence standard in preventing significant harm to the marine environment.

2.6. The relevance of other non-binding instruments in setting environmental standards for offshore energy production activities

The present inquiry into normative developments that affect the standard of prevention under UNCLOS cannot ignore the parallel existence of a variety of non-binding, but legally relevant instruments. Non-binding instruments can differ with respect to the norms contained, the actors that develop them and their addressees.⁴³⁰ Memoranda of understanding of different agreements, declarations of environmental principles and action plans adopted at international conferences, codes of conduct, technical standards and recommendations adopted by international organisations, and ocean corporate responsibility instruments are but a few examples.

As well as their precursory role in the creation of rules of international environmental law, non-binding instruments can also affect the standard of environmental protection by influencing UNCLOS through the process of interpretation. Non-binding instruments can provide useful definitions and assist in clarifying vague obligations of conduct, such as the general obligation of States to take all the necessary measures to prevent significant harm to the marine environment. These documents can be considered as context to the international environmental agreements and thus qualify as supplementary means for interpretation according to article 32 VCLT. The duty to cooperate with international organisations and treaty bodies provides another legal basis to consider non-binding instruments during the interpretation of UNCLOS.⁴³¹ As discussed in the next section, non-binding instruments can further contribute to the concretisation of the due diligence standard required by States in preventing environmental harm from offshore energy production activities.

3. The standard of due diligence as an integrative tool for environmental obligations

The evolutionary nature of the standard of due diligence provides another channel for the interaction of the normative developments in international environmental law with UNCLOS.⁴³² In the context of obligations of conduct, such as the duty to protect and preserve the marine environment under UNCLOS, due diligence is the standard of care against which State responsibility is evaluated.⁴³³ The standard of due diligence guarantees an amount of autonomy and flexibility in the implementation of duties of conduct.⁴³⁴ The imposition of an obligation of result, which would require States to succeed in preventing environmental harm under any circumstances, even when factors leading to the harm are beyond their sphere of control, would be at odds

429 Young and Rioseco Sullivan (2015) *supra* n. 342, 30.

430 For an overview of numerous non-binding instruments in international environmental law, see J Friedrich, *International Environmental “Soft Law”* (Springer, 2013) 15-60.

431 See *supra* sub-section 2.5.2.

432 The same argument is advanced in Matz-Lück, van Doorn (2017) *supra* n. 361, 178.

433 ILA Study Group on Due Diligence in International Law, Second Report, July 2016, Tim Stephens (Rapporteur) and Duncan French (Chair), 2.

434 See discussion above in sub-section 1.1.

with the essence of State sovereignty.⁴³⁵ Even though it appears nearly impossible for a State to always prevent significant harm to the marine environment from activities within its jurisdiction or under its control, a State is reasonably expected to take all appropriate steps to achieve that goal.⁴³⁶ According to the Seabed Chamber, the standard of due diligence is relied upon “to refer to obligations in respect of which, while it is not considered reasonable to make a State liable for each and every violation committed by persons under its jurisdiction, it is equally not considered satisfactory to rely on the mere application of the principle that the conduct of private persons or entities is not attributable to the State under international law”.⁴³⁷ Therefore, obligations of conduct, which are informed by the due diligence standard, are opted for as a compromise between imposing rigid obligations of result and the unacceptable scenario of absolving States from any responsibility in the context of environmental law.⁴³⁸

The Second Report of the ILA Study Group on due diligence in international law, borrowing from the writings of Koskienniemi, explains that “*due diligence can be seen as a technique of proceduralisation, deferring controversial inquiries as to the content of substantive rules regulating wrongdoing to less controversial questions relating to informed decision-making and process*”.⁴³⁹ From that perspective, due diligence is a standard that specifies the content of obligations of conduct, which lack substantive concreteness. However, the lack of normative concreteness does not make obligations of conduct inferior to obligations of result.⁴⁴⁰ The advantage of utilising due diligence as a standard lies in the fact that its normative content is not static, but it can evolve. In the context of international environmental law, creating due diligence obligations may be a good strategy to promote wide and even universal participation by States, since they do not require the achievement of a result at any cost, but rather demand the exercise of best efforts. These best efforts are contingent upon the individual capacity of States. Nonetheless, the obligation might progressively become more demanding concerning the efforts required insofar as the standard of care is gradually enhanced.⁴⁴¹

In the law of the sea, the concept of due diligence has cardinal importance because many of the obligations under UNCLOS require States to adopt certain conduct, rather than achieve a result.⁴⁴² For instance, due diligence sets the standard of conduct in the provisions that require States to show “due regard” to the interests of other States, such as the mutual obligation of both coastal and third States to pay due regard to the interests of other States when exercising their rights and duties in

435 ILA (2016) Second Report on Due Diligence, *supra* n. 433, 2.

436 ICJ, *United States Diplomatic and Consular Staff in Tehran (USA v Iran)* Judgment of 24 May 1980, ICGJ 124, ICJ Reports 3, para 63.

437 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, para 112.

438 D Konig, ‘The Elaboration of Due Diligence Obligations as a Mechanism to Ensure Compliance with International Legal Obligations by Private Actors’, ITLOS (2018) *supra* n. 226, 87.

439 ILA (2016) Second Report on Due Diligence, *supra* n. 433, 3.

440 B Mayer (2018) ‘Obligations of Conduct in the International Law on Climate Change: A Defence’, *Review of European, Comparative and International Environmental Law*, 138.

441 ILA (2016) Second Report on Due Diligence, *supra* n. 433, 3. The Report uses the example of the obligation to conduct an EIA which has gained much stronger content in view of the recent international jurisprudence.

442 I Caracciolo, ‘Due Diligence et Droit De La Mer’ in Société Française pour le Droit International (ed) *Le standard de due diligence et la responsabilité internationale* (Pedone, 2018) 170.

the EEZ. Importantly, it is crucial in defining the content of the obligation to protect and preserve the marine environment.⁴⁴³ Besides the duty to take all necessary measures to prevent, reduce and control pollution by any sources, the obligation to ensure that activities within a State's jurisdiction or control do not cause damage is similarly an obligation to “*deploy adequate means to exercise best efforts, to do the utmost, to obtain this result*”.⁴⁴⁴ The present section discusses how the standard of due diligence can serve as an integrative tool, connecting environmental obligations, principles and non-binding instruments concerning the regulation of offshore energy production activities. Despite its variable elements relating to the level of risk posed by the regulated activities, it is argued that due diligence also comprises objective elements, because it is informed and shaped by the primary environmental obligations of States.

3.1. The variable factual element of risk in the due diligence standard

The recent advisory opinions on the Responsibilities of Sponsoring States in the Area and IUU Fishing and the Award in the *South China Sea Arbitration* have highlighted crucial elements of the seemingly elusive standard of due diligence concerning the protection of the marine environment under UNCLOS. Specifically, the tribunals have affirmed that the standard of due diligence is a “*variable concept*”,⁴⁴⁵ making the content of the obligation to protect the marine environment contingent on the circumstances of each specific case. The flexibility of due diligence allows the content of the obligation to adjust depending on the particular risks posed by certain activities, with a higher standard required for riskier activities.⁴⁴⁶ In the law of the sea, due diligence can have a strong technical nature, “*capable of measurement in terms of technical and scientific standards of behaviour that are commonly accepted by States*”.⁴⁴⁷ States must consider the contemporary level of technological and scientific progress,⁴⁴⁸ because developments in scientific awareness regarding the risks posed by specific activities may enhance the level of due diligence required.⁴⁴⁹ In addition, it was made clear that the measures adopted might not perpetually qualify as appropriate, but States would have to review them regularly to comply with their duty, as new developments occur.⁴⁵⁰

The duty of States to consider scientific and technological developments in defining the level of care which they are required to exercise is essential in the case of the regulation of marine renewable energy production. As discussed in section 1.3.2., the scientific bodies to nature conservation conventions have issued reports

443 *South China Sea Arbitration*, *supra* n. 40, para 941, Caracciolo (2018) *supra* n. 442, 171. See also *SRFC Advisory Opinion*, *supra* n. 426, para 129, where the Tribunal similarly declares that the obligation to ensure compliance by fishing vessels is also an obligation of conduct, which requires States to exercise a certain level of due regard.

444 *Seabed Chamber's Advisory Opinion*, *supra* n. 39, para 110.

445 *Ibid*, para 117.

446 *Ibid*.

447 ILA (2014) First Report on Due Diligence, *supra* n. 57, 29-30.

448 ILC (2001) Draft Articles on Prevention with commentaries, *supra* n. 49, 162.

449 L Chen (2016) ‘Realizing the Precautionary Principle in Due Diligence’, *Dalhousie Journal of Legal Studies*, 16, S Maljean-Dubois, ‘Les obligations de diligence dans la pratique: la protection de l’environnement’ in *Société Française pour le Droit International* (2018) *supra* n. 409, 159.

450 *Seabed Chamber's Advisory Opinion*, *supra* n. 39, para 222.

highlighting the potential impacts of marine renewable devices on the marine environment and various components of marine biodiversity.⁴⁵¹ These reports are not binding on the parties to these agreements and would not qualify as subsequent practice or agreements for the interpretation of the respective treaty-based rules. However, the ILC, in its draft conclusions on subsequent agreements and practice, as a means of interpretation has recognised an – at least – supplementary contribution of the “*pronouncements of expert treaty bodies*”.⁴⁵² Although the views of States on the role of those scientific reports in the interpretation of the respective agreements differ greatly,⁴⁵³ they seem to converge in the point that such reports can qualify as “other” practice relevant for the interpretation under article 32 VCLT,⁴⁵⁴ or can catalyse relevant State practice for the interpretation of the respective treaty, if States consistently follow their recommendations. The Commentary to the ILC draft conclusions acknowledges that the output of expert treaty bodies does not qualify as State practice but instead it is “*conduct mandated by the treaty the purpose of which is to contribute to the treaty’s proper application*”.⁴⁵⁵ In that respect, they can contribute by providing the context for the determination of the ordinary meaning of the rules of a treaty.⁴⁵⁶

The ICJ has, in some cases, relied on the pronouncements of expert treaty bodies to justify its interpretation of the international treaties.⁴⁵⁷ Even though the Court has not explicitly explained their role in treaty interpretation under the rules of the VCLT, it has considered that it “should ascribe great weight” to them during the process of interpretation.⁴⁵⁸ The ICJ justified its reliance upon the pronouncements of the Human Rights Committee on the grounds that they are useful “*to achieve the necessary clarity and the essential consistency of international law, as well as legal security, to which both the individuals with guaranteed rights and the States obliged to comply with treaty obligations are entitled*”.⁴⁵⁹ Therefore, the ICJ acknowledged that expert treaty bodies established under agreements have some authority as to the correct interpretation of their provisions.⁴⁶⁰

Nonetheless, the relevance of their output is also contingent on the relevant provisions of the treaty that establishes these scientific bodies.⁴⁶¹ The corresponding treaty might govern the normative value of their output. However, in light of the *Whaling Judgment*, the parties to the agreements that establish these scientific

451 See further discussion above, sub-section 1.3.2.

452 ILC, Draft Conclusion 13, *supra* n. 335. An expert treaty body is described as “*a body consisting of experts serving in their personal capacity, which is established under a treaty and is not an organ of an international organization*”, see Draft Conclusion 13(1).

453 See UN GA, Summary of the discussion held in the Sixth Committee of the General Assembly during its seventy-first session, 22 February 2017, UN Doc A/CN.4/703, 25.

454 I Buga, *Modification of Treaties by Subsequent Practice* (Oxford University Press, 2018) 46.

455 Comments and observation received from Governments on ILC Draft Conclusions, 21 February 2018, para 24.

456 *Ibid.*

457 D Azaria (2020) ‘The Legal Significance of Expert Treaty Bodies Pronouncements for the Purpose of the Interpretation of Treaties’, *International Community Law Review*, 39-46.

458 In the Diallo case, the ICJ relied on the output of the Human Rights Committee and the African Commission, see *Ahmadou Sadio Diallo (Republic of Guinea v Democratic Republic of the Congo)*, Judgment of 30 November 2010, para 66.

459 *Ibid.*

460 Azaria (2020) *supra* n. 457, 45.

461 ILC, Draft Conclusion 13, *supra* n. 318.

bodies have a duty to cooperate with them, in the sense that they need to pay due regard to their findings.⁴⁶² UNCLOS reiterates the obligation of States to “*cooperate, directly or through competent international organizations for the purpose of promoting studies, undertaking programmes of scientific research and encouraging the exchange of information and data acquired about pollution of the marine environment*”.⁴⁶³ Consequently, it is arguable that parties to the CMS and the Whaling Convention are under an obligation to consider these scientific reports in their decision-making process. Whenever they decide not to follow such recommendations, States must then justify their choice to diverge from the scientifically recommended measures, which aim to prevent, control or minimise the harm caused by marine renewable energy generation on whales and other protected migratory species.

In light of the above, it appears that parties to environmental agreements, whose institutional machinery develops further scientific data, are under a duty to consider those findings when regulating potentially harmful activities. The scientific information can result in a common understanding regarding the risks of offshore energy production activities, which influences the level of diligence required by States. The role of scientific reports is not, however, restricted to providing relevant data. Recently, there has been a focus on studying specific mitigation measures, for instance, to limit the impact of noise created by offshore installations, and providing recommendations and guidelines relating to the use of new technologies.⁴⁶⁴ In that regard, scientific reports may also recommend the adoption of specific conservation measures. Even though these recommendations are by no means binding, the discretion of States in taking all necessary measures could be limited in the case where scientific evidence suggested that a specific type of measure is indispensable to avoid harm to the marine environment by offshore energy activities.⁴⁶⁵ It follows that these non-binding instruments offer an essential input in shaping the level of due diligence required under UNCLOS in preventing marine environmental harm from such activities.

3.2. Objective elements of due diligence: the integration of primary environmental obligations

Even though it is a variable concept, the standard of due diligence also consists of an objective component, since it is informed and shaped by the various international obligations of States. Identifying the objective component appears to be indispensable because the standard of due diligence also functions as a measure to determine States’ compliance and responsibility.⁴⁶⁶ States should be able to ascertain that they satisfactorily fulfil their obligation of protecting and preserving the marine environment for the sake of legal certainty and predictability. It is posited that the standard of due diligence serves as an integrative tool, bringing together the primary environmental obligations of the authorising State, which apply to the regulation of offshore energy production activities. As has been highlighted in section 2, recent

462 *Whaling in the Antarctic*, *supra* n. 406, para 137.

463 Article 200 of UNCLOS.

464 Papanicolopulu (2011) *supra* n. 235, 253.

465 ILA (2016) Second Report on Due Diligence, *supra* n. 433, 7.

466 Assessing compliance with an obligation of conduct is usually more complicated than with a duty of result, see Mayer (2018) *supra* n. 440, 139.

international jurisprudence has supported an enhanced standard of diligence required in protecting the marine environment under UNCLOS in the light of other relevant agreements. In that respect, the definition of due diligence under UNCLOS also relies upon the normative developments in international environmental law.⁴⁶⁷

Both ITLOS in its 2011 and 2015 advisory opinions and the tribunal in the *South China Sea Arbitration* considered the content of due diligence equally as a question of law rather than a standard merely contingent on the facts, such as the variable level of risk.⁴⁶⁸ What makes the contributions of the tribunals significantly relevant is the specific normative content that they read into the general environmental duties under UNCLOS by engaging in their systemic interpretation in the light of other relevant rules of international environmental law.⁴⁶⁹ The level of diligence required rises as international law on the protection of the marine environment evolves.⁴⁷⁰ Primary environmental obligations of States form part of the standard of due diligence, and they “*can be seen as a relevant factor in meeting the due diligence obligation*”.⁴⁷¹ In other words, the standard of due diligence in the context of marine environmental protection under UNCLOS is informed by the relevant environmental obligations of States, which flesh out the parameters of the conduct required by States. This argument is consistent with the view that the due diligence standard requires States to take all reasonably expected measures.⁴⁷² One of the criteria employed by the ICJ in the *Tehran Hostages* case to assess the reasonableness of Iran’s conduct was whether it was “*fully aware*” of its obligations under the conventions in force.⁴⁷³ States are expected to be fully aware of the environmental obligations they have committed to and, therefore, are reasonably expected to do the utmost to comply with them.

Similarly, the Seabed Chamber’s advisory opinion pointed out that the level of due diligence required by States is not uniform, but is contingent on the primary rules that form part of it.⁴⁷⁴ Those primary rules set the legal parameters against which the conduct of States needs to be evaluated. In that respect, the Seabed Chamber rejected the argument that the level of due diligence required by States in the context of activities in the Area should be adjusted according to the level of development of States, because the relevant rules do not provide for such differentiation and that would also jeopardize uniform application of the highest standards of protection of the marine environment.⁴⁷⁵ That reasoning does not necessarily apply for other offshore activities within national jurisdiction because article 194 of UNCLOS uses the qualifier “*in accordance with their capabilities*”. As explained above, the capabilities of individual States should be assessed in light of the resources, knowledge and technological capacity available in each particular case.⁴⁷⁶ Less developed States can make use of the scientific expertise of the private actors licensed to undertake the planned activities. Therefore, even if the subjective element of due diligence

467 Caracciolo (2016) *supra* n. 442, 165.

468 Caracciolo (2016) *supra* n. 442, 177, Mbengue (2016) *supra* n. 300, 286.

469 Mbengue (2016) *supra* n. 300, 285.

470 Matz-Lück and van Doorn (2017) *supra* n. 361, 191.

471 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, para 123.

472 The Seabed Chamber’s Advisory Opinion refers to all measures “*reasonably appropriate*”, *ibid*, para 229.

473 *United States Diplomatic and Consular Staff in Tehran*, *supra* n. 434, para 68.

474 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, paras 161, 235-236.

475 *Ibid*, para 159.

476 *Ibid*, para 162.

is variable, the degree of diligence required of States can be objectively defined by reference to the primary rules that are binding upon them.⁴⁷⁷

As discussed in section 2.3.1., the tribunal in the *South China Sea Arbitration* interpreted the provisions of Part XII of UNCLOS in light of other applicable rules of international environmental law, presumably by implicitly relying upon the principle of systemic integration.⁴⁷⁸ The normative interaction among the various environmental provisions resulted in the tribunal identifying a higher standard of due diligence. The award demonstrates that the normative developments in international environmental law are a source of richness for the standard of due diligence.⁴⁷⁹ Environmental agreements include a wealth of benchmarks to determine what constitutes significant harm to the marine environment and its biological diversity as well as to identify the reasonable conduct that States needs to exercise to prevent or minimise such harm. For instance, the fragile conservation status of certain protected species (such as migratory species under Annex I of the CMS Convention) or protected areas (designated under the CBD, or wetlands listed under the Ramsar Convention) can limit the width of discretion enjoyed by their parties in identifying the appropriate and reasonable measures they need to take to prevent environmental harm from offshore energy activities.

Many nature conservation agreements impose an obligation upon their parties to integrate biodiversity considerations into all their plans, programmes and activities.⁴⁸⁰ In particular, the CBD goes beyond the obligation to conduct an EIA enshrined in article 206 of UNCLOS because it requires the conducting of SEAs to ensure that States duly consider any plans or programmes likely to affect biodiversity.⁴⁸¹ Moreover, following the normative guidance under these agreements, EIAs must reflect essential ecological processes and pay attention to the accumulative impacts of economic activities at sea on the marine environment.⁴⁸² In that respect, the CBD and the relevant CoP decisions provide for specific requirements on the scope and the content of EIAs.⁴⁸³ For instance, under the CBD,⁴⁸⁴ a crucial element of the requirement to conduct EIAs and SEAs, which is not found in article 206 of UNCLOS, is public participation.⁴⁸⁵ Public participation is essential because it offers the public access to environmental information and decision-making processes. Those more elaborate provisions of environmental agreements can “feed” the due diligence obligation under articles 192 and 194 of UNCLOS, by giving it a “particular shape”.⁴⁸⁶ As the content of the duty to prevent harm to the marine environment under UNCLOS is further enhanced by the normative developments in international

477 ILA (2016) Second Report on Due Diligence, *supra* n. 433, 20, Matz-Lück, van Doorn (2017) *supra* n. 361, 189.

478 In its award on the jurisdiction, the arbitral tribunal had referred to article 31(3)(c) of the VCLT to justify the normative interaction between UNCLOS and the CBD, see *supra* n. 299.

479 Mbengue (2016) *supra* n. 300, 286.

480 Harrison (2017) *supra* n. 158, 46.

481 Article 14(b) of CBD.

482 D Pritchard (2005) ‘International Biodiversity-related Treaties and Impact Assessment – How can they Help Each Other?’, *Impact Assessment and Project Appraisal*, 15.

483 Kong (2011) *supra* n. 307, 665.

484 Article 14(a) of CBD.

485 Kong (2011) *supra* n. 307, 666.

486 Mbengue (2016) *supra* n. 300, 286.

environmental law, the discretion of States in determining what the duty to take all the necessary measures entails is commensurately restrained.

3.3. The precautionary principle and the application of BAT and BEP as further elements of the due diligence standard

The precautionary principle can also inform the standard of due diligence required by States in regulating offshore energy production activities, by expanding their obligation to cover situations where there is no scientific certainty about the risk of planned activities. According to the Seabed Disputes Chamber, adopting a precautionary approach is an essential part of the prevention obligations of States, which inform the standard of due diligence.⁴⁸⁷ In practice, the precautionary principle can be conceptualised against the backdrop of the procedural obligations that a State has to comply with to meet the standard of due diligence. For instance, such a reading would suggest an obligation to incorporate a measure of precaution in conducting EIAs, notifying and consulting with the other concerned States in good faith even in the absence of scientific certainty regarding the potential risks of the planned activities.⁴⁸⁸ The precautionary principle would expand the scope of application and thus enhance these procedural obligations since the ICJ in the *Costa Rica v Nicaragua* cases has declared that the standard of diligence concerning the customary rule of prevention requires States to comply with them only when the risk of significant harm is ascertained.⁴⁸⁹

ITLOS, in its order for provisional measures in the *Land Reclamation* case, has confirmed the interrelationship between the procedural duties required by the standard of due diligence and the precautionary principle. *Inter alia*, the Tribunal ruled that “*given the possible implications of land reclamation on the marine environment, prudence and caution require that Malaysia and Singapore establish mechanisms for exchanging information and assessing the risks or effects of land reclamation works and devising ways to deal with them in the areas concerned*”.⁴⁹⁰ Adopting the same wording of “prudence and caution” as in the *Bluefin Tuna* order, ITLOS highlighted the connection between the precautionary principle and the procedural elements of the due diligence standard. The ICJ had also implied that, according to the precautionary principle, an EIA is required “*where there is risk that the proposed industrial activity may have a significant adverse impact*”.⁴⁹¹ Judge ad hoc Vinuesa explicitly claimed that an EIA constitutes “*the essential legal and binding guarantee for the proper implementation of the said precautionary principle*”.⁴⁹² Still, even if it is accepted that the precautionary principle shapes the standard of due diligence, that does not necessarily result in a common standard for all activities. The level of precaution, in the sense of specific measures, that should be adopted will also depend on the degree of the potential risk posed by the planned activities and the degree of uncertainty as to their effects.

487 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, paras 125, 131.

488 Sage-Fuller (2013) *supra* n. 240, 81-82.

489 ICJ, *Certain Activities/Construction of a Road*, *supra* n. 38, para 104.

490 *Land Reclamation*, *supra* n. 428, para 99.

491 *Pulp Mills*, *supra* n. 23 para 204.

492 ICJ, *Pulp Mills*, Order for Provisional Measures, dissenting Opinion, Judge ad hoc Vinuesa, 152-153.

Another element of the due diligence obligation of States to prevent harm to the marine environment is the duty to apply the best available techniques (BAT) and best environmental practices (BEP).⁴⁹³ In the words of the ICJ, the standard of due diligence in preventing environmental harm requires that these measures be “*in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies*”.⁴⁹⁴ In the *Pulp Mills* case, Uruguay, aiming to prove that it complied with the standard of due diligence, argued that the technology involved was the most appropriate to prevent pollution because it was state-of-the-art waste cleansing equipment, which had been acknowledged by both the United States and the European Union as the best available technology.⁴⁹⁵ The ICJ accepted that there was no evidence to support Argentina’s claim that Uruguay had not complied with the duty to apply BAT.⁴⁹⁶ In the *MOX Plant* case, the United Kingdom also relied on international standards set out in treaties and resolutions by the IMO and the IAEA as reflecting BAT.⁴⁹⁷

Similarly, the advisory opinion of the Seabed Chamber stressed that the standard of due diligence encompasses the duty of States to act following BEP.⁴⁹⁸ This obligation appears also to be implied under article 194(1) of UNCLOS, which prescribes that States need to use “*best practicable means*”.⁴⁹⁹ In that respect, scholars have been argued that the concept of best practicable reflects the concept of BAT.⁵⁰⁰ The link between the standard of due diligence and BEP builds another important bridge with non-binding environmental instruments. Arguably, the same should apply with regard to BAT.⁵⁰¹ Even though UNCLOS does not refer to those concepts explicitly, the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) defines the term “best available techniques” as “*the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste*”.⁵⁰² Also, OSPAR defines “best environmental practice” as “*the application of the most appropriate combination of environmental control measures and strategies*”.⁵⁰³ Even though these definitions are provided by a regional sea agreement, the fact that the obligation to follow BEP and BAT is found across several regional agreements related to offshore hydrocarbon activities could

493 Plakokefalos (2013) *supra* n. 42, 42, D Bodansky (2004) ‘Rules vs Standards in International Environmental Law’, *American Society of International Law*, 275-280, D French (2010) ‘From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor – the Seabed Disputes Chamber’s 2011 Advisory Opinion’, *International Journal of Marine and Coastal Law*, 555.

494 *Pulp Mills*, *supra* n. 23, para 190.

495 *Ibid*, para 220.

496 *Ibid*, paras 224-228.

497 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 149-150.

498 *Seabed Chamber’s Advisory Opinion*, *supra* n. 39, para 136.

499 A Oude Elferink (2012) ‘Governance Principles for ABNJ’, *The International Journal of Marine and Coastal Law*, 248.

500 A Nollkaemper, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint* (Martinus Nijhoff, 1993) 137, cited in Oude Elferink (2012) *supra* n. 499, 249.

501 Tanaka (2013) *supra* n. 236, 163.

502 Appendix I para 2 of OSPAR. Para 3 of Appendix I clarifies that “*it therefore follows that what is best available techniques for a particular process will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding*”.

503 Appendix I para 6 of OSPAR.

mean that the duty has acquired the status of an international rule in the meaning of article 208(3) of UNCLOS.⁵⁰⁴ Despite the various critiques on the malleable character of these dynamic environmental standards,⁵⁰⁵ the obligation to apply BEP and BAT enables the standard of due diligence to evolve as technology develops over time.⁵⁰⁶ It appears that it would be difficult for a State to claim compliance with the due diligence standard if it failed to apply BAT and BEP. Even if one denies their normative role in shaping the content of the due diligence standard, following the recommended BAT and BEP remains crucial evidence that States have taken all necessary measures to prevent marine environmental harm.

3.4. Rules of reference: a legal basis under UNCLOS to define the standard of due diligence concerning offshore energy production activities

Several environmental treaties employ the technique of incorporating international standards to define the normative content of obligations of conduct.⁵⁰⁷ Importantly, UNCLOS uses the method of incorporation by reference to inform the content of the due diligence standard to and allow for its evolution in light of normative developments in international environmental law. Instead of seeking to offer detailed environmental rules and standards relating to the operation of offshore economic activities, UNCLOS serves as an umbrella agreement creating obligations of conduct and leaving the further development of technical rules and standards to the relevant (mostly sectoral) agreements.⁵⁰⁸ The rule of reference under article 208(3) of UNCLOS also consists of as an acknowledgement by its drafters that by the time of its conclusion, several environmental agreements had already attempted to regulate offshore energy production activities, such as MARPOL and the London Dumping Convention, which laid down international standards relating to offshore oil and gas activities.⁵⁰⁹

Article 208 of UNCLOS specifies the environmental protection obligations under articles 192 and 194 of UNCLOS concerning seabed activities within national jurisdiction. Coastal States bear the duty to adopt domestic laws and regulations to prevent pollution arising from seabed activities within their jurisdiction and, at the same time, all State parties must take necessary measures to prevent, control or minimise such pollution.⁵¹⁰ To define the content of this due diligence obligation and restrain the regulatory discretion of its parties, the Convention refers to the relevant international rules, standards and recommended practices and procedures.⁵¹¹ Using a somewhat robust wording,⁵¹² article 208(3) of UNCLOS provides that those domestic laws, regulations and measures “*shall be no less effective than international*

504 Harrison (2017) *supra* n. 158, 225, see also chapter 8, sub-section 1.3.

505 Plakokefalos (2013) *supra* n. 42, 42-43, Bodansky (2004) *supra* n. 493, 279-280.

506 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 148.

507 Birnie, Boyle and Redgwell (2009) *supra* n. 41, 150.

508 ILA (2000) Committee on Coastal State Jurisdiction Relating to Marine Pollution, Final Report, 32-33.

509 Frank (2007) *supra* n. 82, 24.

510 Article 208(1) of UNCLOS.

511 Article 208(3) of UNCLOS.

512 For instance, article 207 of UNCLOS regarding pollution from land-based sources only requires States to “take into account” such generally accepted rules, which is interpreted as giving primacy to the domestic law.

rules, standards and recommended practices and procedures". Arguably, the purpose of the rules of reference was precisely to guarantee the primacy of international rules and standards in relation to domestic regulation and, thus, to prevent States from adopting more lenient environmental regulation of offshore energy activities.⁵¹³ In that respect, the provision intends to set a minimum standard of diligence based on international rules and standards, but it does not impair States' authority to impose stricter standards for those activities. Article 208(3) of UNCLOS does not create a duty to adopt rules of specific content, but instead, it requires States to achieve or exceed the benchmark established by international rules and standards.⁵¹⁴ As already discussed, there is no single standard of due diligence concerning the protection of the marine environment against harm from offshore energy installations, because the level of risk and the international environmental commitments of the State can enhance its duty of care. Besides, its individual technological capacity can also affect the standard of care reasonably expected. Nonetheless, the existence of a baseline standard of diligence applicable to all States is necessary for the protection of the marine environment. Consequently, the referred international rules and standards are critical in defining the lowest common standard of diligence concerning the environmental regulation of offshore energy production activities.

Scholars have argued that the ultimate objective of the rules of reference is to make the referred rules and standards, which enjoy general acceptance by States, compulsory standards against which to assess the conduct of all parties to UNCLOS, irrespective of whether those parties have formally adhered to them.⁵¹⁵ That interpretation is rooted in the wording of many rules of reference under UNCLOS which, for instance, require States to adopt domestic rules and regulations which "conform to" those generally accepted rules and standards or "ensure compliance with them",⁵¹⁶ While the wording used in article 208 of UNCLOS differs from other provisions,⁵¹⁷ because article 208 is referring to "international" rather than "generally accepted" rules and standards, it has been interpreted as requiring that those rules are generally accepted.⁵¹⁸ According to Oxman, the duty of coastal States to accept a restriction of their sovereign rights over natural resources imposed by environmental rules, standards, recommended practices and procedures, which they have not explicitly consented to, is to be interpreted as covering only those rules and standards which are "*truly international by virtue of their widespread (that is general) acceptance*".⁵¹⁹

513 E Franckx (2003) 'Marine Environmental Jurisdictional Issues: Coastal States', in M Nordquist, J N Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Kluwer Law International, 2003) 290.

514 A Friedman, 'Article 208 of UNCLOS and National Regulation of Seabed Mining' in L Martin, C Salonidis, C Hioureas, I Laird, and B Sahabi (eds) *Natural Resources and the Law of the Sea: Exploration, Allocation, Exploitation of Natural Resources in Areas under National Jurisdiction and Beyond* (Juris Arbitration Law, 2017) 273.

515 ILA (2000) *supra* n. 508, 33, B Oxman (1991) 'The Duty to Respect Generally Accepted International Standards', *New York University Journal of International Law*, 157, W van Reenen (1981) 'Rules of Reference in the New Convention on the Law of the Sea: In Particular in Connection with the Pollution of the Sea by Oil from Tankers', *Netherlands Yearbook of International Law*, 14-15.

516 Articles 41(3), 53(8), 94(5), and 217(1) of UNCLOS.

517 See also relevant analysis in chapter 2, sub-section 2.2.4.

518 Oxman (1991) *supra* n. 515, 132-133.

519 *Ibid*, 133.

The importance of this rule of reference can be better understood in juxtaposition to the described role of the due diligence standard as a tool to integrate the various environmental obligations of a State in defining the conduct which it is reasonably expected to adopt in compliance with its obligations. In terms of normative consequences, the rule of reference is allegedly likely to have more far-reaching repercussions on State sovereignty, as expressed in a State's prerogative to be bound by international environmental agreements only when it grants its consent. However, it is argued that parties to UNCLOS have *ipso facto* expressed their consent to be bound by international rules and standards of general acceptance, even in the case where they have not separately consented to be bound by them.⁵²⁰ By becoming parties to UNCLOS, States have acquired a series of new duties, as prescribed under the rules referred to in the Convention. That argument seeks to reconcile the potential contradiction between the incorporation by reference of international rules to which parties to UNCLOS have not consented and the principle of *pacta tertiis* under the law of treaties and, thus safeguard the *effet utile* of the rule of reference.⁵²¹

The main problem remains the identification of those generally accepted environmental rules and standards concerning the regulation of offshore energy production. The ILA's final report on coastal State jurisdiction relating to marine pollution in 2000 underlined that the determining factor in their identification is the general acceptance of the rules or standards by States, attaching only secondary importance to the nature and status of the instrument in which they might be incorporated.⁵²² While those rules are not required to have reached the status of customary law, they still need to enjoy "*very widespread and representative participation... including that of States whose interests were specially affected*".⁵²³ This acceptance cannot only be traced in the widespread participation of States in the agreements that incorporate those rules, but the State practice in implementing the rule is an equally important consideration.⁵²⁴ While acceptance needs to be extensive, paying particular attention to the specially affected States,⁵²⁵ such acceptance does not have to be necessarily universal.

3.4.1. *International rules as a minimum standard of due diligence through article 208(3) of UNCLOS*

This section first examines which globally applicable treaty-based rules qualify as international for the application of article 208(3) of UNCLOS. Some convergence appears to exist among scholars in the view that certain IMO conventions, such

520 Lyons (2012) *supra* n. 99, 203, ILA (2000) *supra* n. 508, 45.

521 It has been submitted that an effective interpretation leads to the conclusion that even non-binding standards and recommended practices are transformed into binding rules for the parties of UNCLOS through the rule of reference, see for instance van Reenen (1981) *supra* n. 515, 17.

522 ILA (2000) *supra* n. 508, 37, Liu (2015) *supra* n. 5, 196.

523 ICJ, *North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands)* Judgment of 20 February 1969, ICJ Reports 3, para 73.

524 Oxman (1991) *supra* n. 515, 152-153.

525 van Reenen (1981) *supra* n. 515, 11-12, where van Reenen suggests that the rule should be accepted by a wide and representative group of States, including those without which the purpose of the rule could not be achieved. On the debate about identifying specially affected States in the context of customary law formation, see also K J Heller (2018) 'Specially Affected States and the Formation of Custom', *American Journal of International Law*, 191-243.

as MARPOL, the COLREGS and the London Dumping Convention, contain international rules which enjoy broad acceptance by States and can, therefore, qualify as generally accepted.⁵²⁶ Arguably, at the time of adoption of UNCLOS, the drafters had these pre-existing agreements in mind when they referred to internationally applicable rules.⁵²⁷ As discussed in section 1.3.1., these agreements include some rules which are also relevant for the environmental regulation of offshore energy production activities. Considering their quasi-universal participation, these agreements and, potentially, the 1990 OPRC contain international rules referred to under article 208(3) of UNCLOS.⁵²⁸ However, the same conclusion does not automatically apply to rules contained in their subsequently concluded Annexes and Protocols. On that account, it is necessary to examine whether those Annexes and Protocols enjoy the same level of acceptance by States. For instance, it remains questionable whether the relevant rules in the 1996 Protocol to the London Convention could also qualify as “international” or generally accepted rules since fewer States have ratified it.⁵²⁹

Besides the examined IMO agreements, it appears that some global nature conservation agreements have reached the same level of acceptance and can similarly be considered as rules informing the referred international minimum standard. For instance, the tribunal in the *South China Sea Arbitration* ruled that CITES is the subject of nearly universal adherence and it forms “*part of the general corpus of international law*”⁵³⁰ Similarly, in the tribunal’s view, the universal character of CBD, and at least its acceptance among State Parties to UNCLOS, was a rather important factor in determining that it has an impact on the interpretation of Part XII of the Convention.⁵³¹ Indeed, the CBD had 196 parties and the CITES 183 parties at the time the award was issued.⁵³² Therefore, the relevant provisions of the CBD, CITES and most likely the Ramsar Convention, which has 170 parties, could qualify as “generally accepted” international rules. The same conclusion cannot be safely reached concerning the CMS, which does not enjoy the same wide acceptance by States,⁵³³ having only 125 Parties.⁵³⁴

526 ILA (2000) *supra* n. 508, 39, C Redgwell, ‘The Never Ending Story: The Role of GAIRS in UNCLOS Implementation in the Offshore Energy Sector’ in Barrett and Barnes (2016) *supra* n. 268, 176, Lyons (2012) *supra* n. 99, 194, Bonfanti and Romanin Jacur (2014) *supra* n. 28, 630, Sage-Fuller (2013) *supra* n. 240, 16-17.

527 Nordquist et al (1991) *supra* n. 368, Part XII UNCLOS, 6-9.

528 Redgwell (2016) *supra* n. 526, 176, Harrison (2017) *supra* n. 158, 216-217.

529 R Beckman (2013) ‘Global Legal Regime on the Decommissioning of Offshore Installations and Structures’ in M Nordquist (ed) *The Regulation of the Continental Shelf Development: Rethinking International Standards* (Brill, 2013) 270, 278, L de La Fayette (1998) ‘The London Convention 1972: Preparing for the Future’, *International Journal of Marine and Coastal Law*, 535.

530 *South China Sea Arbitration*, *supra* n. 40, para 956.

531 Boyle (2005) *supra* n. 278, stressed that the level of participation in a treaty cannot be ignored as it provides evidence on whether it has the support of parties to UNCLOS.

532 Kojima (2015) *supra* n. 302, 174.

533 Caddell (2005) *supra* n. 177, 146.

534 However, as already mentioned, general acceptance does not require universal acceptance and it is not merely a numbers game. Instead, it suffices that a wide and representative group of States, including the specially affected ones, have adhered to the rules in question. In the case of the CMS that does not seem to be the case, because many significant range States are not parties to it, see C M Hensz (2018) ‘Participation in the Convention on Migratory Species: A Biogeographic Assessment’, *Ambio*, 739-746.

3.4.2. International standards by intergovernmental organisations and treaty bodies

While it appears easier to assess whether rules enshrined in global environmental agreements fall within the scope of application of the rule of reference, the task of identifying the referred standards, procedures and practices is rather daunting.⁵³⁵ There exists a remarkable number of standards and codes of conduct, including technical regulations drafted by international organisations, the output of treaty bodies and self-regulation initiatives by the offshore energy industry. UNCLOS does not provide any interpretative guidance on what constitutes standards, recommended practices and procedures for the rule of reference. It has been posited that, while the instruments that contain those standards do not need to be binding, their content should be able to inform the laws and regulations or measures to be adopted by States.⁵³⁶ Therefore, their prescriptive nature and the language used could provide some indications on whether – at the very least – these instruments were drafted with the aspiration of becoming generally accepted international standards.⁵³⁷ However, the absence of such intention at the stage of the promulgation of standards or their hortatory nature does not preclude their potential general acceptance, which can only be traced in the relevant State practice.⁵³⁸

Although UNCLOS is silent on the meaning of standards, recommended procedures and practices, article 208(5) of UNCLOS creates an obligation for States, acting especially through competent international organisations or diplomatic conference, to establish those international standards, both at the global and regional levels. It imposes a clear duty upon States to develop those rules and standards to give meaning to the obligation under article 208(3) of UNCLOS. The language used is stronger than the wording of article 207(4) of UNCLOS, which provides that States must endeavour to make best efforts to adopt such rules concerning land-based sources. Article 208(5) of UNCLOS indicates the potential relevance of standards and recommended practices and procedures developed through competent international organisations⁵³⁹ and, to an extent, by CoPs to environmental agreements. Such instruments can eventually qualify as generally accepted standards through catalysing the consistent practice of relevant States. Since *prima facie* the Convention seems to attach some importance to the forum in which those rules and

535 On the potential relevance of the ISA Regulations for the establishment of standards in the meaning of article 208(3), see Chapter 2, sub-section 3.1.3.

536 Oxman (1991) *supra* n. 515, 148.

537 Beckman (2013) *supra* n. 529, 278, who refers to the drafting history of the 2008 IMO Guidelines for the Placement of Artificial Reefs to argue that they were not drafted with the intention of becoming relevant internationally accepted standards. Also, the guidelines explicitly mention that “*they are not legally binding on any country*”.

538 Oxman (1991) *supra* n. 515, 150. On the difficulties of identifying relevant State practice concerning the environmental regulation of offshore energy production activities, see chapter 8, section 2.2.

539 The use of the plural in referring to competent international organisations is an acknowledgement by UNCLOS that there is no single global or regional international organisation with exclusive mandate on the environmental regulation of offshore energy production activities, see Nordquist (1991) *supra* n. 368, commentary on article 207, which applies *mutatis mutandis* with respect to the same wording in article 208. In the context of offshore energy activities, the lack of one competent organisation is, of course, justified by the different type of environmental challenges posed by the various devices and methods used for the exploitation of energy resources.

standards are promulgated,⁵⁴⁰ the following discussion will distinguish between the standards produced by intergovernmental organisations, and those created directly by the offshore energy industry.

When it comes to standards, one should first acknowledge that the IMO has adopted several non-binding instruments related to offshore energy production activities.⁵⁴¹ For example, in 2009 the IMO Assembly adopted the third version of the Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU code).⁵⁴² The MODU code is relevant to the construction and equipment of offshore installations, and it aims to ensure the safety of these devices and the personnel working on them.⁵⁴³ In that respect, it offers safety standards which can be relied upon to prevent accidental pollution and which, therefore, are relevant for the application of the rule of reference under article 208(3) of UNCLOS. However, it does not contain any standards relating to operational pollution from offshore installations. Interestingly, the MODU code does not refer to the requirement to develop international standards under article 208(5) but merely mentions that “*drilling operations are subject to control by the coastal State*”, implying that States maintain absolute discretion to adopt their domestic environmental standards for such activities.⁵⁴⁴ Therefore, the MODU code is only partly relevant for the implementation of article 208(3) of UNCLOS, because it does not offer any environmental standards concerning operational discharges from offshore energy resources. In the same vein, the 1989 Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone⁵⁴⁵ do not directly address the issue of the international standards for the operation of offshore energy activities. Instead, they have been adopted by the IMO to implement the obligation under article 60(3) of UNCLOS.⁵⁴⁶ Therefore, while some scholars have considered the 1989 Guidelines and Standards as an example of international standards for the application of article 208,⁵⁴⁷ it seems to fall short of that end.⁵⁴⁸

Nonetheless, concerning environmental standards on different discharges from offshore installations, specific IMO guidelines have clarified the application of some

540 Article 208(5) of UNCLOS dictates that such standards must be developed “especially” through competent international organisations and diplomatic conferences, which can be interpreted as an indicative enumeration of the fora through which such international rules can be promulgated. The relevance of the forum of promulgation of the standards for identifying international standards is also advocated by Beckman, see *supra* n. 529, 278.

541 See also discussion in chapter 2, sub-section 3.3.

542 IMO Resolution A.1023(26), 2 December 2009. The first MODU code was adopted in 1979 and got revised in 1989.

543 Ashley Roach, ‘International Standards for Offshore Drilling’, in M Nordquist (2013) *supra* n. 11, 108-109.

544 MODU code, *supra* n. 542, preambular para 6.

545 IMO Resolution A.672(16), 19 October 1989.

546 *Ibid*, preambular para 2.

547 Harrison (2017) *supra* n. 158, 216-217, Liu (2015) *supra* n. 5, 196-197.

548 Beckman similarly argues that the 2008 UNEP/IMO guidelines for the placement of artificial reefs cannot be considered as international standards referred to under article 208 UNCLOS. His conclusion is based on the fact that they were not intended to become generally accepted standards, and that the meeting of contracting States to the London Convention does not fulfil the “institutional” requirement under article 208(5) given the doubts as to whether the issue was within the mandate of the London Convention and its Protocol, *supra* n. 529, 278.

provisions of MARPOL Annex I with regard to floating, production, storage and offloading facilities (FPSOs) and floating storage units (FSUs).⁵⁴⁹ In 2010, the MEPC issued an instrument to guide States in the development of regulations on safety, pollution prevention and security of FPSOs and FSUs.⁵⁵⁰ However, these instruments fall short of providing international standards for the rule of reference, as they primarily restate the existing obligations under IMO agreements. It is, though, noticeable that those instruments make explicit references to the industry-produced guidelines and recognise their potential contribution to pollution prevention from FPSOs and FSUs.⁵⁵¹

Some IMO members have contested the competence of the organisation in developing technical standards concerning offshore installations for hydrocarbon exploitation.⁵⁵² Those reactions, however, are primarily related to issues of liability for harm caused by offshore oil and gas exploitation activities.⁵⁵³ The number of non-binding instruments already produced through the IMO could serve as evidence that the organisation is also competent to address issues related to offshore energy activities, as long as its Members wish to consider it as such.⁵⁵⁴ Therefore, these reactions do not exclude the possibility for the IMO to act as a competent international organisation in the meaning of article 208(5) of UNCLOS. Despite the contested competence of the organisation, non-binding instruments adopted under its auspices could qualify as international standards under article 208(3) of UNCLOS insofar as they include specific norms to guide State conduct related to the environmental regulation of offshore energy activities and they are generally accepted by States as international standards.

Another international organisation which can be considered competent to produce international standards, especially for the regulation of marine renewables, is the International Renewable Energy Agency (IRENA). Under article 2 of IRENA's Statute, its objective is to promote the adoption and sustainable use of all forms of renewable energy, including marine renewable energy. IRENA does not have the competence to issue legally binding standards on the operation of marine renewables, but can be a starting point for providing advice and monitoring concerning policy, capacity building and collaboration, and it can function as a clearinghouse for research and best practices used in different regions.⁵⁵⁵ For instance, IRENA, in collaboration with renewable energy professional associations, such as the International Electrotechnical Commission (IEC), has collected renewable energy standards,

549 Guidelines for the Application of the Revised MARPOL Annex I Requirements to Floating, Production, Storage and Offloading Facilities (FPSOs) and Floating Storage Units (FSUs), Resolution MEPC.139(53), 22 July 2005.

550 Guidance for the Application of Safety, Security and Environmental Protection Provisions to FPSOs and FSUs, MSC-MEPC.2/Circ.9, 25 May 2010.

551 *Ibid*, para 5.

552 IMO, LEG 99/14, para 13.2, 13.7.

553 Roach (2013) *supra* n. 543, 107-108. See also IMO Doc (2012) 'Implication of the United Nations Convention on the Law of the Sea for the international Maritime Organization, available online at: <https://nooilcanarias.files.wordpress.com/2012/11/implications-of-unclos-for-imo.pdf>, where the IMO Secretariat asserts that although pollution directly arising from the exploitation is not the direct concern of IMO, it can contribute to the creation of international regulations.

554 Roach (2013) *supra* n. 543, 112.

555 G Wright (2011) 'The International Renewable Energy Agency: A Global Voice for the Renewable Energy Era?', *Renewable Energy Law and Policy Review*, 267.

which mostly address the conduct of the industry and domestic regulators.⁵⁵⁶ Concerning environmental standards, it has published renewable energy technology briefs relating to ocean thermal energy conversion, salinity gradient energy, tidal and wave power.⁵⁵⁷ Even though these briefs outline the environmental impact of these marine renewable energy generation activities, they do not contain environmental standards to inform the due diligence standard of States in regulating and monitoring those activities. Consequently, none of these documents provides any international standards in the meaning of article 208(3) of UNCLOS.

According to the Virginia Commentary on UNCLOS, the reference to “diplomatic conference” in article 208(5) as an appropriate forum for the promulgation of international rules and standards implies that it must be a “*plenipotentiary conference of the representatives of States (and not a conference composed exclusively of the representatives of international organizations or independent experts)*”, regardless of the type of instrument it adopts.⁵⁵⁸ Such interpretation allows for CoPs to environmental agreements, such as the CBD, to serve as potential fora for the development of international standards and recommended practices and procedures for the implementation of article 208(3) of UNCLOS. However, resolutions produced by other treaty bodies composed exclusively of independent experts, such as scientific committees under environmental agreements, cannot be regarded as instruments to be incorporated by reference under UNCLOS.⁵⁵⁹ Even though they can affect the normative content of due diligence of parties to the agreements under which these bodies operate, they do not qualify as international standards for the rule of reference under UNCLOS.

3.4.3. Industry-based Standards: what is their role in defining due diligence?

From an international law perspective, perhaps the most problematic category of non-binding instruments, which could be used to define due diligence, are those produced by the offshore energy industry. As mentioned, States must exercise due diligence in adopting laws and regulations to prevent, control or minimise pollution from offshore energy production activities. Due to the virtual absence of international standards at the global level⁵⁶⁰ and the flexibility of the international legal framework, States maintain a broad discretion in promulgating environmental standards for offshore energy production activities. In this context, many domestic regulatory regimes do not prescribe specific technical and technological requirements for the operation of offshore energy production activities (command and control approach), but instead,

556 ‘Irena Platform Supports Renewable Energy Innovation, Quality and Collaboration’, see IRENA website: <http://www.irena.org/newsroom/pressreleases/2015/Jul/New-IRENA-Platform-Supports-Renewable-Energy-Innovation-Quality-and-Collaboration>.

557 IRENA Ocean Energy Technology Briefs, available online at: <http://www.irena.org/publications/2014/Jun/IRENA-Ocean-Energy-Technology-Briefs>.

558 Nordquist (1991) *supra* n. 368, commentary on article 207, applicable mutatis mutandis to article 208 UNCLOS.

559 However, it is stressed that article 208(5) merely indicates a preference and does not restrictively refer to diplomatic conferences and competent international organisations and therefore, these are not the only for a through which international standards can be developed, A Proelss, *United Nations Convention on the Law of the Sea: A Commentary* (Hart/Nomos, 2017) 1398.

560 See for instance, Beckman (2013) *supra* n. 529, 280, stating that the biggest gap in the current global framework is the lack of globally applicable rules and standards as referred to in article 208 UNCLOS.

they adopt a goal-based or performance-based approach.⁵⁶¹ Goal- or performance-based regulation sets the goals or performance objectives to be achieved and allows companies to identify the appropriate means to reach them.⁵⁶² The underlying idea is that States are unlikely to keep up to date with the latest technology continually and cannot take advantage of the developments as effectively as the private sector.⁵⁶³

The goal-based regulatory approach enables the offshore energy industry to have a strong say in developing its operational standards.⁵⁶⁴ Notably, global oil and gas industry associations, such as the International Association of Oil and Gas Producers (OGP) and the International Petroleum Industry Environmental Conservation Association (IPIECA) have been instrumental in the development of good practices to assist the industry and improve its environmental performance.⁵⁶⁵ With regard to marine renewables, specialised professional associations, such as the International Electrotechnical Commission (IEC), have also contributed by drafting standards of conduct and technical specifications tailored to the different types of marine renewable energy generation.⁵⁶⁶ These forums also serve as a principal corridor of communication between the industry and international organisations.

Nonetheless, while these private standards strive towards preventing marine pollution and environmental disasters associated with the operation of offshore energy installations, they primarily operate as a means to promote productivity and profitability.⁵⁶⁷ Given that the offshore energy industry and its self-regulation initiatives do not necessarily prioritise the protection of the marine environment over economic concerns, due diligence requires that States adopt laws and take measures to monitor the application of such private standards effectively. Therefore, even when States adopt a goal or performance-based regulatory approach, they must identify flexible but qualitative environmental benchmarks to evaluate the conduct of the offshore energy industry and maintain continuous oversight of its activities.⁵⁶⁸

UNCLOS does not make any reference to standards which are produced by private actors.⁵⁶⁹ *Prima facie* that appears to mean that standards produced by the offshore energy industry are not legally relevant in defining the standard of due diligence. According to UNCLOS, international standards need to be generally accepted by States for them to influence the content of domestic rules on offshore

561 B Baker (2012) 'Offshore Oil and Gas Regulation in the Arctic: Room for Harmonization?', *Yearbook of Polar Law*, 481-484.

562 *Ibid*, C Pelaudieix (2015) 'Governance of Arctic Offshore Oil & Gas Activities: Multilevel Governance & Legal Pluralism at Stake', *Arctic Yearbook*, 10.

563 J N Moore, 'Comments on the Unfinished Business of UNCLOS III' in Nordquist et al (2014) *supra* n. 11, 360.

564 Jessen (2018) *supra* n. 27, 79, N Hasson (2013) 'Deepwater Offshore Oil Exploration Regulation: The Need for a Global Environmental Regulation Regime', *Washington and Lee Journal of Energy, Climate and the Environment*, 287.

565 See IPIECA's website: <http://www.ipieca.org/>, OGP's website: <https://www.iogp.org>.

566 Bonfanti and Romanin Jacur (2014) *supra* n. 28, 636.

567 Hasson (2013) *supra* n. 564, 287.

568 A Telesetsky (2013) 'Co-Regulation and the Role of Transnational Corporations as Subjects in Implementing International Environmental Law', in Michaelsen et al (eds) *International Law in the New Age of Globalization* (Brill, 2013) 289-290.

569 In comparison, see "good industry practice" in ISA's regulations, for instance, see Draft Regulations on exploitation of mineral resources in the Area, ISBA/24/LTC/WP.1/Rev.1, also Note by the Secretariat of the ISA on "Distinguishing between good industry practice and best practices under the draft regulations on exploitation of mineral resources in the Area", ISBA/25/C/11, 15 January 2019.

energy production activities. However, States that opt for the goal-based approach seem to endorse the standards produced by the offshore energy industry, so long as they can reach the goals set by the domestic regulators. It is questionable whether that means that States delegate their regulatory authority to those private actors.

Moreover, it is debatable whether the generalised practice by the offshore energy industry reflects implicit State practice.⁵⁷⁰ For instance, the ILC draft conclusions on subsequent agreements and practice for treaty interpretation have suggested that the conduct of non-State actors does not qualify as State practice.⁵⁷¹ Therefore, the general adherence to self-regulation standards by the industry, even if private practice is found to be consistent around the world, would not necessarily alter the non-binding nature of private standards. Much less, these private standards cannot be regarded as informing the normative content of the duty to protect the marine environment under UNCLOS. It is also unlikely that private environmental standards can be considered as international standards for the rule of reference under article 208(3) of UNCLOS simply because they are referred to in instruments developed by the competent international organisations. As has already been noted, some IMO guidelines contain explicit references to standards for the prevention of pollution created by the offshore industry. The endorsement of specific industry standards in IMO's instruments could render them binding upon the parties of the organisation.⁵⁷² By endorsing particular standards, the IMO can, in some fashion, exercise regulatory control over the industry's initiatives for self-regulation. In that respect, as suggested by the above conclusions of the ILC, the conduct of the industry could be useful in assessing the subsequent practice of States parties to the IMO agreements.⁵⁷³ However, that does not necessarily mean that private standards acquire the status of international standards to be incorporated in UNCLOS by reference. As already stressed, some of its members still question the competence of the IMO concerning offshore energy installations. Even if one accepts that specific IMO guidelines can become binding on all parties to UNCLOS as international standards under article 208(3) of UNCLOS, the mere reference therein to the private standards of the industry cannot *ipso facto* upgrade them to internationally accepted standards.⁵⁷⁴

Still, the input of the offshore energy industry in adopting international standards and best practices for the environmental regulation of offshore energy production activities seems indispensable.⁵⁷⁵ Guidelines and technical standards can operate as models for the adaptation of the existing legal framework to new

570 Oxman (1991) *supra* n. 515, 153.

571 ILC (2018) Draft Conclusions, *see supra* n.318, draft conclusion 5(2), which reads as follows: "Other conduct, including by non-State actors, does not constitute subsequent practice under articles 31 and 32. Such conduct may, however, be relevant when assessing the subsequent practice of parties to a treaty". See also, chapter 8, sub-section 2.2.

572 In the context of deep seabed mining activities, the ISA plays a crucial role in adopting or endorsing certain industry standards, which guarantees a level of legal certainty concerning the applicable standards and the regulatory control by the ISA. See L J Gerber, and R Grogan (2020) 'Challenges of Operationalising Good Industry Practice and Best Environmental Practice in Deep Seabed Mining Regulation', *Marine Policy*, 5.

573 See *supra* n. 571 and corresponding text.

574 That is partly justified by the fact that these standards are not developed under the preferred fora mentioned in article 208(5) UNCLOS, see Bonfanti and Romanin Jacur, *supra* n. 18, 637.

575 S Trevisanut, 'Is There Something Wrong with the Increasing Role of Private Actors? The Case of the Offshore Energy Sector' in C Ryngaert, E Molenaar, and S Nouwen (eds) *What's Wrong with*

circumstances.⁵⁷⁶ Co-regulation, as a means for interaction between international marine environmental law and private standards, could perhaps generate solutions for the environmental problems related to offshore energy production. This suggestion appears to be supported by the establishment of international initiatives for cooperation between States, international organisations and representatives of the industry. For example, the Global Marine Environmental Protection Initiative launched by the Group of 20 is an essential development for the promotion and sharing of best industry practices.⁵⁷⁷ It is an outstanding example of public-private cooperation which brings together the expertise of States, international organisations (such as the IMO, the IEA, the OPEC), associations of domestic regulators (the European Union Offshore Oil and Gas Authorities Group, the International Regulators' Forum) and professional associations (OGP, IPIECA). The initiative aims to “*share best practices to protect the marine environment, to prevent accidents related to offshore exploration and development, as well as marine transportation, and to deal with their consequences*”.⁵⁷⁸ Nonetheless, despite the importance of such initiatives in sharing best practices, private environmental standards can only be incorporated by reference and become internationally binding if they are met with general acceptance by States. Such State practice, for instance, could be reflected in the consistent incorporation of private environmental standards in State contracts with operators of offshore energy activities.⁵⁷⁹

Interim conclusions

Several global environmental agreements and customary international law contain rules, which directly or incidentally have implications for the environmental regulation of offshore energy production activities. As discussed, the majority of these rules apply to offshore oil and gas production, but they are not always directly relevant for marine renewables. Besides, most of them create vague obligations of conduct and do not contain specific environmental standards for offshore energy production activities. In that respect, the lack of normative concreteness and specificity of the global environmental rules have been widely criticised for moderating their normative value with regard to prescribing the reasonably expected conduct of States. However, their treaty bodies have produced commendable decisions, resolutions and scientific knowledge concerning, *inter alia*, offshore energy production. As suggested in this chapter, normative interactions between those global instruments and UNCLOS can clarify the contents of environmental obligations under the latter.

Besides the relevant mechanisms under UNCLOS itself, other international law rules also govern the interrelationship between the Convention and global environmental agreements. In light of the above analysis, it follows that treaty-conflict rules are not adequate to address the intra-systemic normative interactions

International Law? Liber Amicorum A.H.A. Soons (Martinus Nijhoff, 2015) 73, Moore (2014) *supra* n. 563, 361.

576 Trevisanut (2015) *supra* n. 575, 56, M Karavias (2018) ‘Interactions between International Law and Private Fisheries Certification’, *Transnational Environmental Law*, 176-177.

577 G20 Global Marine Environmental Protection Initiative, <http://www.g20gmep.org/about/about-the-gmep-initiative/>.

578 *Ibid.*

579 Bonfanti and Romanin Jacur (2014) *supra* n. 28, 637-638. See also, chapter 8, section 2.2.

among marine environmental protection treaties. One of the main reasons lies in the fact that environmental obligations do not create bilateral obligations based on reciprocity, but instead, they establish interdependent duties, whose effectiveness depends on compliance by all their parties. That remark, however, is not to be taken as a total ban on the relevance of the rules of the law of treaties in promoting intra-systemic normative interactions. On the contrary, the rules of treaty interpretation support the view that international law consists of a legal system, in the context of which the various simultaneously applicable environmental rules need to be read as cross-fertilising each other. The author does not suggest that each new treaty on the protection of the marine environment can update the meaning of the relevant provisions of UNCLOS. However, rules on treaty interpretation, as reflected under article 31 and 32 of the VCLT, require the interpreter of UNCLOS, under specific conditions, to take into account subsequent normative developments in international environmental law. The principle of systemic integration is not a “master key”, but other interpretation methods reflected in article 31 of the VCLT also require the interpretation of UNCLOS in an evolutionary manner.

In addition, the concept of due diligence plays a vital role as a standard for determining the content of the duty to protect and preserve the environment in the context of offshore energy production activities. The variable content of the due diligence standard equips these duties of conduct with the required flexibility to adapt to new environmental circumstances and different levels of risk.⁵⁸⁰ Due to its inherently evolutionary character, due diligence can operate as an essential integrative mechanism and can justify normative interactions, alongside the relevant rules of treaty interpretation. The various global environmental agreements, which bear implications for offshore energy production activities, can offer the legal parameters for elucidating the content of this seemingly elusive standard.⁵⁸¹ These primary environmental obligations enrich the standard of due diligence by adding explicit normative content to it.

The examined global environmental agreements include a wealth of benchmarks for States to determine what is the standard of care that needs to be exercised to prevent or minimise such marine environmental harm. Take for example the unqualified prohibition of ‘taking’ of certain protected species (migratory species under Annex I of the CMS) or the restriction of certain activities in protected areas (designated under the CBD, or wetlands listed under the Ramsar Convention). These more normatively precise rules call into question the breadth of discretion enjoyed by States in complying with their duty to regulate offshore energy activities. The normative layers accumulated in the obligation to protect and preserve the marine environment demonstrate how interactions through the evolutionary interpretation of UNCLOS may have an impact on the implementation of the Convention in the context of offshore energy activities. Through its cross-fertilisation with external rules and standards found in international environmental law, the environmental protection duty under UNCLOS takes a particular shape.⁵⁸²

In addition, non-binding instruments produced by non-State actors can enhance the level of diligence required by States in implementing their duty to

580 Birnie, Redgwell, Boyle *supra* n. 41, 149, Gavouneli (1995) *supra* n. 5, 87.

581 Gavouneli (1995) *supra* n. 5, 87.

582 Gavouneli (2018) *supra* n. 316, 10.

protect and preserve the marine environment. Due diligence requires States to keep up with current specifications and standards.⁵⁸³ Specifically, such non-binding instruments have the advantage of being easily adaptable to the rapid scientific and technological developments in the offshore energy sector. Primarily as interpretative guidance, they can exert influence in restraining the broad discretion that States enjoy in determining the most appropriate measures to protect the marine environment. However, their normative value mainly depends on their institutional form and the procedure through which they are adopted. These standards can serve as benchmarks against which to assess whether the relevant international duties have been discharged satisfactorily. That is because they can offer interpretative guidance on the application of existing international obligations. Even when such instruments cannot directly inform the standard of due diligence, compliance with their recommendations may serve as proof that States have been diligent in adopting measures to protect the marine environment.

583 Frank (2007) *supra* n. 82, 24.

CHAPTER 4

Protection of foreign investments in offshore energy production and marine environmental protection: birds of a feather or frenemies forever?

Introduction

Investments are the “lifeblood” at the heart of offshore energy production,¹ as the exploitation of energy resources has heavily depended on the large flow of foreign capital and technological expertise.² The offshore energy sector of most countries has been controlled by multinational energy companies operating under long-term exploitation concessions and production sharing agreements.³ Take for example the Texas Oil Company (now Chevron), which constructed the first mobile installation for offshore oil drilling in the Persian Gulf already in the early 1930s.⁴ Russia’s economy has highly benefited from foreign investments in the exploitation of the rich offshore oil and gas resources off the coasts of its Sakhalin island.⁵ Remarkably, even China opened the South China Sea to foreign companies for exploration and eventually extraction of offshore energy resources in the 1980s, despite its general reluctance to open its territory to international investors, which might indicate an acknowledgement of the significance of foreign investments in the offshore energy sector.⁶

During the last decade, States have relied on large-scale foreign investments to increase their production of energy from renewable sources and mitigate climate change.⁷ Due to their high upfront costs, investments in offshore renewables have been mostly driven by government incentive programmes and favourable legal regimes, offering exceptional regulated prices, long-term contracts or other financial

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- 1 OECD, IEA and IRENA (2017) ‘Perspectives for the Energy Transition: Investment Needs for a Low-Carbon Energy System’, 23, available online at: <http://www.irena.org/publications/2017/Mar/Perspectives-for-the-energy-transition-Investment-needs-for-a-low-carbon-energy-system>.
 - 2 OECD (2002) ‘Foreign Direct Investment and Importance of the Go West Strategy in China’s Energy Sector’, available online at: <https://www.oecd.org/investment/investmentfordevelopment/2085596.pdf>, 6, S Trevisanut, ‘Foreign Investments in the Offshore Energy Industry: Investment Protection v. Energy Security v. the Protection of the Marine Environment’ in T Treves, F Seatzu, and S Trevisanut (eds), *Foreign Investment, International Law and Common Concerns* (Routledge, 2013) 247.
 - 3 M Mbengue, D Raju (2014) ‘Energy, Environment and Foreign Investment’ in E De Brabandere, and T Gazzini (eds) *Foreign Investment in the Energy Sector: Balancing Private and Public Interests* (Brill/Nijhoff, 2014) 173.
 - 4 Offshore Energy Today (2010) ‘Offshore Drilling: History and Overview’, available online at: <https://www.offshoreenergytoday.com/offshore-drilling-history-and-overview/>.
 - 5 R Dean, and M Barry, ‘A Conflict of Interest for Russia: Offshore Oil vs. the Problems of Environmental Regulation’, in M Nordquist, J Moore, and A Skaridov (eds) *International Energy Policy, the Arctic and the Law of the Sea* (Brill, 2005) 214-217.
 - 6 OECD (2002) *supra* n. 1, A Blackman, and X Wu (1998) ‘Foreign Direct Investment in China’s Power Sector: Trends, Benefits and Barriers’, *Discussion Paper 98-50*, 8-9, available online at: <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-98-50.pdf>.
 - 7 M Hanni, T van Giffen, R Kruger, and H Mirza (2011) ‘Foreign Direct Investment in Renewable Energy: Trends, Drivers and Determinants’, *Transnational Corporations*, 28-30.

incentives to investors.⁸ Even though technological sophistication in the sector has helped to drive down the cost of marine energy production, States still need to facilitate a stable legal environment for capital-intensive investments in research and development for emerging marine renewable technologies, such as tidal barrage, tidal current, wave energy and thermal gradient.⁹ According to the IEA, a sustainable development scenario, according to which States can get on track with their climate change and energy access goals, requires an additional 4.6 trillion US dollars in capital investment in both traditional and renewable forms of offshore energy until 2040.¹⁰ Notably, investments in the offshore energy sector are not only crucial to meet the increasing demands in energy consumption, but also to maintain the levels of energy production capacity because much of the current offshore energy infrastructure is approaching the decommissioning phase.¹¹

The strategic importance of energy resources to States and the relevant principle of permanent sovereignty over those resources¹² (or sovereign rights when it comes to resources in the EEZ and the continental shelf) are associated with extensive and inalienable State prerogatives over the regulation of the energy sector. States maintain the right to exploit their energy resources for their development and the well-being of their citizens.¹³ These observations elucidate the potential for conflict between the exercise of sovereignty (or sovereign rights) over natural resources and the protection of foreign investors, which partly explains why investments in the energy sector have historically been vulnerable to expropriation.¹⁴ Indeed, “resource

8 Demark, Germany and the United Kingdom are now established leaders in offshore wind energy production, while China has recently emerged as a key player in the sector, see IRENA (2018) ‘Global Energy Transformation: A Roadmap to 2050’, <http://www.irena.org/publications/2018/Apr/Global-Energy-Transition-A-Roadmap-to-2050>.

9 IRENA (2018) *supra* n. 7.

10 IEA (2017), ‘World Energy Investment: Executive Summary’, 1, available online at: <https://www.iea.org/Textbase/npsum/WEI2017SUM.pdf>.

11 S Trevisanut, ‘Decommissioning of Offshore Installations: A Fragmented and Ineffective International Regulatory Framework’ in C Banet (ed) *The Law of the Seabed- Access, Uses and Protection of Seabed Resources* (Brill, 2020) 431, E Sussman (2010) ‘A Multilateral Energy Sector Investment Treaty: Is it Time for a Call for Adoption by All Nations?’, *International Lawyer*, 941. Also, according to SDG 7b, States must “By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing states, and land-locked developing countries, in accordance with their respective programmes of support”.

12 UNGA Res 1803 (XVII) (14 December 1962); UNGA Res 3171 (XXVIII) (17 December 1973). These UN General Assembly (GA) Resolutions recognised the fundamental right of States to exercise permanent sovereignty over the natural resources located on land within their boundaries, as well as in the seabed and the subsoil thereof within their national jurisdiction and in the superjacent waters, in the interest of their national development. It was declared that States have the right to explore and exploit freely their natural resources and, accordingly, regulate foreign investments in the exploration and exploitation of such resources. See also, P Cameron (2013) ‘Reflections on Sovereignty over Natural Resources and the Enforcement of Stabilization Clauses’, *Yearbook on International Investment Law*, 332-338.

13 J Hossain Bhuijan, ‘Evolution of the Permanent Sovereignty over Natural Resources in the Context of the Investment Regime’ in S Alam, J Hossain Bhuiyan, and J Razzaque (eds) *International Natural Resources Law, Investment Law and Sustainability* (Routledge, 2018) 62,

14 P Cameron, ‘In Search of Investment Stability’ in K Talus (ed) *Research Handbook on International Energy Law* (Edward Elgar, 2014) 124, P Cameron, *International Energy Investment Law: The Pursuit for Stability* (Oxford University Press, 2010) 23-24, P Bernandini (2008) ‘Stabilization and Adaptation in Oil and Gas Investments’, *Journal of World Energy Law and Business*, 98.

nationalism” represents a constant political risk to investments in the energy sector. Like investments in onshore energy infrastructure, investments in offshore energy projects tend to be long-term, capital intensive and largely dependent upon the exercise of the State’s regulatory powers.¹⁵ Once platforms for the exploitation of offshore energy are installed, the investors are regulatory “hostages” of the host State for a long period, which is often required before there is a reasonable return on the investments.¹⁶ During that period, the investors are exposed to considerable political and regulatory risk, because unforeseen regulatory changes in the legal environment of the host State may seriously undermine their financial feasibility or even result in the expropriation of the investment altogether.¹⁷ The decision of Germany to phase out nuclear energy offers a representative example of how environmental policy decisions can have a grave impact on long-term energy investments.¹⁸ In 2019, an Austrian company launched arbitral proceedings against Germany under the Energy Charter Treaty, claiming that the amendments of the German Renewable Energy Sources Act have negatively affected its offshore wind farm investment.¹⁹ Similarly, the decision of Italy to re-impose a moratorium on the exploitation of offshore energy resources in the Ombrina Mare field due to its proximity to a natural reserve area, pending an application for an offshore oil production concession agreement in that area by a foreign company, is currently being examined as an alleged breach of its international investment obligations in an ongoing case before an ICSID Tribunal.²⁰

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- 15 E Whitsitt, and N Banks (2013) ‘The Evolution of International Investment Law and Its Application to the Energy Sector’, *Alberta Law Review*, 210-211, T Wälde, and Alba Kolo (2001) ‘Environmental Regulation, Investment Protection and “Regulatory Taking” in International Law’, *International and Comparative Law Quarterly*, 819.
- 16 L Cotula (2008) ‘Reconciling Regulatory Stability and Evolution of Environmental Standards in Investment Contracts: Towards a Rethink of Stabilization Clauses’, *Journal of World Energy Law & Business*, 158, T Martin (2011) ‘Dispute Resolution in the International Energy Sector: An Overview’, *Journal of World Energy Law and Business*, 332.
- 17 *Ibid*, G Joffe, P Stevens, T George, J Lux, and C Searle (2009) ‘Expropriation of Oil and Gas Investments: Historical, Legal and Economic Perspectives in a New Age of Resource Nationalism’, *Journal of World Energy Law and Business*, 3-23, A Seck, ‘Investing in the Former Soviet Union’s Oil Industry: The Energy Charter Treaty and its Implications for Mitigating Political Risk’, in T Wälde (ed) *The Energy Charter Treaty: An East-West Gateway for Investment & Trade* (Kluwer Law International, 1996) 114-116.
- 18 ICSID, *Vattenfall AB and Others v Federal Republic of Germany*, ICSID Case No ARB/12/12, F Romanin Jacur, ‘The Vattenfall v Germany Disputes: Finding a Balance between Energy Investments and Public Concerns’, in Y Levashova, T Lambooy, and I Dekker (eds) *Bridging the Gap between International Investment Law and the Environment* (Eleven Publishing, 2015) 339-356.
- 19 ICSID, *Strabarg SE, Erste Nordsee-Offshore Holding GmbH and Zweite Nordsee-Offshore Holding GmbH v Federal Republic of Germany*, ICSID Case No ARB/19/29, see also M Oehm, and D Weiss (2019) ‘Federal Republic of Germany Faces Third Ever Investor-State Arbitration: Might Changes to Renewables Regime Lead to Another Public “Vattenfall-outcry” about Arbitration?’, available online at: <https://globalarbitrationnews.com/federal-republic-germany-faces-third-ever-investor-state-arbitration-might-changes-renewables-regime-lead-another-public-vattenfall-outcry-arbitration/#page=1>.
- 20 ICSID, *Rockhopper Exploration Plc, Rockhopper Italia SpA and Rockhopper Mediterranean Ltd v Italian Republic*, ICSID Case No ARB/17/14, information available online at: <http://investmentpolicyhub.unctad.org/ISDS/Details/800>, D R Di Bella (2018) ‘Rockhopper vs Italy: Weighing Legitimate Expectations Up Against Investor’s Due Diligence in M&A Deals’, *Kluwer Arbitration Blog*, available online at: <http://arbitrationblog.kluwerarbitration.com/2018/01/27/rockhopper-vs-italy-weighting-legitimate-expectations-investors-due-diligence-ma-deals/>.

Within this uncertain climate, investors in offshore energy (as any other investor in such long-term projects) are understandably keen to safeguard the stability of the regulatory framework governing their projects. This situation has called for the development of legal tools to manage political and regulatory risks, such as international investment agreements (IIAs).²¹ The high standard of investment protection and the direct recourse to independent dispute settlement mechanisms (usually international arbitration) provided under IIAs have significantly contributed to attracting foreign investments in the energy sector.²² For instance, the existence of IIAs usually obviates the need for expensive insurance against political and regulatory risks or reduces the cost of such insurance.²³ In parallel with the elaborate contractual clauses in concession agreements between investors and host States,²⁴ IIAs offer an international legal mechanism to safeguard the required legal stability for investments in offshore energy production.²⁵

By adopting IIAs, States commit themselves to exercise their sovereignty and sovereign rights over, *inter alia*, their energy resources in a way that does not breach investment standards.²⁶ Host States must refrain from adopting laws and measures that arbitrarily and unduly impact investors since they have accepted that the exercise of their sovereign “right to regulate” is to be reconciled with the international protection obligations they have adhered to concerning foreign investors in their territory.²⁷ In that respect, paragraph 8 of GA Resolution 1803 on permanent sovereignty over natural resources had already stipulated that foreign investment treaties, which are signed by sovereign States, must be adhered to in good faith,²⁸ recognising the possibility for such discretionary self-curtailment of States’ sovereign rights over their natural resources.²⁹ In other words, the principle of permanent sovereignty over natural resources “*epitomises the sovereign right of a host State to regulate and control the activities of foreign investors*”.³⁰ However, investment protection offered by IIAs and the possibility to have recourse to arbitration were considered, at the

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- 21 L Cotula, ‘Freezing the Balancing Act? Project Finance, Legal Tools to Manage Regulatory Risk, and Sustainable Development’ in S Leader, and D Ong (eds) *Global Project Finance, Human Rights and Sustainable Development* (Cambridge University Press, 2011) 142.
- 22 J Bonnitcha (2017) ‘Assessing the Impacts of Investment Treaties: Overview of the Evidence’, *International Institute for Sustainable Development Report*, available online at: <https://www.iisd.org/sites/default/files/publications/assessing-impacts-investment-treaties.pdf>, 3, C Ribeiro (ed) *Investment Arbitration and the Energy Charter Treaty* (JurisNet, 2006) 4-5.
- 23 N Rubins, and S Kinsella, *International Investment, Political Risk, and Dispute Resolution: A Practitioner’s Guide* (Oxford University Press, 2005) 69-89.
- 24 P Cameron (2009) ‘Stability of Contract in the International Energy Industry’, *Journal of Energy and Natural Resources*, 305.
- 25 Whitsitt and Bankes (2013) *supra* n. 15, 211, Cotula (2008) *supra* n. 16, 158-159.
- 26 Y Tyagi (2015) ‘Permanent Sovereignty over Natural Resources’, *Cambridge Journal of International and Comparative Law*, 606-607, D Vielleville, and B Simal Vasani (2008) ‘Sovereignty over Natural Resources versus Rights under Investment Contracts: Which One Prevails?’, *Transnational Dispute Management*, 2-3.
- 27 G Coop, and Isabella Seif, ‘ECT and State’s Right to Regulate’ in M Scherer (ed) *International Arbitration in the Energy Sector* (Oxford University Press, 2018) 221.
- 28 *Supra* n. 12.
- 29 M Bungenberg, ‘Evolution of Investment Law Protection as Part of a General System of National Resources Sovereignty (and Management)?’ in M Bungenberg, and S Hobe (eds) *Permanent Sovereignty over Natural Resources* (Springer, 2015) 138.
- 30 N Schrijver, *Sovereignty over Natural Resources, Balancing Rights and Duties* (Cambridge University Press, 1997) 278.

time of adoption of the GA Resolutions on the permanent sovereignty over natural resources, as exceptions to the fundamental principle that nations and people have sovereignty over their natural resources.³¹ At least in the eyes of developing States, IIAs constituted a considerable bargain, in which they surrendered part of their sovereignty in exchange for economic development.³²

In this context, this chapter analyses the potential normative impact of interactions between international rules regulating foreign investments in offshore energy production. First, it sets the scene by exploring why and how international investment law and marine environmental law mingle and influence each other's implementation. Then, the chapter examines the impact of the jurisdictional framework under UNCLOS and the substantive obligations under environmental agreements on investment law obligations. Specifically, it explores whether the content of these provisions has any normative effect on the interpretation and application of investment protection standards under IIAs. In the next section, it investigates the impact (if any) of investment obligations on the discretion of host States to honour their duty to protect the marine environment. It explores whether investment disciplines, as they have been interpreted and applied by investment tribunals, can restrain States' regulatory discretion by imposing disproportionate requirements to accord a certain level of protection to investments. In that respect, it also looks into legal tools, such as proportionality and reasonableness analysis, which enable the interpretation of investment provisions in a way that allows States sufficient room to make the appropriate choices in adopting and amending environmental measures. In the last section, the chapter enquires into the potential impact of the reformed provisions under new generation IIAs and regional Free Trade agreements on the regulatory discretion of States to take all the necessary measures to protect the marine environment against pollution from offshore energy production activities. Considering the interpretative approach of investment tribunals with regard to the integration of environmental obligations in existing IIAs through interpretation, it reflects upon the likelihood that the reformed provisions can guide both States and investment tribunals in interpreting and implementing investment obligations in a fashion that respects and integrates (marine) environmental protection considerations.

1. Do opposites attract? Normative interactions between international investment law and marine environmental law

After stressing the relevance of foreign investments for offshore energy production in the introduction, this section investigates why and how investment law interacts with rules on marine environmental protection. First, it provides a brief overview of the international legal framework for the protection of foreign investments, focusing

31 J Viñuales (2014) 'Sovereignty in Foreign Investment Law' in Z Douglas, J Pauwelyn, and J Viñuales (eds) *The Foundations of International Investment Law* (Oxford University Press, 2014) 359-360, J Viñuales, 'Foreign Direct Investment: International Investment Law and Natural Resource Governance' in E Morgera, and K Kulovesi (eds) *Research Handbook on International Law and Natural Resources* (Edward Elgar, 2016) 30, who argues that these exceptions have got out of proportion with the proliferation of IIAs and the right of investors to have direct recourse to international investment arbitration.

32 J Salacuse, and N Sullivan (2005) 'Do BITs Really Work? An Evaluation of Bilateral Investment Treaties and their Grand Bargain', *Harvard International Law Journal*, 77.

on investments in offshore energy production. It then discusses the reasons which explain the potential for interactions between international investment law and marine environmental law, before exploring how these interactions are affected by the particularities of these two international regimes.

1.1. The international legal framework for the protection of foreign investments in offshore energy production

Concerning offshore energy projects, the significance of the Energy Charter Treaty (ECT),³³ as an IIA dedicated to investments in the energy sector,³⁴ cannot be overemphasised.³⁵ As stated in its article 2, the ECT aims to establish a comprehensive general legal framework for long-term cooperation in the energy sector to increase the confidence of both foreign investors and financial institutions that support energy investments.³⁶ Its primary objective is to “create a level playing field”³⁷ for investments in the energy sector and to minimise the non-commercial risks associated with such investments.³⁸ In that respect, its provisions regarding the promotion and protection of foreign investments (Part III of the Treaty) and investment dispute resolution are the cornerstone of the ECT.³⁹ The ECT provides foreign investors in the energy sector with protection according to international standards, including investment disciplines such as the most constant protection and security, fair and equitable treatment, most-favoured-nation (MFN) treatment, the prohibition of unreasonable or discriminatory measures, the payment of prompt, adequate and effective compensation⁴⁰ in case of expropriation or measures equivalent to expropriation (indirect expropriation) and a requirement to respect the commitments made to investors (umbrella clause).⁴¹ Largely, these provisions reaffirm customary international law on foreign investment protection as articulated by a series of arbitral awards and IIAs.⁴²

33 Energy Charter Treaty (Annex I of the Final Act of the European Energy Charter Conference) (signed 17 December 1994, entered into force 16 April 1998) (1995) 34 ILM 373 (ECT).

34 According to article 1(5) of the ECT, the agreement covers investments “associated with an Economic Activity in the Energy Sector”. The second ECT’s Understanding, elaborating on the definition of Economic Activity in the Energy Sector, refers explicitly to “land transportation, distribution, storage and supply of Energy Materials and Products, e.g., by way of transmission and distribution grids and pipelines or dedicated rail lines, and construction of facilities for such, including the laying of oil, gas and coal-slurry pipelines”.

35 Y Selivanova (2012) ‘The International Energy Treaty and the International Energy Governance’ in C Herrmann, J Terhechte (eds) *European Yearbook of International Economic Law*, 309.

36 The countries of West Africa have adopted their own agreement in this area, the Economic Community of West African States (ECOWAS) Energy Protocol, which is substantially identical to the ECT, see ECOWAS Energy Protocol (31 January 2003) Doc A./P4/1/03.

37 Energy Charter Secretariat (2004) *The Energy Charter Treaty and Related Documents*, available online at: <http://www.ena.lt/pdfai/Treaty.pdf>, 14.

38 H Corell, ‘Introduction to the Energy Charter Treaty’ in Ribeiro (2006) *supra* n. 22, 5.

39 K Hober (2010) ‘Investment Arbitration and the Energy Charter Treaty’, *Journal of International Dispute Settlement*, 155.

40 This formulation of the duty to compensate in case of expropriation or nationalisation reflects the “Hull formula”, which was first set out by the US Secretary of State, Cornell Hull in 1938 and is commonly found in several IIAs. See *inter alia*, S Nikiema (2013) ‘Compensation for Expropriation’, *International Institute for Sustainable Development Report*, 9, available online at: https://www.iisd.org/pdf/2013/best_practice_compensation_expropriation_en.pdf.

41 Part III, articles 10 and 13 of the ECT.

42 A Konoplyanik, and T Wälde (2006) ‘Energy Charter Treaty and Its Role in International Energy’, *Journal of Energy and Natural Resources Law*, 534, T Wälde (2004) ‘Energy Charter Treaty-Based

In addition, the ECT includes a quite innovative – for an investment agreement of that generation – provision on environmental protection. Under its article 19, its parties must strive to minimise, in an economically efficient manner, the harmful environmental impacts of the activities in the energy sector, including through precautionary measures where appropriate, and taking into account the polluter pays principle. The investment protection chapter of the ECT is supported by its dispute settlement mechanisms, allowing for both inter-state arbitration and investor-state dispute settlement.⁴³ The ECT’s definition of the term “investment” is quite inclusive as it entails virtually any right, property or interest in money or money’s worth.⁴⁴ Therefore, this definition encompasses installations used for the exploitation of traditional fossil resources from the seabed, as well as marine renewable energy generation devices, covering all potential forms of energy production at sea.

The significance of the ECT for the protection of energy investments is aptly illustrated in the growing number of disputes under its provisions. According to statistics released by UNCTAD, the ECT was the most frequently invoked investment protection agreement in 2017 and, in the majority of cases where the investor had a choice between relying on the ECT or a BIT, the investor chose to base its claims on the ECT.⁴⁵ Arguably, one advantage of the ECT compared with the numerous IIAs in force is that the ECT arbitration clause is usually broader.⁴⁶ Perhaps, that also explains why energy-related disputes under the ECT outnumber disputes brought under other IIAs. Moreover, after the intended termination of intra-EU BITs by 23 EU Member States, the ECT will be the only IIA providing for investor-State arbitration in the case of new intra-EU investment disputes.⁴⁷ Nonetheless, despite the distinctive importance of investments in the energy sector, the ECT does not establish a “self-contained legal regime”,⁴⁸ which accords unique standards of protection to energy investments.⁴⁹ The mere fact that the ECT is a stand-alone sector-specific multilateral investment agreement does not necessarily mean that it codifies special investment protection provisions applicable to the energy sector.⁵⁰ In fact, the ECT was the result

Investment Arbitration: Controversial Issues’ *Journal of World Investment and Trade*, 378.

- 43 Article 26 of the ECT, see Y Selivanova, ‘The Energy Charter Treaty and the International Energy Governance in Y Selivanova (ed) *Regulation of Energy in International Trade Law: WTO, NAFTA and Energy Charter* (Kluwer Law International, 2011) 373.
- 44 Article 1(6) of the ECT. See also, F Montero, and L Ruiz (2015) ‘The Concepts of Investor and Investment Under the ECT and the Legal Standing to Bring Arbitrations under the ECT’, *Revista del Club Espanol del Arbitraje*, 87-88, E Gaillard, ‘Investments and Investors Covered by the Energy Charter Treaty’ in Ribeiro (2006) *supra* n. 22, 58-66.
- 45 UNCTAD (2017) ‘Special Update on Investor-State Dispute Settlement: Facts and Figures’, available online at: https://unctad.org/en/PublicationsLibrary/diaepcb2017d7_en.pdf.
- 46 K Hober (2018) ‘Overview of Energy Charter Treaty Cases’ in Scherer (ed) *supra* n. 27, 177.
- 47 Agreement for the Termination of Bilateral Investment Treaties Between the Member States of the European Union, signed 5 May 2020. The preamble explicitly mentions that “*this Agreement addresses intra-EU bilateral investment treaties; it does not cover intra-EU proceedings on the basis of the Energy Charter Treaty. The European Union and its Member States will deal with this matter at a later stage.*”
- 48 ILC (2006) Report of the Study Group of the International Law Commission on ‘Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law’, 65-74.
- 49 M Krajewski (2012) ‘The Impact of International Investment Agreements on Energy Regulation’ in Herrmann and Terhechte, *supra* n. 35, 347-348.
- 50 *Contra*, K Duggal, ‘The Energy Sector, Investment Arbitration, and the ECT: Carving out a Special Regime?’, in I Laird, B Sabahi, F Sourgens, and T Weiler (eds) *Investment Treaty Arbitration and*

of negotiations under particular political circumstances, namely the need to promote investments from the Western European countries for the development of energy resources in the newly independent States after the fall of the Soviet Union and the strategic interest of Western European States in diversifying their energy sources.⁵¹ In addition, its geographical coverage is limited, given that, with few exceptions, the parties to the ECT are European countries.⁵²

Since the ECT does not establish an exclusive regime for the protection of energy investments, offshore energy investments continue to simultaneously fall within the scope of protection of several coexisting IIAs. Following the signature of the first Bilateral Investment Treaty (BIT) between Germany and Pakistan in 1959,⁵³ a dense network of mostly bilateral agreements has gradually expanded to the point where more than 3,000 IIAs have been concluded as of today.⁵⁴ Next to the BITs, there are also regional integration or free trade agreements, which contain specific rules on the protection of investments. In this context, one needs to acknowledge Chapter Eleven of the North American Free Trade Agreement (NAFTA).⁵⁵ Most IIAs have a comparable content: they cover the most common international standards of investment protection, and the majority of them contain provisions on direct access – without prior exhaustion of local remedies – to investor-State arbitration in case of alleged breaches of their rules.⁵⁶ However, the standards of investment protection and their precise formulation and scope unavoidably vary from treaty to treaty. On that account, their interpretation depends on the specific wording of the treaty in question.⁵⁷ As discussed below, provisions in IIAs have also evolved and, therefore, when talking about international investment law, it cannot be conceptualised as a uniform nor static body of law.⁵⁸

International Law, Volume 7 (Juris, 2014) 3-34.

- 51 A Konoplyanik, 'Multilateral and Bilateral Energy Investment Treaties: Do We Need A Global Solution? The Energy Charter Treaty as an Objective Result of the Evolution of International Energy Markets and Instruments of Investment Protection and Stimulation' in Talus (2014) *supra* n. 14, 103-104, E Sussman (2007) 'The Energy Charter Treaty's Investor Protection Provisions: Potential to Foster Solutions to Global Warming and Promote Sustainable Development', *ILSA Journal of International & Comparative Law*, 391-392, J Dorian, and E Khartukov, 'International Oil and Gas Investment in the CIS States in Thomas Wälde (1996) *supra* n. 17, 65-66.
- 52 See ECT's website: <https://www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/signatories-contracting-parties/>.
- 53 Treaty for the Promotion and Protection of Investments, Germany and Pakistan, 25 November 1959, 457 UNTS 24 (entered into force 28 November 1962).
- 54 UNCTAD, 'Investment Policy Hub', available online at: <http://investmentpolicyhub.unctad.org/IIA>, OEDCD (2012) 'Dispute Settlement Provisions in International Investment Agreements: A Large Sample Survey', available online at: https://www.oecd.org/daf/inv/investment-policy/WP-2012_2.pdf.
- 55 North American Free Trade Agreement (signed 17 December 1992, entered into force 1 January 1994) (1993) 32 ILM 289. It is noteworthy that, from the US perspective, NAFTA would facilitate closer and more secure sources of energy from Canada and Mexico and consequently reduce its reliance on oil imports from the middle East, see Peter Cameron, A Kolo (2012) 'What is Energy Investment Law and Why does it Matter?', Working Paper, available online at: http://www.eisourcebook.org/cms/March_2013/Peter%20&%20Abba%20-%20Energy%20Investment%20Law.pdf.
- 56 On the standards of protection offered by IIAs see *inter alia*, A Reinisch, *Standards of Investment Protection* (Oxford University Press, 2008).
- 57 M Maniruzzaman (2008) 'The Pursuit of Stability in International Energy Investment Contracts: A Critical Appraisal of the Emerging Trends', *Journal of World Energy Law and Business*, 152.
- 58 S Di Benedetto, *International Investment Law and the Environment* (Edward Elgar, 2013) 9-10.

1.2. The potential for interactions between investment and marine environmental protection

Offshore energy production projects and, accordingly, the proliferation of investments in such projects, pose significant risks to the marine environment.⁵⁹ The interconnectedness of the oceans, the lack of scientific certainty on the long-term and cumulative effects of emerging technologies used in the exploitation of offshore energy resources, coupled with the fundamental *erga omnes* obligation⁶⁰ of States to protect and preserve the marine environment, create real challenges for the regulation of offshore energy investments. Against such a background, international investment law cannot operate in isolation from the broader international legal framework regulating the environmental externalities of offshore energy projects. The obligations of States under UNCLOS and several environmental agreements on the protection of the marine environment against risks from offshore activities, bear significant implications for the regulation of investments in the offshore energy sector.

Specifically, States are not only responsible for adopting the necessary laws and regulations to prevent and minimise pollution from offshore energy production activities within their jurisdiction but, at the same time, they must ensure that the activities of foreign investors within their jurisdiction and under their control will not cause significant harm to the marine environment.⁶¹ As already explained, these obligations do not require States to achieve a specific result, but they require them to exercise certain conduct to prevent significant marine environmental harm. In other words, States are expected to endeavour or to strive to realise the prevention of pollution, but it cannot be guaranteed that harm will not eventually occur.⁶² While the normative content of these obligations offers some regulatory discretion, States are obliged to exercise due diligence and at least reach the threshold of care set by the international rules, standards and recommended practices and procedures.⁶³ Consequently, besides international investment law, international law on marine environmental protection also restricts the exercise of the sovereign right of host States to regulate how offshore energy investments operate within their jurisdiction. Even though those international law “fragments”⁶⁴ have mainly developed independently from each other, they are creating partly overlapping obligations for States, as they both aim to influence States’ exercise of authority in regulating the exploitation of their offshore energy resources. In other words, they both try to shape

59 S Trevisanut, and N Giannopoulos (2018) ‘Investment Protection in Offshore Energy Production: Bright Sides of Regime Interaction’, *Journal of World Investment and Trade*, 791.

60 L-A Sicilianos (2002) ‘The Classification of Obligations and the Multilateral Dimension of the Relations of International Responsibility’, *European Journal of International Law*, 1136-1137.

61 ITLOS, Seabed Disputes Chamber, *Responsibilities and Obligations of States Sponsoring Persons and Entities with respect to Activities in the Area*, ITLOS Reports 2011, paras 117-20.

62 P-M Dupuy (1999) ‘Reviewing the Difficulties of Codification: On Ago’s Classification of Obligations of Means and Obligations of Result in Relation to State Responsibility’, *European Journal of International Law*, 175.

63 Article 208(3), also read in light of article 194(3) of UNCLOS.

64 *Inter alia*, J Pauwelyn (2004) ‘Bridging Fragmentation and Unity: International Law as a Universe of Inter-Connected Islands’, *Michigan Journal of International Law*, 903-905.

the content of the “right to regulate”, which is a fundamental attribute of sovereignty under international law.⁶⁵

Even though both these bodies of international law are trying to curb the regulatory discretion of States when it comes to offshore energy projects,⁶⁶ international investment law and international environmental law pursue – at least *prima facie* – different objectives. Most of the first generation of IIAs (until approximately 1992) were focused on the protection of foreign investments and did not contain any clauses relating to environmental protection.⁶⁷ The relative autonomy of international investment and international environmental law, as specialised fields of international law, explains why interplay and cross-references between them were somewhat limited in their early stages of development.⁶⁸ From a normative perspective, the interactions between international investment law and international environmental law have their origins in the parallel proliferation of IIAs⁶⁹ and the progressive diversification of international rules, which seek to protect and preserve the marine environment against pollution stemming from economic activities, such as investments in offshore energy generation.

Another critical factor influencing their interplay is that both international investment and international environmental law have a highly dynamic nature. The normative content of international investment obligations is updated through the interpretation and implementation of the vaguely phrased standards of investment protection under IIAs – mostly – by arbitral tribunals. The open-ended formulation of international investment obligations and the fact that many of the investment protection disciplines, such as the full protection and security and the fair and equitable treatment standards, create obligations of conduct (requiring States to show a standard of due diligence), allow broad discretion in their interpretation and application by both States and arbitral tribunals. However, the extensive interpretation of investment obligations has recently triggered the reaction of States, leading many of them to amend and re-negotiate IIAs or try to reassert their control over investment agreements and investment arbitration by issuing joint interpretational declarations regarding investment protection standards.⁷⁰

65 H Mann (2002) ‘The Right of States to Regulate and International Investment Law’, *International Institute for Sustainable Development Report*, available online at: https://www.iisd.org/pdf/2003/investment_right_to_regulate.pdf, 5.

66 V Barral, ‘National Sovereignty over Natural Resources: Environmental Challenges and Sustainable Development’ in Morgera and Kulovesi (2016) *supra* n. 31, 15-17.

67 A Asteriti (2016) ‘Normative Conflicts in International Investment Law: The Case of Environmental Law’, LLM thesis, University of Glasgow, 9, available online at: <http://theses.gla.ac.uk/7604/1/2016AsteritiLLM.pdf>, K Vandeveld (2011) ‘Model Bilateral Investment Treaties: The Way Forward’, *Southwestern Journal of International Law*, 307-308, K Gordon, and J Pohl (2011) ‘Environmental Concerns in International Investment Law: A Survey’, *OECD Working Papers on International Investment*, 2011/01, available online at: https://www.oecd.org/daf/inv/investment-policy/WP-2011_1.pdf, 5-10.

68 J Viñuales, *Foreign Investment and the Environment in International Law* (Cambridge University Press, 2012) 14.

69 S Spears (2010) ‘The Quest for Policy Space in a New Generation of International Investment Agreements’, *Journal of International Economic Law*, 1037.

70 G Sacerdoti, ‘Investment Protection and Sustainable Development’ in S Hindelang, and M Krajewski (eds) *Shifting Paradigms in International Investment Law – More Balanced, Less Isolated, Increasingly Diversified* (Oxford University Press, 2016) 32-33, E Methymaki, and A Tzanakopoulos, ‘Masters of Puppets? Reassertion of Control Through Joint Investment Treaty Interpretation’ in A Kulick

International environmental rules on the protection of the marine environment are also evolving. For instance, the rapid expansion of the offshore energy sector and the consequent concerns about its environmental impacts have prompted developments in the international legal framework.⁷¹ Most importantly, there has been a normative shift towards obligations of prevention and minimisation of marine environmental pollution caused by such activities, rather than rules requiring *ex post* compensation for the damage incurred. The standard of due diligence that States must meet when complying with these obligations is evolving to be appropriate and proportionate in relation to the level of risk posed by offshore energy activities in the light of the increasing scientific awareness regarding their effects on the marine environment.⁷² As discussed in chapter 3, offshore energy activities are now subject to dynamic international environmental law standards.

Consequently, as the content of international obligations under both international investment law and international environmental law expands in scope and increases in depth, the potential for normative interplay between them grows.⁷³ In that context, the need for the regular adaptation of marine environmental protection standards to new challenges might conflict with the aim of a stable and predictable legal framework upon which long-term investments usually rely.⁷⁴ The regulation of investments in offshore energy production illustrates how these two bodies of international law interact: for instance, evolving international environmental standards might require host States to impose stricter environmental measures on ongoing renewable energy projects, which have the potential to affect the economic interests of the investor adversely.

1.3. Normative interactions and interactions of interests

Nonetheless, the interactions between investment protection rules and rules on the protection of the marine environment are not necessarily conflictory. Their interactions can also be neutral or synergistic. For instance, legal obligations relating to the protection of investments and those relating to the preservation and protection of the marine environment can co-exist without giving rise to any kind of legal conflict, when obligations stemming from these two branches of international law do not even speak to the same issues. In such a case, host States will be able to fully comply with both their investment and marine environmental obligations simultaneously. In addition, interactions between legal rules belonging to these legal regimes can even result in their cross-fertilisation, in the sense of complementing or

(ed) *States' Reassertion of Control Over International Investment Agreements and International Treaty Dispute Settlement* (Cambridge University Press, 2017) 155-182.

- 71 See discussion on the normative reaction to the Deepwater Horizon across different marine regions, chapter 6, sub-section 3.2.
- 72 *Seabed Chamber's Advisory Opinion*, *supra* n. 61, para 117.
- 73 W Burke-White (2015) 'Inter-Relationships between the Investment Law and Other International Legal Regimes', E15 Initiative, *International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum*, available online at: <http://e15initiative.org/wp-content/uploads/2015/09/E15-Investment-Burke-White-Final.pdf>, J Viñuales (2010) 'Foreign Investment and the Environment in International Law: An Ambiguous Relationship', *British Yearbook of International Law*, 245-246.
- 74 A Romson, 'International Investment Law and the Environment' in M-C Cordonier Segger, M Gehring, and A Newcombe (eds) *Sustainable Development in World Investment Law* (Wolters Kluwer, 2011) 39.

reinforcing each other.⁷⁵ As discussed in section 2.2., international investment law can be interpreted in the light of environmental obligations, either when the former contains “evolutionary” terms or through systemic interpretation according to article 31(3)(c) of the VCLT.⁷⁶

The most noticeable confirmation of the increasing interactions between these branches of international law is the surge in foreign investment disputes relating to environmental protection issues.⁷⁷ There is a growing perception that the expansive interpretation of investment protection disciplines can encroach upon and conflict with the implementation of international environmental obligations. In particular, foreign investors increasingly challenge regulatory measures adopted in pursuance of environmental protection by host States, claiming that these measures breach investment protection obligations.⁷⁸ These normative interactions can result in a genuine conflict when the host State cannot comply with all the requirements set by simultaneously applicable investment and environmental obligations and its choice to prioritise compliance with one of them would necessarily or potentially entail the failure to comply with the other one.⁷⁹ In other words, a legal conflict arises when the content of simultaneously applicable international investment and environmental rules requires the exercise of contradictory conduct by the host State, or when one norm permits certain conduct which is explicitly prohibited by the other applicable norm.⁸⁰ The problem is that, in the case of such horizontal normative conflicts,⁸¹ there is no *a priori* hierarchy among rules of different branches of international law.⁸² As a matter of principle, investment obligations do not prevail over international marine environmental obligations nor do the latter trump the former. Because none of these norms qualifies as *jus cogens*,⁸³ their conflicts are governed by either specific

75 M Hirsch (2006) ‘Interactions between Investment and Non-Investment Obligations in International Investment Law’, *Hebrew University International Law Research Paper No 14-06*, available online at: <https://ssrn.com/abstract=947430>, 5.

76 B Simma (2011) ‘Foreign Investment Arbitration: A Place for Human Rights?’, *International and Comparative Law Quarterly*, 573.

77 J Viñuales, ‘Foreign Investment and the Environment in International Law: Current Trends’ in K Miles (ed) *Research Handbook on Environment and Investment Law* (Edward Elgar) 21-25, where Viñuales has incorporated a figure with 114 investment disputes with environmental components which were decided up until 2015.

78 V Prislán, ‘Non Investment Obligations in Investment Treaty Arbitration: Towards a Greater Role for States?’, in F Baetens (ed) *Investment Law within International Law: Integrationist Perspectives* (Cambridge University Press, 2013) 451.

79 E Vranes (2009) ‘The Definition of Norm Conflict in International Law and Legal Theory’, *European Journal of International Law*, 395, S-A Sadat-Akhavi, *Methods of Resolving Conflicts between Treaties* (Martinus Nijhoff, 2003) 5, W Czaplinski, and G Danilenkow (1990) ‘Conflict of Norms in International Law’, *Netherlands Yearbook of International Law*, 12-13.

80 For a more detailed analysis of the possible normative conflict among treaties, see Sadat-Akhavi (2003) *supra* n. 79, 5-24.

81 D Firger, and M Gerrard, ‘Environmental Protection’ in P Mavroidis (ed) *Regulations of Foreign Investment: Challenges for International Harmonization* (World Scientific Publishing, 2014) 239, Viñuales (2012) *supra* n. 68, 33, C Pavel (2009) ‘Normative Conflicts in International Law’, *San Diego Law Review*, 885-886, J Pauwelyn, *Conflict of Norms in Public International Law: How WTP Law Relates to Other Rules in International Law* (Cambridge University Press, 2003) 327-439.

82 A Lindroos (2005) ‘Addressing Norm Conflict in a Fragmented Legal System: The Doctrine of *Lex Specialis*’, *Nordic Journal of International Law*, 28-29.

83 See generally, A Orakhelashvili, *Peremptory Norms in International Law* (Oxford University Press, 2006).

clauses under the agreements in question, or by the treaty-conflict rules under the law of treaties.⁸⁴

Arguably, these conflicts can also be perceived and resolved not as normative ones, but instead as conflicts of competing values which are underpinning the relevant international rules.⁸⁵ Insofar as a State cannot simultaneously comply with all the requirements of both rules, it could consider the underlying interests and values to determine the *ad hoc* hierarchy among them on a case-by-case basis. The argument reaffirms that only *jus cogens* norms have inherent priority over other norms and does not seek to establish an *a priori* value-based hierarchy which, for instance, would rank rules for environmental protection or human rights protection higher than investment protection obligations. This *ad hoc* value-oriented hierarchy could also facilitate the resolution of normative conflicts by investment tribunals, which often deal with complicated issues of conflicting applicable rules. Nevertheless, according to that view, the value-based ordering of international rules does not result in the prevalence of the one rule over the other and cannot absolve State responsibility for the breach of the lower value-level norm.⁸⁶ It consists of a value-based choice between two conflicting rules, which is only relevant at the phase of their implementation in a particular case considering the relevant factual situation. Therefore, such balancing does not resolve their normative conflict in general, which endures and might be resolved differently by another State or judicial body. Notwithstanding the attractiveness of supporting such a value-oriented hierarchy of norms, the argument appears to lack a solid legal basis. Instead, it is rooted in the false premise that all States or interpreters of international law share the same value system.⁸⁷ Such contextual normative ordering could be seen as a *de lege ferenda* guideline for the application of the principle of “political decision”, according to which a State can freely choose to comply with one conflicting treaty obligation over another and then potentially face the legal consequences for the violation of the latter.⁸⁸

However, as was described in chapter 3, most international environmental rules do not prescribe precise conduct but allow States some discretion regarding their implementation, albeit subject to the evolving standard of due diligence. They require the adoption of domestic environmental laws and regulations which, *inter alia*, apply to foreign investors carrying out potentially harmful activities in their territory and the exercise of a certain level of vigilance in the enforcement of these laws. As a result, conflicts – at least from the perspective of international arbitrators dealing with investment disputes – are usually conceptualised as arising from vertical interactions between international investment obligations and domestic environmental regulations, which – allegedly – adversely affect the economic interests of investors.⁸⁹ On that account, these vertical conflicts (also characterised

84 R Michaels, and J Pauwelyn (2012) ‘Conflict of Norms or Conflict of Laws? Different Techniques in the Fragmentation of Public International Law,’ *Duke Journal of Comparative and International Law*, 366-371.

85 A Ghouri, *Interaction and Conflict of Treaties in Investment Arbitration* (Kluwer Law International, 2015) 49.

86 *Ibid.*, 52.

87 ILC Report on Fragmentation (2006) *supra* n. 48, para 36.

88 A Ghouri (2012) ‘Determining Hierarchy Between Conflicting Treaties: Are There Vertical Rules in the Horizontal System?’ *Asian Journal of International Law*, 237.

89 Firger and Gerrard (2014) *supra* n. 81, 234-236.

in the investment law literature as legitimacy conflicts)⁹⁰ are not subject to the same conflict norms like the ones applicable in the case of horizontal normative conflicts between different rules of international law. Treating these interactions as vertical conflicts between international and domestic rules results in investment tribunals upholding the priority of an investment obligation insofar as it conflicts with domestic environmental rules. That is because, in the light of the supremacy of international law,⁹¹ a State may not use its domestic law to justify its non-compliance with an international obligation.⁹²

Moreover, these vertical conflicts are usually perceived by investment tribunals as a conflict between investment protection as an international duty and the so-called right of the State to regulate. Scholars have regarded this as a tension between the private interest in investment protection and the public interest of States in protecting the environment.⁹³ Due to that general approach of tribunals, there is a growing number of specifically elaborated environmental provisions in new generations of IIAs, which explicitly aim to carve out more space for the domestic environmental regulation of foreign investments.⁹⁴ This trend demonstrates the discontent of States about the previously myopic treatment, by arbitral tribunals, of domestic environmental measures as breaches of investment disciplines.

However, the focus of new IIAs on the “right to regulate” fails to consider that, in some cases, domestic environmental regulation is not just a domestic measure unilaterally adopted by the host State in the exercise of its sovereignty. Instead, such regulatory measures might be required, permitted or otherwise induced by an international environmental commitment.⁹⁵ The legal basis in which the measure is grounded is significant; measures induced by an international environmental obligation should be treated differently from purely domestic measures. Consequently, in the case of environmental measures induced by environmental obligations, the interaction should be perceived as one between two equally valid and applicable international rules, which are not in any *a priori* hierarchical order. With respect to the underpinning interests, an environmental measure required by an international obligation should at least dilute the allegations that the protection of the environment is a mere disguise for protectionist or discriminatory regulation against foreign investments.

The main difficulty arises again because of the due diligence nature of most environmental obligations. As most of them are not sufficiently precise regarding

90 Jorge Viñuales (2010) *supra* n. 73, 254.

91 See for instance reasoning in the Santa Elena Award where the tribunal held that: *The Tribunal is satisfied that the rules and principles of Costa Rican law which it must take into account, relating to the appraisal and evaluation of expropriated property, are generally consistent with the accepted principles of public international law on the same subject. To the extent that there may be any inconsistency between the two bodies of law, the rules of public international law must prevail*, ICSID, *Compania del Desarrollo de Santa Elena SA v Republic of Costa Rica*, ICSID Case No ARB/96/01, Award of 17 February 2000, para 64.

92 Article 27 of VCLT.

93 Mbengue and Raju (2014) *supra* n. 3, 171, Romanin Jacur (2015) *supra* n. 18, 355-356.

94 Viñuales (2012) *supra* n. 68, 282.

95 J Viñuales (2012) ‘The Environmental Regulation of Foreign Investment Schemes under International Law’, *The Graduate Institute Research Paper*, 9/2012, available online at: http://graduateinstitute.ch/files/live/sites/iheid/files/sites/cies/shared/Research%20Papers%20%26%20Publications/Research%20Papers/2012/CIES_RP_09_Viñuales.pdf, 3.

the conduct which a State needs to adopt, it is not usually clear whether a measure is adopted because an international environmental obligation requires it or whether the international environmental rule was simply a distant source of inspiration for the domestic measures.⁹⁶ Another particularity of international environmental law is its extensive reliance on non-binding rules and standards, which do not impose obligations on the States strictly legally speaking. Nonetheless, as explained in chapter 3, the normative effects of such non-binding environmental norms can vary widely. For instance, they sometimes interact with binding rules. Through the process of interpretation, they may also be considered as guidance by States when complying with their environmental obligations. Consequently, as international environmental norms evolve, and their normative concreteness increases, their potential interactions with investment disciplines can more easily be perceived as horizontal.

Likewise, many investment standards do not demand a State to adopt specific conduct. However, they may require it to make policy choices that privilege investment protection over the protection of the environment or restrict the State's discretion in choosing the appropriate measures to comply with its environmental obligations.⁹⁷ While the underlying interests of investment protection and environmental protection obligations might be competing, there would be no genuine legal conflict between the obligations, insofar as the State can comply with all their requirements simultaneously. However, legal conflicts might arise as the normative content of duties of conduct is enriched by subsequent legal developments. As discussed in chapter 3, several normative, scientific and technological developments inform and shape the standard of due diligence with regard to the obligation of States to protect the marine environment. These can enrich the normative content of the duty to protect and preserve the marine environment and consequently curtail the discretion of States in its implementation.

The particularities of investor-State arbitration accentuate the potential interactions between international investment law and international marine environmental law.⁹⁸ The enhanced enforceability of investment law through the *sui generis* investment arbitration proceedings increases the likelihood that investment tribunals will need to determine the impact of international environmental norms on the outcome of the dispute before them. However, the wording of IIAs also plays an essential role in their interpretation and, consequently, in their interaction with environmental obligations of the host State. The challenges posed by the interaction between investment law disciplines and marine environmental law obligations can differ depending on the generation to which the IIA in question belongs.⁹⁹ While the first generation IIAs were drafted excluding any non-investment considerations, successive generations of IIAs have incorporated more detailed provisions regulating their relationship with other international obligations of host States, as further discussed in section 4.

96 Viñuales (2010) *supra* n. 73, 287.

97 Burke-White (2015) *supra* n. 73, 3.

98 Di Benedetto (2013) *supra* n. 58, 15.

99 Burke-White (2015) *supra* n. 73, 2.

2. Protection of offshore energy investments in the context of the law of the sea¹⁰⁰

Although some early investment awards approached international investment law as an autonomous branch of international law, it does not consist of a self-contained legal regime.¹⁰¹ Investment agreements cannot be read in clinical isolation from their normative background,¹⁰² which comprises simultaneously applicable international rules speaking to the same facts.¹⁰³ The generally accepted approach concerning the position of IIAs in the broader international legal system is illustrated aptly in the reasoning of the ICSID tribunal in the *AAPL v Sri Lanka* final award,¹⁰⁴ which found that the BIT in question

“is not a self-contained closed legal system limited to provide for substantive rules of direct applicability, but it has to be envisaged within a wider juridical context in which rules from other sources are integrated through implied incorporation methods, or by direct reference to certain supplementary rules, whether of international law character or domestic law character”.¹⁰⁵

In that respect, other relevant rules of international law are to be considered in the interpretation and implementation of any investment obligation.¹⁰⁶ As reaffirmed by the tribunal in the *Saluka v Czech Republic* award, “[i]n interpreting a treaty, account has to be taken of any relevant rules of international law applicable in the relations between the parties”.¹⁰⁷ Indeed, article 31(3)(c) of the VCLT instructs the interpreter of investment obligations under IIAs to take into account any relevant rules of international law for their interpretation.¹⁰⁸

In the case of an investment dispute with environmental aspects, there are several legal bases for an arbitral tribunal to consider the environmental obligations of the host State. Primarily, arbitral tribunals can rely on article 31(3)(c) of the VCLT to integrate other norms of international law in the interpretation of IIAs independently of the consent of the parties concerning the applicable law in the case of an investment dispute.¹⁰⁹ At the same time, most clauses on the applicable law in IIAs

100 This section of the chapter builds on the research paper: Trevisanut and Giannopoulos (2018) *supra* n. 59.

101 C McLachlan (2005) ‘The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention’, *International Comparative Law Quarterly*, 280.

102 “...the Tribunal had to apply international law as a whole to the claim, and not the provisions of the BIT in isolation”, ICSID, *MTD Equity Sdn Bhd v Chile*, ICSID Case No ARB/01/7, Decision on Annulment of 21 March 2007, paras 61-62.

103 Ghouri (2015) *supra* n. 85, 112.

104 ICSID, *Asian Agricultural Products Ltd v Republic of Sri Lanka*, ICSID Case No ARB/73/3, Final Award of 27 June 1990.

105 *Ibid*, para 21.

106 See for instance the award in *Urbaser v Argentina*, which also declared that “The BIT cannot be interpreted and applied in a vacuum. The Tribunal must certainly be mindful of the BIT’s special purpose as a Treaty promoting foreign investments, but it cannot do so without taking the relevant rules of international law into account. The BIT has to be construed in harmony with other rules of international law of which it forms part, including those relating to human rights”, *Urbaser S.A. and Consorcio de Aguas Bilbao Bizkaia, Bilbao Biskaia Ur Partuergoa v the Argentine Republic*, ICSID Case No. ARB/07/26, Award of 8 December 2016, para 1200.

107 *Saluka Investments BV v Czech Republic*, UNCITRAL, Partial Award of 17 March 2006, para 106.

108 P-M Dupuy, and Jorge Viñuales, ‘Human Rights and Investment Disciplines: Integration in Progress’, in M Bungenberg, J Griebel, S Hobe, and A Reinisch (eds) *International Investment Law* (Nomos, 2015) 1758.

109 Weeramantry has argued that the use of systemic interpretation in investment arbitration is rather rare, because it could be seen as running contrary to the applicable law clause, when that clause does

provide explicitly for the application of international law to define the relevant legal rules that govern the substantive investment issues.¹¹⁰ As well, even in the absence of reference to international law in the choice of law clause, an investment tribunal can still refer to international law and the relevant environmental obligations through the application of domestic environmental law, which usually incorporates these obligations in the domestic legal order.¹¹¹ Therefore, international environmental rules can be invoked either as a legal defence against claims of breach of investment disciplines or as normative guidance in the interpretation of investment obligations. For instance, a host State could rely upon its international environmental obligations under UNCLOS and the CBD to argue that the designation of an MPA was in furtherance of these obligations and, therefore, the moratorium on offshore energy generation projects imposed in relation to the MPA is not in breach of its investment obligations.¹¹²

In that spirit, in the *Maffezini v Spain* award, an ICSID tribunal accepted that EU and international law (expressly referring to the Espoo Convention) relating to the obligation to conduct an EIA before the construction of a chemical plant, were part of the applicable law in the dispute before it.¹¹³ Interestingly, the tribunal upheld that the investor should have known that, under the international and EU legal framework, the authorisation of such a project requires the prior conduct of such an environmental assessment,¹¹⁴ and, therefore, the investor could not successfully claim that the increased costs caused by this requirement were in breach of the IIA in question. The tribunal, considering the relevant international, European and domestic environmental rules, concluded that the Spanish authorities had strictly complied with the applicable environmental obligations regarding the EIA and, therefore, had not breached the BIT.¹¹⁵

The above observations regarding the different entry points for consideration of other international obligations of the host State are significant in respect of the international law regulating investments in offshore energy production projects.¹¹⁶

not refer to other rules of international law, see R Weeramantry, *Treaty Interpretation in Investment Arbitration* (Oxford University Press, 2012) 3.149. Similarly, see D Kalderimis (2012) 'Systemic Integration and International Investment Law: Some Practical Reflections', *SIEL Online Proceedings Working Paper 2012/46*, 7.

- 110 See for example, article 26(6) of the ECT, article 1131 of the NAFTA, article 42 of the ICSID Convention, article 40(1) of the Canadian Model BIT (2004), article 9(3) of the Chinese Model BIT (2003), article 30(1) of the US Model Bit (2012).
- 111 P-M Dupuy, 'Unification Rather than Fragmentation in International Law? The Case of International Investment Law and Human Rights Law' in P-M Dupuy, F Francioni, and E-U Petersmann (eds) *Human Rights in International Investment Law and Arbitration* (Oxford University Press, 2009) 25.
- 112 It is noteworthy that despite such arguments being raised in several cases, no investment tribunal has yet completely exonerated a host State of its liability on the grounds that it had complied with a conflicting non-investment international obligation.
- 113 ICSID, *Emilio Agustin Maffezini v Kingdom of Spain*, ICSID Case No. ARB/97/7, Award of 13 November 2000, paras 65-71.
- 114 "...the Environmental Impact Assessment procedure is basic for the adequate protection of the environment and the application of appropriate preventive measures. This is true, not only under Spanish and EEC law, but also increasingly under international law". *Ibid*, para 67. See also, para 70.
- 115 *Ibid*, para 71.
- 116 It might also be possible for the host States to rely on the "legality" clause contained in several IIAs to defend themselves against claims by investors who have intentionally and gravely breached fundamental environmental regulations. Specifically, several IIAs qualify the protection of foreign investments upon their compliance with the laws of the host State. However, the clause has been

Foreign investments in offshore energy production are subject to several international rules, which have a different substantive focus. In the context of such a complex international legal framework, the investment protection standards under IIAs do not operate in a legal vacuum. Instead, the broader legal framework has a direct bearing on the regulation of offshore energy investments.¹¹⁷ More specifically, due to the physical location of offshore energy projects and their potential impact on the marine environment, the law of the sea and international environmental law play an important role in the regulation of investments in offshore energy production. In other words, the law of the sea and international environmental law provide a dense normative context in which offshore energy investments operate.

The marine dimension of offshore energy projects and the consequent application of the law of the sea substantially influence the international legal framework in terms of both the jurisdictional framework and the substantive rules. Specifically, the law of the sea lays down the general legal framework for the establishment of such investments in offshore energy projects by providing a solid jurisdictional basis for the installation of infrastructure in different maritime zones. In that regard, this section first investigates the *rationae loci* application of IIAs in various marine areas against the backdrop of the law of the sea's jurisdictional provisions. Moving to the substantive level, it explores how international obligations stemming from the law of the sea and the relevant environmental agreements relating to the protection of the marine environment restrain the discretion of the coastal state to adopt laws and regulations regarding offshore energy investments. Then, this section also examines how the overarching duty of states to exercise due diligence in preventing and mitigating the risk of significant harm to the marine environment¹¹⁸ with regard to offshore energy activities might affect the implementation of relevant investment obligations. Specifically, it explores whether environmental protection obligations can influence the level of investment protection that can be granted to investors. It also discusses both the relevance of the nature of the competing duty to protect the marine environment and the role of arbitral tribunals in resolving potential normative conflicts.

2.1. The relevance of the jurisdictional framework under UNCLOS for offshore energy investments and the geographical scope of investment protection at sea

As illustrated in chapter 2,¹¹⁹ UNCLOS serves as a general international legal framework regulating all energy production activities at sea.¹²⁰ In terms of jurisdiction, UNCLOS divides the oceans into zones, where different rights and obligations are

interpreted rather restrictively by investment tribunals so far and none of the cases related to the breach of environmental regulations, which might not be considered as falling within the core obligations relating to the validity of an investment. J Sullivan, and V Kirsey (2017) 'Environmental Policies: A Shield or a Sword in Investment Arbitration?', *Journal of World Investment and Trade*, 116-129, T Acedo Betancourt (2014) 'When May Foreign Investors Lose the Protection of Investment Treaties Due to Misconduct', *University of Oslo Research Legal Studies Research Paper Series 2014-12*, available online at: <https://dx.doi.org/10.2139/ssrn.2433578>, 63.

117 Viñuales (2015) *infra* n. 108, 1717.

118 'ILA Study Group on Due Diligence in International Law: Second Report' (July 2016) 18-20.

119 See chapter 2, sub-section 2.1.

120 The relevant UNCLOS provisions have acquired customary nature, and, therefore, are applicable even with regard to States that are not parties to the Convention, see chapter 3, section 1.

allocated to States and (indirectly) other users of the sea. The sovereign rights over offshore energy resources and the relevant duties recognised therein have a direct bearing on the regulation of energy-related activities at sea. Importantly, in the territorial sea, the EEZ, and the continental shelf, coastal States are vested with a spectrum of exclusive rights for the exploration and exploitation of natural resources and the installation of infrastructure for the prospecting, exploration, or exploitation of energy resources. The power of the host State to authorise and regulate investments in offshore energy production falls within the spectrum of sovereign rights granted to it by the law of the sea. However, the rules of UNCLOS do not address the protection of foreign investors (or any private actor) authorised by the host State to engage in offshore energy generation activities in areas within its national jurisdiction.¹²¹ That is a matter dealt with in international investment law. In that respect, this section examines if the territorial scope of application of IIAs covers investments at sea and, if so, how it relates to the jurisdictional framework under the law of the sea.

Exploring the geographical nexus between offshore energy investments and the host State is inevitably associated with the notion of “territory” under IIAs.¹²² Generally, an IIA covers only foreign investments made “in the territory” of one of the State parties to the agreement.¹²³ In new generation IIAs, and especially following the conclusion of UNCLOS, the definition of territory¹²⁴ often explicitly refers to the EEZ and the continental shelf of the host State.¹²⁵ However, the formulation can vary from treaty to treaty.¹²⁶ For instance, many IIAs define territory as including the “*territorial sea as well as those maritime areas, adjacent to the outer limit of the territorial sea over which the Contracting Party has jurisdiction or sovereign rights, pursuant to international law*”.¹²⁷ Other IIAs opt for a more general wording, only

121 See the relevant proposal by the USA during the UNCLOS negotiations, chapter 2, sub-section 1.5.

122 M Benatar (2015) ‘Applying International Investment Law to Disputed Maritime Zones: A Case Study of the Falklands (Malvinas)’, *Hague Yearbook of International Law*, 73.

123 For instance, article 1101 of NAFTA reads as follows: “1. *This Chapter applies to measures adopted or maintained by a Party relating to: (a) investors of another Party; (b) investments of investors of another Party in the territory of the Party; and (c) with respect to Articles 1106 and 1114, all investments in the territory of the Party*”. On the interpretation of the territorial requirement of investments under NAFTA, see *Bayview Irrigation District et al v United Mexican States*, ICSID Case No ARB(AF)/05/1, Award of 19 June 2007, paras 105-9.

124 However, it should be mentioned that some more recent IIAs do not contain language to that effect, see C Knahr, ‘Investments “in the Territory” of the Host State’ in C Binder, U Kriebaum, A Reinisch, and S Wittich (eds) *International Investment Law for the 21st Century: Essays in Honour of Christoph Schreuer* (Oxford University Press, 2009) 42.

125 UNCTAD (2007) ‘Bilateral Investment Treaties 1995-2006: Trends in Investment Rulemaking’, available online at: https://unctad.org/en/Docs/iteiia20065_en.pdf, 17-19.

126 The ECT’s investment protection provisions are applicable to investments located in or transiting through the ‘Area’ of another Contracting Party to the ECT. Article 1(10) of the ECT defines “Area” as “(a) *the territory under its sovereignty, it being understood that territory includes land, internal waters and the territorial sea; and (b) subject to and in accordance with the international law of the sea: the sea, sea-bed and its subsoil with regard to which that Contracting Party exercises sovereign rights and jurisdiction*”.

127 Denmark–Algeria BIT (signed 25 January 1999) art 1(4); Denmark–Argentina BIT (signed 6 November 1992) art 1(6); Denmark–Bosnia and Herzegovina BIT (signed 24 March 2004) art 1(4); Denmark–Bulgaria BIT (signed 14 April 1993) art 1(4); Denmark–Pakistan BIT (signed 18 July 1996) art 1(6); Denmark–Peru BIT (signed 21 November 1994) art 1(4); Denmark–Philippines BIT (signed 25 September 1997) art 1(6); Denmark–Poland BIT (signed 1 May 1990) art 1(4); Denmark–Russian Federation BIT (signed 4 November 1993) art 1(4); Denmark–Slovenia BIT (signed 12 May 1999) art 1(5); Denmark–Tanzania BIT (signed 22 April 1999) art 1(5); Denmark–Uganda

referring to areas where the parties exercise jurisdiction.¹²⁸ Therefore, when IIAs do not refer to specific marine zones in their definition of “territory”, the interpreter must consider the relevant rules of the law of the sea, which allocate rights and jurisdiction to coastal States. Particularly, in the light of articles 2, 56 and 77 of UNCLOS, the term ‘territory’ in these agreements should be interpreted as including the continental shelf and the EEZ, once proclaimed.¹²⁹ Even though this appears speculative, as no energy production on a commercial scale has yet taken place on the high seas,¹³⁰ investment protection under IIAs, which cover all marine areas where the host State exercises jurisdiction, could also extend to potential offshore energy projects on the high seas or the Area, insofar as these fall under the control of the host State. The significance of such contextual interpretation is that it clarifies the applicability of IIAs to investments made in various marine areas within and beyond the host State’s jurisdiction.¹³¹

Nevertheless, there remains some ambiguity about the precise geographical scope of application of IIAs, which do not include any definition of territory. For instance, the Association of Southeast Asian Nations (ASEAN) Comprehensive Investment Agreement (ACIA)¹³² offers an example of an investment agreement, which does not define the term “territory”. For those IIAs that remain silent regarding their territorial scope of application, it is necessary to have recourse to general international law¹³³ and, specifically, the law of treaties, to examine whether the agreements in question also cover maritime zones beyond the territorial sea. Under article 29 of the VCLT “[u]nless a different intention appears from the treaty or is otherwise established, a treaty is binding upon each party in respect of its entire

BIT (signed 26 November 2001) art 1(6); Denmark–Ukraine BIT (signed 23 October 1992) art 1(4); Denmark–Venezuela BIT (signed 28 November 1994) art 1(4); Denmark–Vietnam BIT (signed 23 July 1993) art 1(4); UK–China BIT (signed 15 May 1986) art 1; Australia–China BIT (signed 11 July 1988) art 1; United Arab Emirates–China BIT (signed 1 July 1993) art 1(2); Algeria–China BIT (signed 17 October 1996) art 1(2); China–Kuwait BIT (signed 23 November 1985) art 1(6-7); China–Netherlands BIT (signed 26 November 2001) art 1; Belgo–Luxembourg China BIT (signed 6 June 2005) art 1(4); Madagascar–China BIT (signed 21 November 2005) art 1(4), cited in O G Repouis (2017) ‘The Application of Investment Treaties to Overseas Territories and the Uncertain Provisional Application of the Energy Charter Treaty to Gibraltar’, *ICSID Review*, 172.

128 Article 1.4 of the Egypt – Thailand BIT (signed 18 February 2000).

129 Pursuant to Part V of UNCLOS, the exclusive economic zone (EEZ) is an area beyond and adjacent to the territorial sea in which the coastal State has “sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds”, article 56(1)(a) of UNCLOS. The EEZ does not exist *ipso jure* and cannot extend beyond 200 nautical miles from the coast.

130 There are ongoing discussions and related research projects on the (technological and legal) feasibility of wind farms and solar panels on the high seas; see *inter alia* the research project ‘Solar Energy to Fuel at Sea: Marinization of Energy Transition’, available online at: www.kivi.nl/uploads/media/58ff66f0216a6/Sol2FaS_KIVI_Presentation_20170420_public.pdf.

131 UNCTAD (2012) ‘Scope and Definition: UNCTAD Series on Issues in International Investment Agreements’, available online at: https://unctad.org/en/Docs/diaeia20102_en.pdf, 100.

132 The ASEAN Comprehensive Investment Agreement was signed on 26 February 2009, entered into force on 29 March 2012 and was amended by the 2013 Protocol to Amend the ASEAN Comprehensive Investment Agreement available online at: <http://agreement.asean.org/>.

133 Regarding the role of general international law in special regimes, see ILC Report on Fragmentation, *supra* n. 48, para 15.

territory".¹³⁴ According to the International Law Commission's (ILC) Commentary on the Draft Articles on the Law of Treaties, the term "territory" refers to "*the land, the appurtenant territorial waters and the air space which constitute the territory of the State*".¹³⁵ Whereas the words "land" and "air space" do not raise any interpretation problems, the phrase "*appurtenant territorial waters*" lacks clarity.¹³⁶ If it is accepted that the word "*appurtenant*" refers to the exercise of sovereignty, it should be read as covering only the internal waters and the territorial sea of the coastal State.¹³⁷ Insofar as such a strict interpretation of the term "territory" is adopted, the EEZ and the continental shelf over which the coastal State exercises only sovereign rights and jurisdiction would remain outside the geographical scope of application of IIAs which are silent on their territorial application, such as the ACIA.¹³⁸

Scholars have argued that the term "territory" is intrinsically linked to the exercise of jurisdiction by the State.¹³⁹ Following this interpretation of territory,¹⁴⁰ the EEZ and the continental shelf would fall within the geographical scope of application of IIAs, even when the agreement in question does not explicitly refer to these maritime zones. This argument appears to be reinforced by a teleological interpretation of IIAs. According to the rules on treaty interpretation, as codified in article 31 of the VCLT, any international agreement is to be interpreted "*in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose*".¹⁴¹ Despite the different wording used by various IIAs concerning their territorial scope of application, their primary purpose is to promote foreign investments and to advance economic cooperation

134 Article 29 of the VCLT. The provision is regarded as setting out a rule of customary international law, see O Dörr, and K Schmalenbach (eds), *Vienna Convention on the Law of Treaties: A Commentary* (Springer, 2012) 490. The tribunal in the *Fedax* case gave a very broad interpretation of territoriality, based upon the fact that the BIT under its scrutiny included a lenient territorial requirement, see *Fedax N. V. v. The Republic of Venezuela*, ICSID Case No. ARB/96/3, Award of 9 March 1998, para 41.

135 ILC, 'Draft Articles on the Law of Treaties with Commentaries' (1966) article 25, para 3.

136 See the 1945 Truman Proclamation, chapter 2, sub-section 1.2., according to which the USA regarded "*the natural resources of the subsoil and seabed of the continental shelf ... as appertaining to the United States, subject to its jurisdiction and control*".

137 Dörr and Schmalenbach (2012) *supra* n 134, 497.

138 The EEZ as a new *sui generis* maritime zone was a development in the law of the sea introduced by UNCLOS in 1982 and for that reason it could not have been taken into consideration by the ILC at the time of drafting the Articles on the Law of Treaties. On the contrary, the exercise of sovereign rights over the natural resources of the continental shelf by coastal States, enshrined in art 2 of the Convention on the Continental Shelf (adopted 29 April 1958, entered into force 10 June 1964) 499 UNTS 311, was already recognised as a rule of customary international law.

139 I Brownlie, *Principles of Public International Law* (Oxford University Press, 6th edition, 2003) 112.

140 However, the ICJ in the *Aegean Continental Shelf* case dismissed the argument that disputes relating to the "territorial status" coincide with disputes concerning matters of domestic jurisdiction. According to the ICJ's view, the term territorial status included "*the territorial integrity and the boundaries of the State*", see ICJ, *Aegean Sea Continental Shelf (Greece v Turkey)* Judgment 19 December 1978, paras 68, 73-75.

141 T Wälde, 'Interpreting Investment Agreements: Experiences and Examples' in Binder et al (eds) *supra* n. 124, 751-68; J Salacuse, *The Law of Investment Treaties* (Oxford University Press, 2010) 146-148.

between States.¹⁴² Thus, the broader the geographical scope of application of the treaty, the better the purpose and object of the investment treaty are served.¹⁴³

In addition, article 31(3)(a) and (b) of the VCLT provides that treaties are to be interpreted, taking into account subsequent agreements and the practice of States concerning their interpretation. As the ICJ stated in the *Aegean Sea Continental Shelf case*,

“once it is established that the expression the territorial status was used in Greece’s instrument of accession as a generic term denoting any matters comprised within the concept of territorial status under general international law, the presumption necessarily arises that its meaning was intended to follow the evolution of the law and to correspond with the meaning attached to the expression by the law in force at a given time”.¹⁴⁴

In other words, insofar as the term “territory” is considered a generic term included in IIAs, it has an intertemporal nature and is subject to evolutionary interpretation. Therefore, the term “territory” should be interpreted considering the parties’ subsequent agreements and practice. As already described, States have included very elaborate definitions of the term “territory” in the most recent IIAs and many model BITs. It is arguable that these subsequent IIAs, which explicitly include the EEZ and the continental shelf of the State parties within their geographical scope of application, constitute subsequent practice for interpretation of the term “territory”.¹⁴⁵ However, as explained in chapter 3, subsequent agreements and practice can also exclude the presumed intention of the parties to give the term “territory” evolutionary character.¹⁴⁶ In such a case, subsequent State practice could suggest that the term “territory” used in the earlier IIAs did not refer to the EEZ and the continental shelf.

As discussed above, when it comes to the definition of territory, many IIAs include a *renvoi* to the relevant law of the sea provisions, containing explicit references to the relevant rules of the international law in general and sometimes to UNCLOS specifically. Besides reaffirming the cardinal role of UNCLOS in the regulation of offshore energy production activities, those references illustrate the necessary complementary normative interaction between IIAs and the international law of the sea when it comes to investments located in offshore areas. Their combined interpretation appears to significantly clarify the geographical scope of application of IIAs in marine areas. In this context, the interplay between those two branches of international law does not give rise to any normative conflicts. The provisions that determine the application *rationae loci* in IIAs, interpreted in the light of the applicable

142 For instance, the tribunal in the *LG&E* case relied on the preamble of the BIT to conclude that the purpose and object of the treaty was to promote economic cooperation and “stimulate the flow of private capital and the economic development of the parties”, see ICSID, *LG&E Energy Corp et al v The Argentine Republic*, ICSID Case No ARB/02/01, Decision on Liability of 26 September 2006, para 124.

143 *Sanum Investments Limited v Lao People’s Democratic Republic*, UNCITRAL, PCA Case No 2013-13, Award on Jurisdiction of 13 December 2013, para 240 (“In fact, the larger scope the Treaty has, the better fulfilled the purposes of the Treaty are in this case: more investors—who would not otherwise be protected—are internationally protected, and the economic cooperation benefits a larger territory that would otherwise not receive such benefit”).

144 *Aegean Sea Continental Shelf*, *supra* n. 140, para 75.

145 In this sense see J Harrison, ‘International Investment Law and the Regulation of the Seabed’ in Banet (2020) *supra* n. 11, 488.

146 See also chapter 3, sub-section 2.3.2.

law of the sea rules, can be read as also covering marine areas over which the State does not exercise sovereignty, such as the EEZ and the (extended) continental shelf. The outcome of this systemic interpretation of provisions regarding geographical application in IIAs in the light of the jurisdictional framework of law of the sea is consistent with their object and purpose,¹⁴⁷ which primarily (but not exclusively) is to provide broader protection to investments and cultivate economic cooperation between the contracting States.¹⁴⁸ Such interaction between the two fields of law, i.e., textual references to the law of the sea in IIAs, consequently clarifies the geographical scope of protection of IIAs regarding offshore energy production investments.

2.2. The impact of substantive rules of international marine environmental law on the protection of foreign investments in offshore energy production

In the marine context, the overlap of international investment obligations with the broader international legal framework serves as the springboard for normative interactions. These interactions often occur at the stage of interpretation and application of investment obligations and can take primarily two forms. Firstly, open-ended provisions or generic legal concepts in IIAs,¹⁴⁹ such as the FET standard, “like circumstances”, “discriminatory”, “just compensation”, “public purpose” can be interpreted in the context of simultaneously applicable marine environmental obligations.¹⁵⁰ Indeed, when the IIA does not define the precise content of such terms, the interpreter needs, *inter alia*, to refer to other relevant rules of international law to clarify their meaning. In other words, the interpreter can make use of the interpretative flexibility of such notions, which may be regarded as having an evolutionary character.¹⁵¹ That interpretative process results in a normative cross-fertilisation between the interpreted rule and its context.

Secondly, in the case of competing obligations that cannot co-exist in a complementary way, the interpreter might need to consider the environmental obligations of the host State in a manner that qualifies the normative content and restricts the State’s discretion in the implementation of investment disciplines. As discussed in section 3, the flexibility of investment protection standards usually allows States a margin of appreciation in their application. Under such circumstances, international marine environmental obligations can play an essential role in shaping and delimiting the discretion of the host State to comply with investment

147 T Gazzini, *Interpretation of International Investment Treaties* (Hart, 2016) 175-176.

148 According to UNCTAD, the rationale of the definition of territory derives from the objective of investment protection and, in particular, is aimed at protecting investments located in maritime areas beyond the territorial waters, see UNCTAD (2012) *supra* n. 131, 100.

149 In the Namibia Advisory Opinion, the ICJ upheld that the use of generic terms in a treaty is an indication that these are not static, but they should be considered as evolutionary and their interpretation cannot be unaffected by developments in public international law, see ICJ, *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276, 1970*, para 53. Similarly, in the *Dispute Regarding Navigational and Related Rights*, the ICJ concluded that when using such generic terms, there is a presumption that States have intended to allow for their evolutionary interpretation in the light of developments in international law, ICJ, *Case Concerning the Dispute Regarding Navigational and Related Rights (Costa Rica v Nicaragua)* 2009, paras 64-66.

150 Simma (2011) *supra* n. 76, 589.

151 A Mills, ‘The Balancing (and Unbalancing) of Interests in International Investment Law and Arbitration’, in Douglas, Pauwelyn, Viñuales (2014) *supra* n. 31, 453-454, Prislán (2013) *supra* n. 78, 471.

protection standards.¹⁵² This argument stems from the premise – now considered a well-accepted rule of treaty interpretation – that States do not wish to opt-out from their other international obligations towards third States (or even all States when it concerns *erga omnes* obligations) when they conclude treaties for the protection of investments unless they explicitly express such an intention.¹⁵³ It appears challenging to suggest that investment obligations are adopted with the intention to *a priori* override any simultaneously applicable environmental commitments. On that account, the systemic interpretation of the competing obligations can serve as a tool to reconcile their normative requirements by “interpreting away” the initially identified incompatibility between them.¹⁵⁴

The following sub-section examines the potential implications of substantive rules of marine environmental law on the implementation of investment protection standards in the context of offshore energy production investments. To that end, it focuses on potential normative interactions and their effects on the most commonly found investment protection standards under IIAs (protection against expropriation, fair and equitable treatment, the prohibition of discrimination). Specifically, it describes how the nature and wording of these investment obligations enable their interpretation in the light of relevant environmental obligations.

2.2.1. Expropriation and environmental measures required under international law

Traditionally, one of the most significant risks faced by foreign investors in the energy sector was the possibility of unlawful taking of their assets by the host State. Following the end of colonialism, developing countries began to terminate long-term concessions, which had been granted previously to foreign investors for the exploitation of natural resources. In that respect, some of the most well-known early investment disputes concerned the nationalisation of energy exploitation agreements in the Middle East and North Africa.¹⁵⁵ International law does not prohibit the expropriation or nationalisation of the property of foreign investors. On the contrary, the privilege of the host State to expropriate investments in its territory is an expression of sovereignty.¹⁵⁶ States have the right to regain control over the exploitation of their natural resources for their economic development.¹⁵⁷ However, IIAs impose certain conditions on the lawful exercise of the right to expropriate, including its exercise

152 B Simma, and T Kill ‘Harmonizing Investment Protection and International Human Rights: First Steps Towards a Methodology’, in Binder, Kriebaum, Reinisch and Wittich (2009) *supra* n. 124, 704, Ghouri (2015) *supra* n. 85, 115-116.

153 ICJ, *Case Concerning the Right of Passage over Indian Territory (Portugal v India)*, Preliminary Objections, 1957, 142 where the Court upheld that: “it is a rule of interpretation that a text emanating from a government must, in principle, be interpreted as producing and as intended to produce effects in accordance with existing law and not in violation of it”. See also, Simma and Kill (2009) *supra* n. 152, 686-691.

154 Prislán (2013) *supra* n. 78, 474, ILC Report on Fragmentation (2006) *supra* n. 48, para 412, McLachlan (2005) *supra* n. 101, 286.

155 *In the matter of an arbitration between the Government of the State of Kuwait and the American Independent Oil Company (Aminoil)*, 1982, I.L.M 976, *Dispute Between Texaco Overseas Petroleum Company/ California Asiatic Oil Company and the Government of the Libyan Arab Republic and Others*, Award of 9 January 1977, I.L.M 1 1978.

156 UN GA Resolution 1803, *supra* n. 12, article 4.

157 Schrijver (1997) *supra* n. 30, 363.

for a public purpose, in a non-discriminatory manner, following due process and accompanied by the payment of prompt, adequate and effective compensation.¹⁵⁸

Provisions for the protection of investments against expropriation usually cover both “direct” and “indirect”, “creeping”¹⁵⁹ or “regulatory” expropriation.¹⁶⁰ Indirect expropriation refers to regulatory measures, which have effects equivalent to a *de facto* taking of the investment either by depriving the investor, partly or in whole, of its investment or depriving the investment, partly or in whole, of its value.¹⁶¹ Such measures must, individually or cumulatively, severely interfere with the essence of the property of foreign investors to qualify as expropriation. According to the *Madimoil v Albania* award

“in its literal translation, expropriation describes a specific effect on property itself and not a damage inflicted to property. The effect can be a direct taking as it can be an indirect deprivation of one or several of its essential characteristics. These are traditionally defined by its use and enjoyment, control and possession, and disposal or alienation. If one of these attributes is affected, the resulting loss of value and/or benefit may lead to a claim for expropriation.”¹⁶²

Although direct expropriation has become rare, the risk of indirect expropriation is still substantial for investments in the exploitation of marine energy resources.¹⁶³ In the context of such investments, environmental measures imposed by the host State, depending on the level of their stringency, may interfere with the investor’s property and deprive the investment of its value.¹⁶⁴ For instance, individual or cumulative environmental measures restricting offshore energy activities near protected areas for the preservation of the marine environment could result in terminating the

158 For instance, article 13(1) of the ECT provides that: “*Investments of Investors of a Contracting Party in the Area of any other Contracted Party shall not be nationalized, expropriated or subjected to a measure or measures having effect equivalent to nationalization or expropriation (hereinafter referred to as Expropriation) except where such Expropriation is: (a) for a purpose which is in the public interest; (b) not discriminatory; (c) carried out under due process of law; and (d) accompanied by the payment of prompt, adequate and effective compensation.*”

159 Despite the often inconsistent formulation of investment disciplines, it is argued that creeping expropriation mostly refers to a series of State measures whose effects cumulatively are equivalent to expropriation, see Krajewski (2012) *supra* n. 49, 355.

160 R Dolzer, and C Schreuer, *Principles of International Investment Law* (Oxford University Press, 2008) 90-91.

161 Coop and Seif (2018) *supra* n. 27, 225.

162 ICSID, *Madimoil Jetoil Greek Petroleum Products Société Anonyme SA v Republic of Albania*, ICSID Case No ARB/11/24, Award of 30 March 2015, para 569.

163 F Baetens (2010) ‘Foreign Investment Law and Climate Change: Legal Conflicts Arising from Implementing the Kyoto Protocol Through Private Investment’, *Sustainable Development Law on Climate Change Legal Working Paper Series*, available online at: <http://www.idlo.org/english/publications/Pages/Details.aspx?ItemsID=235>, 12-13, C Brewer (2004) ‘Case Report: S.D. Meyers Inc v Canada’, *American Journal of International Law*, 344.

164 As was illustrated by the recent awards in the renewable energy cases against Spain, investment tribunals have interpreted quite strictly the requirements for qualifying a measure as indirect expropriation. For example, in the *Charranne v Spain* award, the tribunal held that while the modifications of the feed-in tariffs framework had serious economic and financial consequences, the measures “were not of such significance as to destroy the value of the investment” and therefore did not have an effect equivalent to expropriation, *Charanne BV & Construction Investments SARL v Kingdom of Spain*, SCC Case No 062/2012, Final Award of 21 January 2016, para 466. See also *Isolux Infrastructure Netherlands BV v Kingdom of Spain*, SCC Case No 153/2013, Award of 12 July 2016, para 868.

operation of offshore installations. Investment disputes have demonstrated that the discussion is not merely of theoretical interest. In the case of *Windstream v Canada*, an American investor, who invested in one of the world's largest offshore wind parks in Lake Ontario after having been incentivised with a feed-in tariff agreement,¹⁶⁵ claimed that a subsequent moratorium imposed by the Government of Ontario on offshore wind projects amounted to a breach of the indirect expropriation standard under NAFTA.¹⁶⁶ Specifically, the investor argued that the moratorium was an unlawful indirect expropriation of its investment because it did not serve a public purpose. *Inter alia*, he claimed that in the absence of scientific certainty regarding the environmental impacts of the wind farm, the moratorium on wind farms in Lake Ontario was arbitrary. The investor also alleged that the challenged measure was discriminatory because it did not affect other energy-producing holders of feed-in tariff agreements in the same manner.¹⁶⁷ With regard to the expropriation claim, the tribunal did not examine whether environmental obligations and in particular the application of the precautionary principle, could have an impact on the standard of protection against expropriation under NAFTA because it concluded that the investor was not substantially deprived of his property by the moratorium.¹⁶⁸

Due to the vague formulation of the relevant provisions in IIAs, the precise normative contours of the standard of protection against indirect expropriation remain unclear and are a matter of dispute in several investment arbitrations.¹⁶⁹ Even though there is no binding *stare decisis* of the awards rendered by investment tribunals, their interpretations of common investment standards are considered quasi-authoritative and, to a certain extent, shape the implementation of investment obligations by creating an expectation that similar standards under other IIAs will be interpreted and applied consistently.¹⁷⁰ In that respect, this sub-section examines how international marine environmental obligations, insofar as they require States to take regulatory measures which might impinge upon the property of offshore energy investments, can have a normative impact on the protection from expropriation, in the light of the jurisprudence of investment tribunals.

As already noted, the first condition for an expropriation to be considered as lawful according to the standard under most IIAs is that a public purpose must motivate the taking, or the equivalent to the taking regulatory measures. For example, environmental measures adopted for the protection of the marine environment could

165 A feed-in tariff agreement offers the investors guaranteed electricity purchase prices, usually higher than market rates, and guaranteed access to the electricity grid for a long-term period, see M Wilke (2011) 'Feed-in Tariffs for Renewable Energy and WTO Subsidy Rules: An Initial Legal Review', ICTSD Programme on Trade and Environment; *Trade and Sustainable Energy Series, Issue Paper No. 4*, available online at: <https://www.ictsd.org/sites/default/files/downloads/2011/11/feed-in-tariffs-for-renewable-energy-and-wto-subsidy-rules.pdf>.

166 *Windstream Energy LLC v Government of Canada*, PCA Case No 2013-22, Award of 27 September 2016, para 235 ff.

167 *Ibid*, paras 242-247.

168 *Ibid*, para 291.

169 Firger, Gerrard (2014) *supra* n. 81, 243.

170 S Schill, 'International Investment Law and Comparative Public Law – An Introduction' in S Schill (ed) *International Investment Law and Comparative Public Law* (Oxford University Press, 2010) 18, A Reinisch (2008) 'Investment Arbitration – The Role of Precedent in ICSID Arbitration', *Austrian Arbitration Yearbook*, 498-499.

qualify as undertaken for a public purpose. In that vein, the arbitral tribunal in the *Santa Elena v Costa Rica* award held that

“international law permits the Government of Costa Rica to expropriate foreign-owned property within its territory for a public purpose and against the prompt payment of adequate and effective compensation and that...an expropriation or taking for environmental reasons may be classified as a taking for a public purpose, and thus may be legitimate”.¹⁷¹

Nonetheless, the adoption of environmental measures, which bear an effect equivalent to an expropriation of the investment, could also be used by the State to advance protectionism instead of genuine environmental objectives. On that account, investment tribunals have, in some instances, not accepted that the challenged measures were genuinely adopted to promote environmental protection because they found that the measures in question were a sort of disguise for political purposes.¹⁷²

International obligations relating to the protection of the marine environment can legitimise the adoption of domestic environmental measures¹⁷³ and, thus, serve as proof regarding the genuine intent underlying those measures. In the *Chemtura v Canada* award, the tribunal rejected the investor’s claim that the measures taken by the Canadian Government (especially the conduct of a particular review regarding the environmental impact of lindane-based pesticides by the environmental agency) did not pursue a genuine environmental objective. The tribunal’s conclusion relied on the argument that the contested measures were induced by Canada’s obligations under the Aarhus Protocol on Persistent Organic Pollutants to the Convention on Long-Range Transboundary Air Pollution.¹⁷⁴ Notably, the tribunal considered that lindane was listed in 2009 as a persistent organic pollutant under the Aarhus Protocol and Canada had relevantly undertaken an international commitment to reviewing its use.¹⁷⁵ It stressed that “*the evidence on the record does not show bad faith or disingenuous conduct on the part of Canada. Quite the contrary, it shows that the Special Review was undertaken by the PMRA in pursuance of its mandate and as a result of Canada’s international obligations*”.¹⁷⁶

Similarly, in the *SPP v Egypt* award, the tribunal referred to the UNESCO Convention on the protection of the world cultural and natural heritage to assess the legality of the cancellation of a tourist development project, which was in proximity to a site in the meantime designated as protected under the UNESCO Convention. In the tribunal’s view, “*the right was exercised for a public purpose, namely, the preservation and protection of antiquities in the area*”.¹⁷⁷ Following the approach of the *Chemtura* and *SPP* awards, the *Philip Morris v Uruguay* award¹⁷⁸ reinforced the argument that international obligations of the host State can be a crucial factor in

171 *Santa Elena v Costa Rica*, *supra* n. 91, para 71.

172 Wälde and Kolo (2001) *supra* n. 15, 837-839.

173 Viñuales (2012) *supra* n. 68, 12.

174 *Chemtura Corporation (formerly Crompton Corporation) v Government of Canada*, Award of 2 August 2010, paras 139-141.

175 *Ibid*, para 136.

176 *Ibid*, para 138.

177 ICSID, *Southern Pacific Properties (Middle East) Ltd v Arab Republic of Egypt*, ICSID Case No ARB/84/3, Award of 20 May 1992, para 158.

178 ICSID, *Philip Morris Brands SARI, Philip Morris Products SA and Abal Hermanos SA v Oriental Republic of Uruguay*, ICSID Case No ARB/10/7, Award of 8 July 2016.

evaluating the legality of actions taken by the State when a public purpose motivates them.¹⁷⁹ The tribunals reasoning relied heavily on the obligations of Uruguay under the Framework Convention on Tobacco Control¹⁸⁰ and the relevant scientific findings by the World Health Organization as proof regarding the legitimate public purpose of the challenged plain packaging scheme for tobacco products imposed by Uruguay.¹⁸¹ The stance of arbitral tribunals shows that, by analogy, marine environmental obligations can be relevant at least in classifying the expropriation of an investment as lawful, in the sense that it is conducted for legitimate public reasons and is not a disguise for any protectionist intent or other political purposes.¹⁸² While it might be challenging to causally link the domestic implementation measures with the environmental obligations of the host State, the reliance on such obligations should at least create a rebuttable presumption that the measures serve a legitimate public purpose.

It is essential to clarify that the host State must pay due compensation to the investor for the deprivation of the investment even in cases of lawful direct or indirect expropriation. That was the reasoning of the tribunal in the *Santa Elena v Costa Rica* case, which is well known for adopting the “sole-effects doctrine” regarding the standard of expropriation.¹⁸³ According to that perspective, the purpose underlying the expropriation is not relevant and does not alter the obligation of the State to pay compensation, since the only factor that matters is the effects on the investor’s property.¹⁸⁴ In the tribunal’s view, “*the purpose of protecting the environment for which the Property was taken does not alter the legal character of the taking for which adequate compensation must be paid. The international source of the obligation to protect the environment makes no difference*”.¹⁸⁵ Having reached this conclusion, the tribunal explicitly noted that it was not necessary “*to analyze the detailed evidence submitted regarding what Respondent refers to as its international legal obligation to preserve the unique ecological site that is the Santa Elena Property*”.¹⁸⁶ Remarkably,

179 C Foster (2017) ‘Respecting Regulatory Measures: Arbitral Method and Reasoning in Philip Morris v Uruguay Tobacco Plain Packaging Case’, *Review of European, Comparative and International Environmental Law*, 288-289.

180 Articles 11(1)(a) and 13(4)(a) oblige parties to the FCTC to eliminate false, misleading, deceptive or other packaging, labelling, advertising and promotion likely to create an erroneous impression about the characteristics and health effects, while article 11(1)(b) prescribes that health warnings on packages should cover at least 50 per cent or more of principal display areas.

181 *Philip Morris v Uruguay*, *supra* n. 178, paras 395-396.

182 See *Tecmed v Mexico* award, where the tribunal had concluded that the measure challenged by the investor had been adopted for merely political reasons, ICSID, *Tecnicas Medioambientales Tecmed SA v United Mexican States*, ICSID Case No ARB/00/2, Award of 29 May 2003, para 128.

183 M Paporinskis (2011) ‘Regulatory Expropriation and Sustainable Development’ in Cordonier-Segger, Gehring and Newcombe (eds) *supra* n. 74, 305-312.

184 The case concerned the amount of compensation owed by Costa Rica for the expropriation of the investor’s property, which was nationalised by the issuance of an administrative decree for the protection of biodiversity.

185 *Santa Elena v Costa Rica*, *supra* n. 91, para 71.

186 *Ibid.*

the tribunal flatly refused to consider the environmental obligations of Costa Rica,¹⁸⁷ regarding them as irrelevant concerning the amount of compensation due.¹⁸⁸

However, these sweeping statements of the *Santa Elena* award, which were subsequently relied upon in the *Tecmed v Mexico* award,¹⁸⁹ do not seem to reflect the view generally adopted by investment tribunals in more recent cases.¹⁹⁰ The relevance of this award as a precedent for the resolution of future disputes, is further limited if one considers that the dispute concerned a direct expropriation of the investor's property based on a decree and that Costa Rica did not question its obligation under international law to pay compensation for that expropriation, but only the amount of compensation that was due to the investor.¹⁹¹ Notably, the IIA in question did not contain any provisions relating to exceptions for environmental regulation.¹⁹² However, the particular wording of the IIA cannot justify the failure of the tribunal to interpret (or at least engage with the argument that it must interpret) its provisions taking into account the relevant environmental obligations of the host State according to article 31(3)(c) of the VCLT, since the respondent State had raised that argument.

Since 2000, there has been a consistent trend in favour of differentiating between regulatory measures (often relating to environmental protection) in the exercise of the host State's police powers and indirect expropriation both in arbitral awards¹⁹³ and specific provisions under IIAs.¹⁹⁴ According to the police powers principle (or doctrine), the good faith exercise of police powers by the host State in matters such as the maintenance of public order, health or morality, excludes compensation even when it causes economic damage to an investor and, accordingly, measures

187 Concerning the environmental obligations of Costa Rica, the tribunal found that “*expropriatory environmental measures – no matter how laudable and beneficial to society as a whole – are, in this respect, similar to any other expropriatory measures that a State may take in order to implement its policies: where property is expropriated, even for environmental purposes, whether domestic or international, the State’s obligation to pay compensation remains*”, *ibid*, para 72.

188 Costa Rica had invoked numerous environmental obligations under the Western Hemisphere Convention, the World Heritage Convention, the Ramsar Convention, the Convention on Biological Diversity and the Central American Regional Convention for the Management and Conservation of the Natural Forest Ecosystems and the Development of Forest Plantations, see C Brower, and J Wong, ‘General Valuation Principles: The Case of Santa Elena’ in T Weiler (ed) *International Investment Law and Arbitration: Leading Cases from the ICSID, NFAT, Bilateral Treaties and Customary International Law* (Cameron May, 2005).

189 *Tecmed v Mexico*, *supra* n. 182, para 121.

190 Hirsch (2006) *supra* n. 75, 20, Firger and Gerrard (2014) *supra* n. 81, 244-245.

191 Brower and Wong (2005) *supra* n. 188, 745-775.

192 L Boisson de Chazournes (2016) ‘Environmental Protection and Investment Arbitration: Yin and Yang?’ *Anuario Colombiano de Derecho Internacional*, 386.

193 In the *Saluka v Czech Republic* award, the tribunal notes that: “*It is now established in international law that States are not liable to pay compensation to a foreign investor, when, in the normal exercise of their regulatory powers, they adopt in a non-discriminatory manner bona fide regulation that are aimed to the general welfare*”. According to its view “*the principle that the State adopts general regulations that are commonly accepted as within the police powers of States forms part of customary international law today*”, *supra* n. 107, paras 255, 260, 262.

194 See, for instance, the 2004 and 2012 US Model BIT provisions on expropriation: “*Except in rare circumstances, non-discriminatory regulatory actions by a Party that are designed and applied to protect legitimate public welfare objectives, such as public health, safety, and the environment, do not constitute indirect expropriation*”. Similar provisions are included in several IIAs, like the Canada Model BIT, and the EU-Canada Comprehensive Economic and Trade Agreement, see CETA Annex 8-A, Expropriation, Article 3, and also EU Singapore Free Trade Agreement, Annex 9-A, Expropriation.

taken for such purpose should not be considered as expropriatory.¹⁹⁵ Therefore, when it comes to indirect expropriation, in the light of the police powers doctrine, marine environmental obligations can be a significant factor to be considered in distinguishing between measures that constitute compensable indirect expropriation and non-compensable legitimate environmental regulations, even though they affect the economic value of investments.¹⁹⁶ What separates indirect expropriation from regulation under the police powers of the State appears to be “*the degree of interference with the property right, the character of governmental measures, i.e. the purpose and the context of the governmental measure, and the interference with reasonable and investment-backed expectations*”.¹⁹⁷ Environmental regulations, which are generally applicable, in a non-discriminatory manner for a public purpose and following due process, are usually not considered as indirect expropriations by investment tribunals given the police powers doctrine¹⁹⁸ unless the State had made specific commitments that it would refrain from such regulations.¹⁹⁹

More importantly, the tribunal in the *Chemtura v Canada* case accepted that not only environmental measures of general application but also targeted measures affecting specifically an investor could be justified under the police powers doctrine, thus absolving the State from any liability for the economic damage suffered by the investor because of the measures.²⁰⁰ As already discussed above, the tribunal justified the challenged review of lindane as lawful because it correlated with Canada’s environmental obligations under the Aarhus Protocol.²⁰¹ In the same vein, the *Philip*

195 “*The principle that the State’s exercise of its sovereign powers within the framework of its police power may cause economic damage to those subject to its powers as administrator without entitling them any compensation is undisputable*”, *Teched v Mexico*, *supra* n. 182 para 119. See also, *Philip Morris v Uruguay*, *supra* n. 178, para 295.

196 C Beharry, and M Juritzky (2015) ‘Going Green: Managing the Environment Through International Investment Arbitration’, *American University International Law Review*, 398.

197 OECD, ‘Indirect Expropriation and the Right to Regulate in International Investment Law’, *Working Paper No 2004/4*, available online at: https://www.oecd.org/daf/inv/investment-policy/WP-2004_4.pdf, 10.

198 See for example, the *Methanex* case, where California’s ban on the sale and use of the gasoline additive methyl tertiary-butyl ether was justified on the environmental concerns regarding its risk to groundwater and drinking water. The tribunal held that “*the California ban was made for a public purpose, was non-discriminatory and was accomplished with due process. Hence, Methanex’s central claim under Article 1101(1) of expropriation under one of the three forms of action in that provision fails. From the standpoint of international law, the California ban was a lawful regulation and not an expropriation*”, *Methanex v United States*, Case No ARB/98/3, Award of 3 August 2005, Part IV, Chapter IV, para 15.

199 “*A non-discriminatory regulation for a public purpose, which is enacted in accordance with due process and, which affects, inter alios, a foreign investor or investment is not deemed expropriatory and compensable*”, *Methanex v United States*, Case No ARB/98/3, Award (3 August 2005), Part IV, ch D, para 7. Similarly, it has been upheld that “*the principle that a State does not commit an expropriation and is thus not liable to pay compensation to a dispossessed alien investor when it adopts general regulations that are commonly accepted within the police powers of States forms part of customary law today*”, *Saluka Investments BV v the Czech Republic*, *supra* n. 107, para 262.

200 “*The Tribunal considers in any event that the measures challenged by the Claimant constituted a valid exercise of the Respondent’s police powers. As discussed in detail in connection with Article 1105 of NAFTA, the PMRA took measures within its mandate, in a non-discriminatory manner, motivated by the increasing awareness of the dangers presented by lindane for human health and the environment. A measure adopted under such circumstances is a valid exercise of the State’s police powers and, as a result, does not constitute expropriation*”, *Chemtura v Canada*, *supra* n.174, para 266.

201 *Supra* n. 175 and accompanying text.

Morris award contains an extensive *obiter dictum*, in which the tribunal engages with the parties' debate on whether the non-investment international obligations of Uruguay are meaningful in identifying whether the challenged measures fall within the police powers of the State and, therefore, do not qualify as expropriation.²⁰² After analysing the relevant international obligations of Uruguay, the tribunal concluded that “*the challenged measures were taken with a view to protecting public health in fulfilment of its national and international obligations*”, and therefore they constituted a valid exercise of the police powers of the State, which excludes their qualification as expropriation.²⁰³

Thus, considering the tribunals' reasoning, domestic measures adopted in implementation of international obligations for the protection of the marine environment against risks from offshore energy activities would, in most cases, be considered as legitimate regulation within the police powers of the State and would not qualify as indirect expropriation. Those cases provide an apt illustration of the potential impact of substantive obligations under marine environmental law on the standards of investment protection²⁰⁴ since the former can expressly be relied upon to justify environmental regulation. Consequently, environmental obligations can limit the scope of protection accorded by the provisions on protection against expropriation, through narrowing down the cases where investors can claim compensation for regulatory measures that might have an economic impact on their investments. In other words, through the means of interpretation, the international environmental obligations of States can give shape to and clarify the broad and somewhat indeterminate protection offered by expropriation-related investment standards.

2.2.2. Fair and equitable treatment (FET) in the light of marine environmental obligations

The importance of such normative interactions for the clarification of the normative content and the implementation of investment protection standards becomes evident in the case of FET. The nature of the FET standard makes it conducive to systemic interpretation because it is a flexible and vague concept.²⁰⁵ Characteristically, the FET standard has been described as a “sophists'” norm,²⁰⁶ in the sense that it does not provide a hard and fast rule, but instead it requires balancing of multiple factors at the stage of its implementation, allowing broad discretion to the interpreter of the rule. According to the FET standard, host States must encourage and create stable, equitable, favourable and transparent conditions for foreign investments.²⁰⁷ Even

202 *Philip Morris v Uruguay*, *supra* n. 178, paras 287-307. The tribunal could have avoided the analysis regarding the police powers doctrine and the expropriatory nature of the regulations by Uruguay, as it had already reached the conclusion that the interference with the investor's property was not so severe as to be considered indirect expropriation.

203 *Ibid*, paras 306-307.

204 K Nowrot (2014) ‘How to Include Environmental Protection, Human Rights and Sustainability in International Investment Law?’, *The Journal of World Investment and Trade*, 628.

205 E De Brabandere (2015) ‘Host States’ Due Diligence Obligations in International Investment Law’, *Syracuse Journal of International Law and Commerce*, 347.

206 R Klager (2010) ‘Fair and Equitable Treatment: A Look at the Theoretical Underpinnings of Legitimacy and Fairness’, *Journal of World Investment and Trade*, 452.

207 See for instance, article 10(1) of the ECT.

though most IIAs do not precisely define its content,²⁰⁸ the FET standard is commonly regarded as an obligation of conduct, which allegedly originates from the customary rule on the minimum standard of protection of aliens.²⁰⁹ Confirming the nature of the FET standard as an obligation of conduct, the tribunal in the *Lauder v Czech Republic* award noted that “*fair and equitable treatment is related to the traditional standard of due diligence*”²¹⁰

Due to its fluid nature, the content of the obligation cannot be defined precisely *a priori*, but it depends heavily on the facts of the case²¹¹ as well as on other relevant international obligations of the host State. The Tribunal in *AAPL v Sri Lanka* stated that due diligence “*is nothing more nor less than the reasonable measures of prevention which a well-administered government could be expected to exercise under similar circumstances*”²¹² In this context, environmental rules can provide an objective standard to measure the “reasonableness” of the measures adopted by the host State. Indeed, the tribunal in the *Total v Argentina* award stressed the need to consider other applicable rules of international law when interpreting the FET standard.²¹³ According to that award,

“in order to elucidate the content of the [fair and equitable] treatment required by article 3 in conformity with international law, a tribunal is directed to look not just to the BIT in isolation or the case-law of other arbitral tribunals in investment disputes interpreting and applying similarly worded investment protection treaties, but rather to the content of international law more generally. The Tribunal will, therefore, proceed, to further interpret the ‘fair and equitable’ treatment standard also looking at general principles and public international law in a non-BIT context”²¹⁴

Although the content of the FET standard has been a thorny issue of interpretation, it is generally accepted by the literature and by investment tribunals that the protection of legitimate expectations of the foreign investor is intrinsically connected to the FET standard, as are the obligations of due process, transparency, stability, predictability, good faith and freedom from coercion and harassment.²¹⁵ According to the *Waste Management* award,

208 See however the third generation of investment agreements described below, section 4.

209 A de Nanteul (2018) ‘Due Diligence et Investissements Etrangers’, in *SDI- Journée Franco-Italienne Du Mans*, 99-100. It is noteworthy that the connection between FET and the minimum standard of protection under customary international law has been contested by some arbitral tribunals, which opined that the FET is an autonomous standard of investment protection, see *Saluka v Czech Republic*, *supra* n. 107, para 309.

210 *Lauder v Czech Republic* (UNCITRAL) Award of 3 September 2001, para 292. Similarly, arbitrator Pedro Nikken argued in his Separate Opinion in the *Suez v Barcelona* case that “*regardless of what is considered the autonomy of fair and equitable treatment with respect to the minimum standard, fair and equitable treatment represents the degree of due diligence that the States Parties to the BIT mutually pledged to observe with respect to investments from nationals of both States*”, ICSID, Separate Opinion of Arbitrator Pedro Nikken, *Suez Sociedad General de Aguas de Barcelona SA v Argentine Republic*, ICSID Case No ARB/03/19 Award of 30 July 2010, para 19.

211 Mbengue and Raju (2014) *supra* n. 3, 185.

212 *AAPL v Sri Lanka*, *supra* n. 44, para 77.

213 ICSID, *Total SA v Argentina*, ICSID No ARB/04/1, Award on Liability of 27 December 2010, para 126-127.

214 Firger and Gerrard (2014) *supra* n. 81, 248-249.

215 De Brabandere (2015) *supra* n. 205, 347, Dolzer and Schereur (2008) *supra* n. 160, 119.

“the minimum standard of treatment of fair and equitable treatment is infringed by conduct attributable to the State and harmful to the claimant if the conduct is arbitrary, grossly unfair, unjust or idiosyncratic, is discriminatory or exposes the claimant to sectional or racial prejudice, or involves a lack of due process leading to an outcome which offends judicial propriety ... In applying this standard, it is relevant that the treatment is in breach of representations made by the host State which were reasonably relied on by the claimant”.²¹⁶

To determine whether regulatory measures constitute a breach of the FET standard, tribunals have often considered, *inter alia*, the purpose and context of the challenged measures.²¹⁷ Regarding this element of the FET protection, environmental obligations can support the public purpose underpinning the regulatory measures and serve as a benchmark against which to evaluate whether the measures were reasonable and appropriate in achieving the environmental objectives.²¹⁸ An example is provided by the case of *Electrabel v Hungary* concerning the implementation of EU law obligations in domestic law, which led to the early termination of a power production agreement (PPA) with the foreign investor.²¹⁹ In particular, the EU Commission decided that the PPA signed between Hungary and the investor consisted of illegal state aid under EU competition law and for that reason had to be terminated.²²⁰ *Inter alia*, the investor challenged the early termination of the PPA as a breach of the FET standard under the ECT. The tribunal accepted that the relevant domestic measure conformed with an obligation under EU law and, thus, there was no breach of the FET standard.²²¹ Importantly, it declared that since the termination of the PPA was a strict requirement under EU secondary law, the proportionality of the measure was not contestable.²²² In an *obiter dictum*, the tribunal upheld that in the event of a conflict between the ECT and EU law, compliance with EU law would operate as a defence against an ECT violation.²²³ In the words of the tribunal,

“the acts of the Respondent implementing such a binding decision under EU law have to be taken into account in the evaluation of its conduct under the ECT... the ECT does not protect the claimant, as against the Respondent, from the enforcement by the Respondent of a binding decision of the European Commission under the EU law”.²²⁴

However, this reasoning has been challenged by the *obiter dictum* in the subsequent *RREEF Infrastructure Ltd v Spain* award, where the tribunal squarely disagreed and

216 ICSID, *Waste Management v Mexico*, ICSID Case No ARB/00/3, Award of 30 April 2004, para 98.

217 *Madimoi v Albania*, *supra* n. 162, para 791.

218 In the words of the tribunal in the *Philip Morris* award “the FCTC [Framework Convention on Tobacco Control] is a point of reference on the basis of which to determine the reasonableness of the two [challenged] measures”, *supra* n. 178, para 401.

219 ICSID, *Electrabel SA v Hungary*, ICSID Case No ARB/07/19, Award of 25 November 2015.

220 *Ibid*, paras 2.18-2.24.

221 *Ibid*, para 6.76.

222 *Ibid*, para 6.86.

223 G Bermann, ‘ECT and European Union Law’ in Scherer (2018) *supra* n. 27, 214-215. It is, however, stressed that the tribunal did not find any actual conflict between the ECT and EU law and it only proceeded to analyse what would happen in the case where such a conflict arose, see para 4.167-4.189.

224 *Electrabel v Hungary*, *supra* n. 219, para 4.169.

found that “EU law does not and cannot trump public international law”.²²⁵ Even though scholars have argued that this position might prevail in the long-run,²²⁶ in the author’s view, the relevant EU law duties should be regarded as being on the same level with duties under the ECT, and therefore, should be interpreted harmoniously.

The *Philip Morris v Uruguay* award offers another vivid illustration of the role played by non-investment obligations of States in determining the regulatory purpose of domestic measures for the application of the FET standard. At the same time, it highlights the relevance of non-binding instruments by treaty bodies in providing scientific and technical evidence regarding the appropriateness of domestic measures taken in furtherance of the obligations under the respective international agreements.²²⁷ The tribunal rejected the investor’s claim that the challenged measures were arbitrary (and therefore breached the FET standard) because they had aimed to protect public health and were proportionate in the sense that they were potentially effective to achieve that objective.²²⁸ With regard to the public purpose, the tribunal considered that the measures were taken in implementation of Uruguay’s obligations under the FCTC, which the tribunal characterised as a treaty containing human rights obligations on the right to health.²²⁹

Interestingly, concerning the reasonableness and effectiveness of the challenged measures in relation to their objective, the tribunal relied considerably upon the non-binding guidelines on the implementation of article 11 FCTC by the CoP to the Convention, as well as on scientific evidence provided by the Secretariats of the World Health Organization (WHO) and the Pan American Health Organization (PAHO).²³⁰ In the view of the tribunal, Uruguay was not required to gather further scientific evidence or perform additional research to substantiate the reasonableness of the adopted measures.²³¹ Instead, considering the limited economic and technical resources of Uruguay, the tribunal decided that Uruguay justifiably and duly relied on its participation in the FCTC to obtain the scientific knowledge necessary to guide its implementation of the Convention in pursuit of protecting public health.²³² Furthermore, the tribunal considered that it was not necessary to decide whether the adopted measures had in practice achieved the results that were intended by the State,²³³ but it was sufficient to examine whether they were reasonable at the

225 ICSID, *RREEF Infrastructure Ltd & RREEF Pan European Infrastructure Two Lux Sarl v Kingdom of Spain*, ICSID Case No ARB/13/30, Decision on Jurisdiction of 6 June 2016, para 87. In that case the tribunal made the observation even though it did not find any inconsistency between the ECT and the EU law, therefore, there was no horizontal conflict, but rather a legitimacy conflict between the ECT and a domestic measure.

226 Bermann (2018) *supra* n. 223, 215. See also *Ioan Micula and others v Republic of Romania*, ICSID Case No ARB/05/20, Award of 11 December 2013, in which the tribunal upheld that the contested measures, even though allegedly conforming with EU state-aid rules, consisted of a breach of the FET standard under the BIT in question. In practice, the award has not been implemented, as the EU Commission has declared that any payment would consist of unlawful state aid, see EU Commission Decision 2014/3192 of 26 May 2014.

227 Foster (2017) *supra* n. 179, 293.

228 *Philip Morris v Uruguay*, *supra* n. 178, para 306.

229 *Ibid.*

230 *Ibid.*, para 391.

231 *Ibid.*, para 396.

232 *Ibid.*, para 393.

233 *Ibid.*, para 408.

time of their adoption.²³⁴ The tribunal also justified this conclusion as reflecting the appropriate level of deference owed to States under the “margin of appreciation”, recognising that States maintain discretion in the implementation of obligations of conduct, like the ones in question.²³⁵ Thus, in light of the scientific evidence by the relevant treaty bodies, the measures were regarded as a genuine attempt to implement obligations under the FCTC in good faith, and they were not disproportionate.²³⁶

Remarkably, the tribunal used non-binding guidelines as well as their interpretation by the public health experts to substantiate its conclusion that the FET standard was not breached because Uruguay reasonably expected that the recommended measures under these instruments could be sufficient regardless of the actual effectiveness of the measures.²³⁷ In essence, the tribunal examined whether Uruguay had exercised due diligence in complying with its obligation under the FCTC. Although the guidelines and scientific evidence by the WHO and HAPO were not binding, the fact that Uruguay followed their recommendations was evaluated by the tribunal as proof that it had demonstrated due diligence in choosing the appropriate measures to comply with the FCTC.

These observations can have significant implications with regard to the environmental regulation of offshore energy investments and the corresponding implementation of the FET standard. As discussed in chapter 3, the obligation to protect and preserve the marine environment against pollution from offshore energy generation activities leaves States some discretion in adopting the appropriate measures. In the light of the *Philip Morris* award, such an international obligation could not justify the adoption of particular environmental measures: the host State would further need to prove that the means chosen were, in fact, proportionate to achieve the objective of the international obligation. In that respect, subsequent normative developments, including both environmental obligations and non-binding instruments produced by the relevant treaty bodies and competent international organisations, can interact with and inform the normative content of the duty to protect the marine environment. These normative developments may specifically require, refer to or contemplate measures which are appropriate and necessary to achieve marine environmental protection. Considering the reasoning in the *Philip Morris* award, all these environmental rules and standards should be considered by the host State as interpretation guidelines for the implementation of its duty to protect the marine environment and constitute a reference point for evaluating the compliance of the host State with the FET standard.²³⁸ According to the tribunal's view, the adoption of such measures based on interpretative guidelines and scientific evidence provided by treaty bodies and international organisations serves as evidence that the State has exercised due diligence, and, therefore, they cannot be “*arbitrary, grossly unfair, unjust, discriminatory or disproportionate*”.²³⁹

234 *Ibid*, para 409.

235 *Ibid*, para 399.

236 *Ibid*, para 409-410.

237 J Alvarez (2018) ‘Reviewing the Use of Soft Law in Investment Arbitration’, *Public Law and Legal Theory Research Paper Series Working Paper No 18-46*, available online at: <https://ssrn.com/abstract=3258737>, 53-54.

238 Foster (2017) *supra* n. 179, 297.

239 *Philip Morris v Uruguay*, *supra* n. 178, para 410.

Interestingly, from a marine environmental protection perspective, the tribunal in the *Windstream v Canada* case tackled the question of whether the precautionary principle can justify the adoption of measures such as an indefinite moratorium, affecting offshore wind farm investments despite the lack of full scientific certainty regarding the environmental impacts of such projects.²⁴⁰ The investor claimed, *inter alia*, that the imposed moratorium had breached the FET standard as the lack of scientific evidence rendered it arbitrary. Although ultimately the tribunal found for the investor, the award can be read as having acknowledged tacitly that Canada justifiably relied on the precautionary principle in imposing the moratorium.²⁴¹ In particular, the tribunal considered that the moratorium was “*at least in part driven by a genuine policy concern that there was not sufficient scientific support for establishing an appropriate setback, or exclusion zone, for offshore wind projects*”.²⁴² While the award did not question that the precautionary principle could justify a temporary interference with the investment, it upheld that the inaction of the Government following the imposition of the moratorium amounted to a violation of the FET standard because “*the Government, on the whole, did relatively little to address the scientific uncertainty surrounding offshore wind that it had relied upon as the main publicly cited reason for the moratorium*”.²⁴³ Therefore, it was not the initial moratorium as a precautionary measure, but rather the Government’s subsequent failure to progress with scientific research and update its regulatory framework, leaving the investor in a legal limbo, which breached the FET standard.²⁴⁴ The reasoning implies that the precautionary principle would support temporary measures affecting investments, yet the host State must show diligence in taking all measures needed to bring clarity to the scientific and regulatory uncertainty.²⁴⁵ That conclusion is crucial for environmental measures, which might interfere with investments in offshore renewable energy generation. In the case where a host State gets into specific commitments and generates legitimate expectations for the establishments of such investments, it must strive to create a transparent regulatory framework in which these projects can operate.

The scope of protection of legitimate expectations of the foreign investor under the FET standard can also be significantly affected by the environmental obligations of the host State. Specifically, since the host State bears international obligations for the protection of the marine environment, foreign investors in offshore energy production should be aware of the (international) legal context in which their investments operate.²⁴⁶ For example, in the *Plama v Bulgaria* award, the investor complained that Bulgaria had amended the applicable environmental regulations

240 *Windstream Energy LLC v Government of Canada*, *supra* n. 166.

241 M Levine, ‘Investor-State Arbitration and Domestic Environmental Governance: Recent Developments in Canada’, in N Craik, C Jefferis, S Seck, and T Stephen (eds) *Global Environmental Change and Innovation in International Law* (Oxford University Press, 2018) 309, Foster (2017) *supra* n. 179, 290.

242 *Windstream v Canada*, *supra* n. 166, para 376.

243 *Ibid*, para 378.

244 In the words of the tribunal, the failure “*to take the necessary measures, including when necessary by way of directing the OPA [independent regulatory authority], within a reasonable period of time after the imposition of the moratorium to bring clarity to the regulatory uncertainty surrounding the status and the development of the Project constitutes a breach of Art. 1105(1) of NAFTA*”, *ibid*, para 380.

245 J Harrison (2017) ‘Significant International Environmental Law Cases 2016-17’, *Journal of Environmental Law*, 556.

246 PCA, *Antaris Solar GmbH v the Czech Republic*, Award of 2 May 2018, para 437.

in a manner that frustrated his legitimate expectations.²⁴⁷ In that case, the tribunal upheld that the investor should have been aware of the legal framework applicable in Bulgaria as well as of the foreseeable – at the time of the establishment of the investment – amendments in environmental regulations.²⁴⁸ In the *SPP v Egypt* case, the tribunal dismissed the claim that the host State had frustrated the legitimate expectation of the investors by declaring an area to be public for the protection of cultural heritage because investors should have taken notice of the host State's obligations under the World Heritage Convention. It went on to explain that, using international and national inventories, the investors should have been aware of the potential cultural and natural sensitivity of the areas where they planned to implement their activities. Therefore, if the investors decide to move on with their plans in such areas, the foreseeable measures adopted subsequently by the host State to protect those areas are considered a typical business risk and, therefore, are not protected under the legitimate expectations concept.²⁴⁹

In that spirit, it is arguable that foreign investors are reasonably expected to become aware of the legal framework and the associated potential risks for their investments beforehand. Understanding the existing legal obligations of the host State enables investors to infer the standard of environmental protection and the measures that can be adopted or amended by the host State during the life-cycle of their investment and, consequently, make informed decisions on whether to proceed with their plans. In this context, it would be reasonable of them to expect that environmental regulations concerning offshore energy projects are due to change and possibly become stricter as the environmental status of the oceans deteriorates and as environmental standards evolve in the light of scientific and technological developments. For instance, investors should be aware of the obligations of the host State to protect environmentally sensitive maritime areas under different environmental agreements and thus should choose the location of their investments accordingly, keeping in mind the business risks involved in potentially protected areas. For example, article 8 of the CBD, which requires States to establish protected areas, could be an objective factor in defining an investor's legitimate expectations.²⁵⁰ Investors cannot claim a breach of the FET standard arguing that their legitimate expectations have been frustrated when the host State adopts measures according to its international obligations on the protection of the marine environment, even broadly formulated ones.²⁵¹

The potential effect of international commitments on the legitimate expectations of foreign investors is further elucidated by the *Urbaser v Argentina* award,²⁵² which concerned emergency measures taken by Argentina affecting concessions for the

247 ICSID, *Plama Consortium Limited v Bulgaria*, ICSID Case No ARB/03/24, Award of 27 August 2008, para 200.

248 *Ibid.*, 220-221.

249 *SPP v Egypt*, *supra* n. 177, para 155.

250 M Fink, 'Protected Areas under the Convention on Biological Diversity in International Investment Law: Conflicts and Solutions', in F Baetens, and J Caiado (eds) *Frontiers in International Economic Law: Legal Tools to Confront Interdisciplinary Challenges* (Brill, 2014) 61.

251 J Viñuales, and M Langer (2011) 'Managing Conflicts between Environmental and Investment Norms in International Law', in Y Kerbrat, and S Maljean-Dubois (eds) *The Transformation of International Environmental Law* (Hart and Pedone, 2011) 187.

252 *Urbaser SA v Argentina*, *supra* n. 106.

supply of water and sewage services. In the view of the tribunal, the expectations of foreign investors should not be evaluated separately from the legal framework. Instead, they need to be examined within a broader “*legal environment also covering core interests of the host State, as protected by sources of law prevailing over the Contract, based on international and constitutional law*”.²⁵³ The award went a step further to embed the legitimate expectations of the investors within the international obligations of Argentina when it stated that Argentina’s obligation under human rights agreements to guarantee the right to water to its citizens was the legal framework within which the “reasonableness” of the investors’ expectations should be assessed.²⁵⁴ Consequently, the tribunal confirmed that the investors need to be aware of the host State’s international commitments. In light of that conclusion it is posited that, in the context of investment in offshore energy production, environmental obligations of the host State can have a normative impact on the evaluation of legitimate expectations of investors for the application of the FET standard.

2.2.3. *Most-favoured-nation and national treatment: the concept of the like circumstances as a gateway for international environmental law*

International environmental law can also find its way in influencing the implementation of investment disciplines through the interpretation and application of the prohibition of discrimination. These obligations do not create autonomous investment protection standards, in the sense that they do not create an obligation to a certain level of protection by the State.²⁵⁵ However, they purport to prohibit unlawful discriminatory treatment vis-à-vis domestic investors (national treatment) or other foreign investors (most-favoured-nation treatment, hereinafter MFN) in “like circumstances”.²⁵⁶ Therefore, both these standards of investment protection need a basis of comparison to determine whether certain measures are discriminatory. That basis of comparison is a variable which can be influenced by relevant environmental obligations. In the context of the MFN and national treatment standards, international environmental obligations can function as interpretative guidance for the test of “likeness” of the circumstances under which the compared investments operate.²⁵⁷

As explained in the context of the expropriation and FET protection standards, investment tribunals have found that measures adopted by host States in compliance with their international obligations pursue a legitimate public purpose.²⁵⁸ In that respect, the purpose of measures required by international obligations of the host State is not to arbitrarily discriminate against the investors that might be affected by

253 *Ibid.*, paras 619-621.

254 *Ibid.*, para 624.

255 Reinisch (2008) *supra* n. 56, 29, 59.

256 See articles 1102 (national treatment) and 1103 (MFN) of NAFTA, which explicitly refer to the “like circumstances” test.

257 R Pavoni, ‘Environmental Rights, Sustainable Development, and Investor-State Case Law: A Critical Appraisal’ in Dupuy, Petersmann and Francioni (2009) *supra* n. 111, 539.

258 Environmental obligations are not the only ones considered so far by tribunals to determine whether two investments are in like circumstances. In the *United Parcel Service v Canada* case, the tribunal accepted that the investor UPS and Canada Post were not in like circumstances, taking into account the Universal Postal Convention and the World Custom Organization Kyoto Convention. *United Parcel Service of America II v Government of Canada*, ICSID Case No. UNCT/02/1 Award of 24 May 2007, para 119-120.

them. Investors who are subject to measures induced by international obligations are not in “like circumstances” with foreign or local investors, who do not fall within the scope of application of those measures. That is because the potential differentiated treatment of the former category is justified by the pursuit of a legitimate public policy objective, such as the implementation of international environmental law obligations.²⁵⁹ For example, when the operation of an investment is incompatible with the requirements of an environmental obligation of the host State, its differentiated treatment in terms of environmental regulations compared with the ones applicable to other projects in the same sector which are potentially in competition with the affected investment, is not discriminatory. In that vein, in the *SD Mayers v Canada* case, Canada relied on its obligations under the Basel Convention on Hazardous Wastes to justify that its ban on the export of certain wastes was not a discriminatory measure in favour of domestic competitors.²⁶⁰ The tribunal noted that

“the interpretation of the phrase like circumstances in Article 1102 must take into account the general principles that emerge from the legal context of NAFTA, including both its concern with the environment and the need to avoid trade distortions that are not justified by environmental concerns. The assessment of like circumstances must also take into account circumstances that would justify governmental regulations that treat them differently in order to protect the public interest.”²⁶¹

The statement appears to call for the systemic interpretation of NAFTA in light of relevant environmental agreements to assess the notion of like circumstances.²⁶² Thus, the tribunal recognised that compliance with the Basel Convention is a matter of public interest which justifies the differential treatment between foreign and domestic investors.²⁶³

This approach to the application of the test of like circumstances was followed by the tribunal in the *Parkerings v Lithuania* award.²⁶⁴ The case concerned the termination of a project including the construction of a modern multi-storey car park in the Old Town of Vilnius in Lithuania, because of its potential cultural and environmental impact on the historic centre. The important factor was that the historical centre of Vilnius had been included in the UNESCO World Heritage List. Consequently, the location was subject to special legal restrictions to ensure its preservation and integrity, according to Lithuania’s obligations under the UNESCO Convention for the Protection of World Cultural and Natural Heritage. Following the termination of the project by the host State, the investor claimed that the MFN standard of the applicable BIT had been violated, because of the allegedly preferential treatment accorded to another foreign investor, who was licensed to proceed with the construction of parking facilities on a location close to the city’s Old Town. The tribunal decided for the respondent-State, considering that the two investments were not in like circumstances and that their different treatment was justified because the impact of the claimant’s project was bigger than that of its competitor. On that

259 Pavoni (2009) *supra* n. 257, 540.

260 *SD Myers Inc v Government of Canada* (UNCITRAL) Partial Award of 13 November 2000.

261 *Ibid*, para 250.

262 Viñuales (2012) *supra* n. 68, 11.4.1.

263 *SD Myers v Canada*, *supra* n. 260, para 255.

264 ICSID, *Parkerings-Compagniet AS v Lithuania*, ICSID Case No ARB/05/08, Award of 11 September 2007.

ground, the tribunal reasoned that “*the historical and archaeological preservation and environmental protection could be and in this case was a justification for the refusal of the project*”.²⁶⁵ Despite the similarities of the compared projects, the tribunal concluded that “*the differences in the size of the projects, as well as the significant extension of the latter [claimant’s project] into the Old Town near the Cathedral area, are important enough to determine that the two investors were not in like circumstances. ... Thus, the City of Vilnius did have legitimate grounds to distinguish between the two projects*”.²⁶⁶ Therefore, non-investment obligations of the host State played a crucial role in evaluating the likeness between the two compared investments. Even though the two projects had a comparable objective and location, the special protection granted to the Old Town in compliance with the UNESCO Convention justified their differential treatment.

The reasoning of the tribunal reveals the potential of international environmental obligations to influence the interpretation and implementation of investment protection standards.²⁶⁷ The potentially different regulation of offshore energy production investments by a host State could be justified given their different environmental impacts or their location in proximity to sensitive marine areas. For instance, an investment in offshore oil and gas exploitation can be subject to different environmental regulations from those applying to an investment in marine renewable energy generation, due to their diverse impacts on the marine environment. In that respect, in the *Windstream v Canada* case, the tribunal rejected the claimant’s argument that its offshore wind farm investment was discriminated against compared to the treatment accorded to a domestic company (TransCanada), which was awarded a contract to build a gas generation plant near Toronto. Even though they were both energy production investments, the tribunal ruled that the compared projects were not in like circumstances, as Windstream was the only investor which had been awarded a feed-in tariff agreement for offshore wind energy generation.²⁶⁸ However, that conclusion does not preclude the possibility that two offshore wind farms could be treated differently in the case where one of them was in proximity to a designated MPA required under environmental obligations of the host State. In such a situation, the investments cannot be considered as operating under like circumstances and, therefore, their differential treatment would not breach the national and MFN standards under IIAs.

2.3. Assessment of the quantum compensation for breaches of investment protection standards due to environmental measures induced by international obligations

Since the payment of monetary compensation to the investor who suffered damages is the most important remedy in investment disputes,²⁶⁹ it is necessary to examine whether environmental obligations can affect the determination of the quantum of compensation owed to the investor and play a role in the choice of the method

265 *Ibid*, para 392.

266 *Ibid*, para 396.

267 Pavoni (2009) *supra* n. 257.

268 *Windstream v Canada*, *supra* n. 166, para 414.

269 This is the case even though they can also award non-pecuniary remedies, such as specific performance. See, C Schreuer (2004) ‘Non-Pecuniary Remedies in ICSID Arbitration’, *Arbitration International*, 332.

of valuation in the case of an investment protection standard violation. Even if the measures amounting to that breach consist of legitimate measures adopted by the host State to comply with its environmental obligations, it is significant to determine who should bear the costs. Investment tribunals have so far adopted diverse positions in this regard.²⁷⁰

As a preliminary remark, it is noteworthy that rules applicable to the compensation for expropriation are well developed, as most of the IIAs explicitly provide that a lawful expropriation must be accompanied by prompt, adequate, and effective compensation, which is also called market or genuine value.²⁷¹ When the expropriation is lawful, the due compensation is typically the fair market value of the investment, while in case it is deemed unlawful, it covers the whole of the damage incurred by the investor.²⁷² Tribunals usually determine the quantum of compensation relying on elements of different methods of investment valuation, including market-based valuation, discounted cash flow, or book value. That grants them a certain margin of discretion in the calculation.²⁷³ Their discretion in determining the amount of compensation appears to be even broader when it comes to breaches of the FET standard because IIAs do not contain specific rules on the compensation owed in cases other than the expropriation. Even though tribunals have this leeway in calculating the amount of compensation concerning all other investment standard breaches, the width of their discretion is considerable when it comes to the FET standard, because it is by its nature a very fact-specific standard and requires the tribunal to weigh several different factors.²⁷⁴

In early investment awards up until 2000, tribunals had adopted the position that non-investment obligations of the host State could not be considered either for determining the breach of an investment protection standard or for calculating the amount of compensation owed to the investor. As mentioned above, the *Santa Elena v Costa Rica* award relying on the “sole effects doctrine” left no room for arguing that the international obligations to protect biodiversity could have any impact on the amount of compensation for the expropriation of an investor’s land.²⁷⁵ In the same spirit, but this time concerning an indirect expropriation, the tribunal in *Metaclad v Mexico* concluded that it was completely irrelevant to examine the environmental considerations behind the ecological decree that declared an area, for which previously the claimant had been awarded a construction permit for a waste disposal landfill, to be an ecological reserve. Therefore, regardless of the environmental reasons provided by Mexico, the tribunal considered that the measure was a fully compensable expropriation.²⁷⁶

270 L. Liberti (2007) ‘The Relevance of Non-Investment Treaty Obligations in the Assessment of Compensation’, *Transnational Dispute Management*, 3.

271 F. Balcerzak, ‘Determinations of Compensation in Investor-State Arbitrations: Is There a Place for Human Rights Arguments?’ in Baetens and Caiado (2014) *supra* n. 250, 139.

272 *Ibid*, 139-140.

273 T. Wälde, and B. Sabahi, ‘Compensation, Damages and Valuation’ in P. Muchlinski, F. Ortino, and C. Schreuer (eds) *The Oxford Handbook of International Investment Law* (Oxford University Press, 2008) 1070-1079.

274 Balcerzak (2014) *supra* n. 271, 140-141.

275 *Santa Elena v Costa Rica*, *supra* n. 91, para 71-72.

276 ICSID, *Metaclad Corp v United Mexican States*, ICSID Case No ARB/97/1, Award of 25 August 2000, para 109-111.

Investment tribunals have generally rejected the idea that non-investment international obligations can completely justify a violation of investment protection standards and, therefore, exonerate host States from their responsibility and liability under IIAs.²⁷⁷ For instance, in the *SAUR v Argentina* award, the tribunal held that obligations of the host State deriving from the right to water are compatible with investment protection standards, because

“the fundamental right to water and the right of the investor to benefit from the protection offered by the BIT operate on different levels: the concessionary company of a basic public service is in a situation of dependency on the public administration, which has special powers to guarantee its enjoyment by virtue of the priority of the fundamental right to water”.²⁷⁸

The tribunal failed to examine how the implementation of the human right to water could affect investment protection standards, by generally accepting that “*the exercise of these powers is not absolute and must be combined with respect for the rights and guarantees granted to the foreign investor under the BIT*”.²⁷⁹ In that respect, it concluded that if a host State decides to expropriate an investment, treat the investor unfairly or inequitably, or deny the promised protection or full security, the investor will be entitled to compensation.²⁸⁰ The reasoning of the tribunal seems to be based on the premise that the host State maintains discretion in the way it implements its non-investment obligations, and, thus, it can choose implementation measures that will not violate or will interfere as little as possible with investment protection standards.²⁸¹ In such cases, the host State can “implement away” the potential conflict between those competing rules. However, there are instances where the implementation of one of them will necessitate the adoption of measures, which are inescapably in breach of investment obligations.

Contrary to the above reasoning of the *SAUR v Argentina* award, another ICSID tribunal, in the *SPP v Egypt* case, attached considerable relevance to international obligations under the UNESCO Convention on World Cultural and Natural Heritage for the interpretation and implementation of standards of investment protection and the corresponding liability of the host State in the case of their violation.²⁸² The dispute concerned the cancellation by Egypt of the “Pyramids Oasis Project”, which consisted of the construction of large-scale touristic complexes and facilities in proximity to an area that was included in the World Heritage List following the licensing of the project. Egypt argued that its actions were induced and, for that reason, justified by its obligations under the UNESCO World Heritage Convention, which it had ratified

277 However, it seems that sometimes international environmental obligations are associated with the police powers doctrine, which is used to justify non-compensable environmental regulation, *supra* n. 195 and accompanying text.

278 ICSID, *SAUR v Argentine Republic*, ICSID Case No ARB/04/4, Decision of Jurisdiction and Liability of 6 June 2012, para 331.

279 *Ibid.*

280 *Ibid.*

281 In the *Biwater v Tanzania* case, the award supported the view that human rights considerations and the relevant NGO’s amici curiae submissions were relevant and useful in assessing the host State’s conduct. However, it did not clarify whether and to what extent they could condition the compliance by Tanzania with its duty to protect the investment, see *Biwater Gauff (Tanzania) Ltd v United Republic of Tanzania*, ICSID Case No ARB/05/22, Award of 24 July 2008, paras 355, 370 and 392.

282 *SPP v Egypt*, *supra* n. 177.

in 1974, more than a year before the approval of the project took place in 1976. The tribunal rejected the contention of Egypt that the decree, which declared lands on the project site to be public property in 1978, was a measure adopted in compliance with the WHC, because “it was only in 1979 after the Respondent nominated the pyramid fields and the World Heritage Committee accepted that nomination, that the relevant international obligations emanating from the Convention became binding on the Respondent”.²⁸³ Thus, in the tribunal’s view, Egypt had enhanced obligations to protect the natural and cultural integrity of that location only from the point when the World Heritage Committee had accepted the nomination of the site for the WHL. From that time on, “a hypothetical continuation of the claimant’s activities interfering with antiquities in the area could be considered as unlawful from the international law point of view”.²⁸⁴ Still, in light of the general duty to conserve and protect all culturally significant sites, the termination of the project in 1978 amounted to a lawful expropriation, in the sense that it took place for a legitimate public reason, and Egypt owed compensation to the investor.

Nonetheless, the tribunal recognised that, after the listing in 1979, the investor’s activities would have violated international law.²⁸⁵ Presumably, the tribunal would have reached a different conclusion regarding Egypt’s responsibility, if the termination of the project had taken place after the listing of the area on the WHL. The reasoning of the award implied that, under such circumstances, there would be a genuine conflict between the obligations under the WHC and the ones under the BIT, where the former could override the latter and exonerate the host State from liability. Even though the tribunal concluded that the UNESCO Convention did not absolve Egypt from its responsibility because of the time of the site’s listing in the WHL, it affected the quantum of compensation.²⁸⁶ The tribunal stressed that, for the assessment of the compensation, it considered that the project would not operate legally because its operation would violate the international obligations of Egypt from the time of inclusion of the area in the WHL.²⁸⁷ On that account, it rejected the “discounted cash flow” method of valuation suggested by the claimant.²⁸⁸ Moreover, the quantum of compensation was influenced by the premise that the investor had had to be aware of the international obligations of the host State relating to the protection of cultural heritage. Specifically, in the circumstances of the case, the investor was expected to know that implementing a project in that area involved risks, since it was foreseeable that the host State could adopt measures for the protection of antiquities under the UNESCO Convention.²⁸⁹ Consequently, the tribunal refused to grant *lucrum cessans* (loss of anticipated profit) as from the date of inclusion of the area in the WHL.²⁹⁰

The rationale of the *SPP v Egypt* award could serve as a useful precedent for future disputes, where the State invokes its environmental obligations as a defence to its liability for adopting measures found to be in breach of standards of investment

283 *Ibid*, para 100.

284 *Ibid*, para 154.

285 *Ibid*, para 191.

286 Pavoni (2009) *supra* n. 257, 536.

287 *SPP v Egypt*, *supra* n. 177, para 183.

288 *Ibid*, para 190.

289 L Liberti (2009) ‘The Relevance of Non-Investment Treaty Obligations in Assessing Compensation’ in Dupuy, Petersmann and Francioni (2009) *supra* n. 111, 563.

290 *SPP v Egypt*, *supra* n. 177, para 191.

protection. The pending case of *Rockhopper v Italy* might be a testing ground for that argument.²⁹¹ While the details of the dispute are still not publicly available,²⁹² Italy could rely on its environmental obligations to justify the imposition of the moratorium on energy exploitation activities in the Ombrina Mare field. Even in case of scientific uncertainty regarding the potential environmental impacts of offshore energy production activities in the area close to a sensitive marine area, Italy can justify the temporary imposition of such measures, as evidenced by the reasoning of the tribunal in the *Windstream v Canada* award. The tribunal might probably conclude that there was a breach of the FET standard, considering the specific commitments by the Italian authorities that they would grant a licence for the exploitation of energy resources to the investor.²⁹³ However, several different factors will need to be weighed by the tribunal to evaluate the compensation if a breach of the investment protection standards under the ECT were to be upheld. For instance, the challenged moratorium was initially imposed by the Italian Government in 2010 and then subsequently withdrawn in 2012. Therefore, the investor should have shown diligence in acquiring all the information regarding the potential risks or regulatory amendments that were foreseeable. In a case where the tribunal finds that the investor had not been diligent in that sense, it could also reduce the amount of compensation or even find that the damage is a result of the investor's failure to exercise due diligence and, thus, decline to award any compensation.²⁹⁴

2.4. The relevance of the nature of environmental obligations in resolving genuine normative conflicts with investment law obligations

In the *SPP v Egypt* case, the tribunal tacitly recognised that, in the event of a genuine conflict between the WHC and investment obligations, the former would override the latter, and that could affect the liability of the host State. In that regard, this sub-section investigates whether the “integral” or *erga omnes* nature²⁹⁵ of the duty to protect and preserve the marine environment under UNCLOS could play a decisive role when an interpreter has to resolve a genuine conflict with investment law obligations. The discussion appears relevant considering the emerging human right to a healthy environment,²⁹⁶ which has recently been recognised as an autonomous right under

291 *Supra* n. 20 and accompanying text.

292 The ICSID tribunal has issued a decision rejecting the intra-EU jurisdiction objection raised by Italy, but the decision does not refer to the facts or the substantive arguments of the parties to the dispute, see *Rockhopper Italia S.P.A v Italian Republic*, ICSID Case No. ARB/17/14, Decision on the Intra-EU Jurisdictional Objection of 26 June 2019.

293 Di Bella (2018) *supra* n. 20.

294 *Ibid.* See also the *Biwater v Tanzania* case, where the tribunal despite finding breaches of the investment protection standards upheld that there was no causal link between the violations and the damage caused to the investor. In the tribunal's view, the damage occurred due to the investor's lack of due diligence and, therefore, it declined to award any compensation, *supra* n. 281, paras 773-808.

295 See chapter 3, sub-section 2.2.

296 On 10 May 2018 the UN General Assembly adopted Res.A/72/L.51 and launched a formal intergovernmental consultation about a proposed Global Compact for the Environment, whose first principle is explicitly referring to the right to a healthy environment. See also Report of the Special Rapporteur of the Human Rights Council on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, UNGA A/HRC/40/55, 8 January 2019, Report of the Special Rapporteur on Human Rights and the Environment, “Safe Climate”, UN GA A/74/161, July 2019, where the Special Rapporteur enumerates the several national, regional

the American Convention in the 2017 Advisory Opinion by the Inter-American Court of Human Rights.²⁹⁷ Specifically, the Advisory Opinion was requested by Colombia concerning the obligations of States under the Inter-American Convention on Human Rights relating to the construction and operation of large-scale energy infrastructure projects in the Greater Caribbean region.²⁹⁸ The Inter-American Court acknowledged the existence of an autonomous right to a healthy environment, which is largely informed by international environmental obligations on the prevention of marine pollution.²⁹⁹ It explained that the obligation of States relating to the right to a healthy environment is an obligation of due diligence, which requires States to take all necessary measures, apply the best environmental practices and act in conformity with the precautionary principle.³⁰⁰ Moreover, the Court emphasised that States must regulate, supervise, conduct EIAs, establish contingency plans and, mitigate environmental damage.³⁰¹ Interestingly, the Court also touched upon the nature of the right to a healthy environment: besides its nature as an individual right, the Court declared that the right also has a collective dimension, constituting a universal value, owed to present and future generations.³⁰² Besides the anticipated implications of the advisory opinion for big offshore energy infrastructure projects in the region,³⁰³ empirical studies have indicated that the recognition of a human right to a healthy environment might have positive effects on State compliance.³⁰⁴ *Inter alia*, the recognition of an autonomous human right to a healthy environment could enhance marine environmental protection, by granting the civil society the means to hold States accountable for marine environmental degradation.³⁰⁵

It is submitted that the *erga omnes* obligation of States to protect the marine environment could be perceived as protecting a higher value interest, which is common to all States. In the words of Bruno Simma, community interests reflect “a consensus according to which respect for certain fundamental values is not to be left to the free disposition of States individually or *inter se* but is recognized and

and international instruments in which States have recognised the importance of the right to a healthy environment.

297 Inter-American Court of Human Rights, *Advisory Opinion on the Environment and Human Rights* (State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity- Interpretation and Scope of Articles 4(1) and 5(1) of the American Convention on Human Rights) OC 23/17 15 November 2017, available online at: http://www.corteidh.or.cr/docs/opiniones/seriea_23_esp.pdf, paras 62-63. See also M Banda (2018) ‘Inter-American Court of Human Rights’ Advisory Opinion on the Environment and Human Rights’, *ASIL Insights*, available online at: <https://www.asil.org/insights/volume/22/issue/6/inter-american-court-human-rights-advisory-opinion-environment-and-human>.

298 H Cohen (2018) ‘International Decisions’, *American Society of International Law*, 460.

299 *Advisory Opinion on the Environment and Human Rights*, *supra* n 297, paras 97-99.

300 *Ibid*, paras 123-124, 180.

301 *Ibid*, para 145.

302 *Ibid*, paras 53-59.

303 *Ibid*, paras 151, 155.

304 G De Burca (2017) ‘Human Rights Experimentalism’, *American Journal of International Law*, 277-316, K Cope, C Creamer, and M Versteeg (2019) ‘Empirical Studies of Human Rights Law’, *Annual Review of Law and Social Science*, 155-182.

305 On the potential positive impacts of the recognition of an autonomous human right to a healthy environment, see J Knox (2020, *forthc*) ‘Constructing the Human Right to a Healthy Environment’, *Annual Review of Law and Social Science*, 15-19.

sanctioned by international law as a matter of concern to all States.”³⁰⁶ Arguably, such an obligation does not just create bilateral obligations based on reciprocity but creates legal relationships of universal character.³⁰⁷ That does not necessarily mean that obligations *erga omnes* have an *ex ante* priority over investment obligations. *Erga omnes* obligations are not necessarily peremptory norms of international law, from which no derogation is possible.³⁰⁸ As stated by the ILC, “while peremptory norms of general international law focus on the scope and priority to be given to a certain number of fundamental obligations, the focus of obligations to the international community as a whole is essentially on the legal interest of all States in compliance”.³⁰⁹ However, obligations *erga omnes* and those qualifying as *jus cogens* form two concentric circles, the first of which is much larger than the second.³¹⁰ As a result, the conflict with an *erga omnes* obligation will not lead to the invalidity of the other norm but can result in the invocation of international responsibility. It has been argued though that the progressive evolution of the right to a healthy environment may lead to “an inflexible right” for States to take measures for the protection of the environment and, in that regard, such measures would not amount to a breach of investment standards, so long as they are exercised on objective grounds.³¹¹

In the event of a normative conflict with a synallagmatic investment obligation, non-compliance with the obligation to protect and preserve the marine environment infringes the rights of all States, and each of them could qualify as an injured party entitled to raise the issue of international responsibility of the host State even if they have not suffered damage other than the breach of their right.³¹² Therefore, even if the interpreter of the investment discipline were to accept that an investment obligation trumps the applicable environmental obligation, the obligation owed to all States would remain in place.³¹³ Thus, the *erga omnes* nature of the fundamental obligation to protect and preserve the marine environment at least supports an argument in favour of interpreting IIAs in a manner that would not breach environmental obligations. That is because “it cannot be lightly presumed that a State would conclude a bilateral treaty that would impose obligations that would place the State in breach of obligations owed to multiple other States, if not to the international community as a whole”.³¹⁴

The fact-specific and value-oriented priority of the environmental obligation of the host State is reinforced if consideration is given to its human rights dimension. As stressed in the Advisory Opinion of the Inter-American Court of Human Rights, the obligation to protect the marine environment is not just a community interest of

306 B Simma (1994) ‘From Bilateralism to Community Interest in International Law, *Recueil des Cours de l’Academie de Droit International*, 233.

307 C Tams, *Enforcing Obligations Erga Omnes in International Law* (Cambridge University Press, 2005) G Arangio-Ruiz (1989) ‘4th Report on State Responsibility’, *Yearbook of the International Law Commission*, 33, see also chapter 3, sub-section 2.2.

308 E de Wet (2013) ‘Invoking Obligations Erga Omnes in the Twenty-First Century: Progressive Developments since *Barcelona Traction*’, *South African Yearbook of International Law*, 9.

309 UN Doc, A/56/10, Introduction to the ILC Commentary on Articles 40 and 41 of Articles on State Responsibility, para 7.

310 Sicilianos (2002) *supra* n. 60, 1137.

311 M Sornarajah, *The International Law on Foreign Investment* (Cambridge University Press, 4th edition, 2017) 136.

312 *Ibid*, 43, Sicilianos (2002) *supra* n. 60, 1136.

313 See ILC Articles on Responsibility of States for Internationally Wrongful Acts, article 48.

314 Simma and Kill (2009) *supra* n. 152, 706.

all States. It is also an obligation towards present and future generations, reflecting a global value.³¹⁵ Another important consideration is that the protection of the marine environment is a rule of integral character, which means that it benefits all and can only be achieved if there is consistent adherence to it by the totality of States that engage in potentially harmful offshore activities. Therefore, the sacrifice of the individual interest of the investor could be considered as a necessary evil for the protection of community interests. However, the author does not suggest that, under all circumstances, the rules reflecting community interests should prevail over the ones protecting individual interests. That is because, currently, there is no legal basis for proclaiming the normative priority of *erga omnes* obligations or obligations protecting community interests over other rules.³¹⁶

When the reconciliation of the competing obligations is possible through their systemic interpretation, the challenge is easily fought off. On the other hand, in the case of a genuine conflict, where the competing obligations are incompatible, as in the *SPP v Egypt* case, the State faces the choice of respecting one treaty and consequently breaching its competing duty under the other. In the face of such a situation, the State needs to make a balanced decision. In the light of the *erga omnes* character of its obligation to protect and preserve the marine environment, it might be reasonable for the State to prioritise marine environmental protection over the economic interest of the foreign investor. However, the potential breach of an investment protection standard might result in an investment claim before an arbitral tribunal. The question is then whether and how the investment tribunal might evaluate the responsibility of the State for the violation of an investment protection standard while simultaneously considering the conflicting environmental obligation of the host State.³¹⁷

In the author's view, even though the environmental obligations cannot wholly exonerate the host State from its responsibility for the violation of investment obligations, they should be considered at the stage of the assessment of adequate compensation. Thus, even though the environmental obligations do not override the investment obligations, the significance of the underlying common interest which the former protect could play a role in the valuation of the loss by the investor to determine the quantum of compensation.³¹⁸ Notably, in the case of a breach of the FET standard, the tribunal can use its discretion in picking the valuation method and in considering the competing environmental obligations as "equitable considerations" to achieve a balance between the breach of the IIA and the duty to protect the marine environment.³¹⁹ Alternatively, the tribunal could also consider the duty of the investor to exercise due diligence by keeping abreast of the foreseeable environmental measures induced by the international obligations of the State, in

315 *Supra* n. 302 and accompanying text.

316 S Villalpando (2010) 'The Legal Dimension of the International Community: How Community Interests Are Protected in International Law', *The European Journal of International Law*, 413.

317 According to Wälde and Kolo, the compensation paid to the investor in cases of violation of investment standards for a State to comply with its environmental obligations must be considered as a special sacrifice of the investor to the benefit of the community at large. Therefore, in their view, even if the breach is justified by a conflicting environmental obligation, the amount of compensation is to remain the same. See Wälde and Kolo (2001) *supra* n. 15, 845-846.

318 Hirsch (2006) *supra* n. 75, 29-30.

319 Wälde and Sabahi (2008) *supra* n. 273, 1105.

its evaluation of the quantum of compensation.³²⁰ In any event, the tribunal plays a central role in resolving the normative conflict.

2.5. The significant role of arbitral tribunals and their stance towards environmental obligations

In many investment disputes, rules of international environmental law may be considered as applicable law by arbitral tribunals. In these cases, the outcome of the arbitration depends on how the arbitral tribunal manages interactions between the applicable rules of international law.³²¹ For instance, investment tribunals can integrate international environmental law obligations through the interpretation of the applicable rules of international investment law. As a consequence, many interactions between investment and environmental obligations often occur during the adjudication of disputes in investor-State arbitration. On that account, the stance of investment tribunals towards these interactions is critical, given that they are often called on to resolve normative interplay between the two sub-systems of international law.

At least in connection with first-generation IIAs, which lacked references to non-investment considerations, investment tribunals prioritised investment obligations over non-investment obligations of host States. Either by considering the rules of international investment law as *lex specialis* which trumps other international rules or by conceptualising investment law as a self-contained regime, early investment awards avoided considering international environmental rules as relevant for the interpretation and implementation of investment disciplines.³²² In addition, the consideration of environmental obligations in the context of investment disputes partly depends on the margin given to the tribunals by the parties.³²³ Nonetheless, the arguments of the parties do not restrain the reasoning of arbitral tribunals. For example, the arbitral tribunal in the *Glamis* case paid lip service to environmental considerations raised by the defendant State and the *amicus curiae*³²⁴ and deliberately chose to disregard issues of international environmental law even though the respondent State had explicitly raised them in its counterarguments.³²⁵

320 See the relevant conclusions of the tribunal in the *Biwater v Tanzania* case, *supra* n. 281.

321 For instance, article 42 of the ICSID Convention provides that Tribunals are to apply “the law of the Contracting State party to the dispute (including its rules on the conflict of law) and such rules of international law as may be applicable” (emphasis added). See also, A Asteriti (2015) ‘Environmental Law in Investment Arbitration: Procedural Means of Incorporation’, *The Journal of World Investment & Trade*, 264-270.

322 M Koskeniemi (2009) ‘Fragmentation of International Law – The Function and Scope of the Lex Specialis Rule and the Question of “Self-Contained” Regimes: An Outline’, available online at: <https://www.transnational-dispute-management.com/article.asp?key=1308>, S Ratner (2008) ‘Regulatory Takings in Institutional Context: Beyond the Fear of Fragmentation of International Law’, *American Journal of International Law*, 475, J Kammerhofer, ‘The Theory of Norm Conflict Solutions in International Investment Law’ in Cordonier Segger, Gehring and Newcombe (2011) *supra* n. 74, 88.

323 Asteriti (2015) *supra* n. 321, 267.

324 Gazzini (2016) *supra* n. 147, 223.

325 “A tribunal should confine its decision to the issues presented by the dispute before it. The Tribunal is aware that the decision in this proceeding has been awaited by private and public entities concerned with environmental regulation, the interests of indigenous peoples, and the tension sometimes seen between private rights in property and the need of the State to regulate the use of property. These issues were extensively argued in this case and considered by the Tribunal. However, the Tribunal is

However, as was illustrated by several investment awards discussed above, investment tribunals have gradually abandoned the idea that IIAs are operating in clinical isolation from the rest of public international law.³²⁶ In principle, investment tribunals have to apply the relevant rules of international law in a mutually supportive way, trying to reconcile the potentially competing investment and non-investment obligations.³²⁷ Although plenty of awards have dealt with investment disputes involving environmental law considerations,³²⁸ arbitral tribunals have been reluctant to confront horizontal normative interactions and have proved relatively ineffective at reconciling international environmental law obligations with investment disciplines.³²⁹ In that respect, arbitral tribunals have not yet developed consistent strategies to resolve normative conflicts between investment and environmental law.³³⁰ On the contrary, they have addressed such questions in a rather casuistic manner, based on the factual particularities of each dispute.

A series of awards, which dealt with the right to water as a defence against the alleged violation of investment disciplines, offers a characteristic example of that stance of investment tribunals concerning horizontal normative interactions.³³¹ In the *Suez v Argentina* award, the tribunal rejected the arguments that the obligation to ensure the protection of the human right to water trumps investment obligations, as the positive obligation of the State to protect this right does not require it to take measures disregarding investment protection.³³² Instead, the tribunal found that Argentina was “*subject to both international obligations, i.e., human rights and treaty obligations, and must respect both of them equally*”.³³³ Considering the facts of the case, the tribunal concluded that the human rights obligations and the investment treaty obligations were not inconsistent, contradictory or mutually exclusive and, therefore, Argentina could have respected them simultaneously.³³⁴ According to the tribunal’s view, while the host State has special powers to guarantee the right to water, these are not unlimited and must be adapted to ensure the discharge of its investment obligations.³³⁵ While tribunals have recognised that the host State also

not required to decide many of the most controversial issues raised in this proceeding. The Tribunal observes that a few awards have made statements not required by the case before it. The Tribunal does not agree with this tendency: it believes that its case-specific mandate and the respect demanded for the difficult task faced squarely by some future tribunal instead argues for it to confine its decision to the issues presented”, see Glamis Gold Ltd v United States of America (NAFTA/UNCITRAL) Award of 16 May 2009, para 8.

326 The *Saluka v Czech Republic* award provides an apt example of how investment tribunals have tried to embed IIAs in the wider international law through systemic interpretation.

327 Gazini (2016) *supra* n. 147, 222.

328 Z Douglas, ‘The Enforcement of Environmental Norms in Investment Treaty Arbitration’ in P-M Dupuy, and J Viñuales (eds) *Harnessing Foreign Investment to Promote Environmental Protection – Incentives and Safeguards* (Cambridge University Press, 2013) 416.

329 Burke-White (2015) *supra* n. 73, 2.

330 Kammerhofer (2011) *supra* n. 322, 87-88.

331 In *Azurix v Argentina*, the tribunal simply rejected the defence on the basis of conflicting human rights obligations, noting that “*the tribunal fails to understand the incompatibility in the specifics of the instant case*”, ICSID, *Azurix v Argentine Republic*, ICSID Case No ARB/01/12, Award of 14 July 2006, para 261.

332 ICSID, *Suez Sociedad General de Aguas de Barcelona SA and Interagua Servicios Integrales de Agua SA v Argentine Republic*, ICSID Case No ARB/03/17, Decision on Liability of 30 July 2010, para 262.

333 *Ibid.*

334 *Ibid.*

335 *Ibid.*, 331.

bears responsibilities under human rights treaties, they have engaged in a rather superficial discussion regarding the relationship of these obligations with investment protection standards.³³⁶ For instance, in the *Azurix v Argentina* award, the tribunal avoided examining the normative conflict between human rights and investment obligations by stating that “*the matter has not been fully argued and the tribunal fails to understand the incompatibility in the specifics of the instant case*”.³³⁷ Regrettably, several tribunals dealing with similar cases have failed to pronounce on the relationship between investment and human rights obligations.³³⁸ Besides avoiding the difficulties of resolving such normative conflicts, they have also abstained from providing interpretative guidance on how States can balance competing obligations when their application seems to restrict the level of investment protection.³³⁹

The reluctance of arbitral tribunals to deal with genuine normative conflicts between investment and non-investment obligations can also be due to the general absence of specific conflict clauses dealing with such types of conflicts under most IIAs.³⁴⁰ NAFTA is one of the few agreements³⁴¹ containing conflict clauses, which refer explicitly to its relationship with specific environmental agreements and establish a hierarchy among their obligations.³⁴² Article 104(1) of NAFTA provides that, in the event of any inconsistency with the specific trade obligations under certain environmental agreements, including CITES, the Montreal Protocol, the Basel Convention and agreements listed under its Annex 104.1, the last-named “*shall prevail to the extent of the inconsistency, provided that where a Party has a choice among equally effective and reasonably available means of complying with such obligations, the Party chooses the alternative that is the least inconsistent with the other provisions of this Agreement*”. Such a provision seems to facilitate the resolution of normative conflicts between certain environmental obligations and investment protection standards under NAFTA.

The tribunal in the *S D Myers v Canada* award examined the potential of article 104 NAFTA to resolve normative conflicts with its investment obligations when environmental measures are contemplated by the environmental agreements referred to therein. Canada raised the issue of the normative conflict between its obligations under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and its investment obligations under NAFTA. Notably, Canada argued that the ban on exports of hazardous waste was justified and required by its obligations under the Basel Convention and, therefore, relieved

336 E De Brabandere (2018) ‘Human Rights and International Investment Law’, *Grotius Centre Working Paper Series N 2018/075*, 18-19, T Meshel (2015) ‘Human Rights in Investor-State Arbitration: The Human Right to Water and Beyond’, *Journal of International Dispute Settlement*, 15.

337 *Azurix v Argentine Republic*, *supra* n. 331, para 261.

338 U Kriebaum (2018) ‘The Right to Water Before Investment Tribunals’, *Brill Open Law*, 6-7.

339 A Tanzi, ‘Recent Trends in International Investment Arbitration and the Protection of Human Rights in the Public Services Sector’ in N Boschiero, T Scovazzi, C Pitea, and C Ragni (eds) *International Courts and the Development of International Law: Essays in Honour of Tullio Treves* (Asser Press, 2013) 328.

340 A Asteriti (2012) ‘Waiting for the Environmentalists: Environmental Language in Investment Treaties’, available online at: <https://ssrn.com/abstract=2028405>, 10.

341 See also, article 103 of Canada-Colombia Free Trade Agreement, article 102(2) of Canada-Peru Free Trade Agreement, providing that in the event that specific environmental treaties are inconsistent with the FTAs, the former is to prevail to the extent of the inconsistency.

342 Viñuales (2012) *supra* n. 68, 135-136.

it from responsibility for the alleged NAFTA violations. Even though the tribunal rejected the application of article 104 NAFTA on the facts of the case, it made it clear that, in the hypothetical situation where this specific conflict clause was applicable, it still would not exonerate Canada from its responsibility for violating investment obligations under NAFTA. That is because “*where a party has a choice among equally effective and reasonably available alternatives for complying with a Basel Convention obligation, it is obliged to choose the alternative that is least inconsistent with the NAFTA*”.³⁴³ The tribunal concluded that, even in the hypothetical situation just mentioned, Canada could have adopted other measures with a lower adverse impact on the affected investment.³⁴⁴ Therefore, in the opinion of the tribunal, even if the measures were justified under the Basel Convention, they could still not have priority over investment protection, to the extent that they were not *stricto sensu* proportionate.

Overall, while investment tribunals have not always been insensitive to the host State’s environmental obligations, they have generally displayed a somewhat reluctant attitude with regard to directly considering the normative implications of non-investment commitments.³⁴⁵ Similarly, they have primarily avoided treating the interactions between investment and environmental (or even human rights) obligations as genuine normative conflicts, because such a conflict would require them to make a tough decision and justify for which reasons one of the incompatible duties trumps the other. Arguably, with a few highlighted exceptions in recent investment jurisprudence, the stance of investment tribunals illustrates that they have moved from an isolationist position towards acknowledging the existence and operation of parallel non-investment obligations, but have not yet expressed a genuine will to integrate environmental or other non-investment obligations into investment law.³⁴⁶

Far from being “*bouches de la loi*”³⁴⁷ investment tribunals have played an undeniably decisive role in the evolution of investment protection standards. Investment tribunals are significant actors within the broader process of the evolution of investment treaty norms.³⁴⁸ Their predominant role, especially in the application of investment disciplines, seems to be associated with the initial objective of IIAs, which purported to impose a degree of control over the exercise of sovereign rights by the host State that could adversely affect investments.³⁴⁹ Through applying investment obligations to particular facts, investment tribunals hold a proactive role in allocating

343 *S D Myers v Canada*, *supra* n. 260, paras 255-256.

344 *Ibid.*

345 M Hirsch, ‘Conflicting Obligations in International Investment Law: Investment Tribunals’ Perspective’ in Y Shany, and T Broude (eds) *The Shifting Allocation of Authority in International Law: Considering Sovereignty, Supremacy and Subsidiarity* (Hart, 2008) 321-343.

346 P Acconci (2014) ‘The Integration of Non-Investment Concerns as an Opportunity for the Modernization of International Investment Law: Is a Multilateral Approach Desirable?’ in G Sacerdoti, P Acconci, M Valenti, and A De Luca (eds) *General Interests of Host States in International Investment Law* (Cambridge University Press, 2014) 181.

347 Montesquieu, in ‘L’Esprit des Lois’ claimed that ‘*les juges de la nation ne sont ... que la bouche qui prononce les paroles de la loi*’.

348 J Paine (2018) ‘On Investment Law and Questions of Change’, *Journal of World Investment and Trade*, 182.

349 F Ortino (2013) ‘The Investment Treaty System as Judicial Review’, *American Review of International Arbitration*, 440-444.

risk for regulatory changes enacted by the host State.³⁵⁰ Their influence is even more evident in the case of amendments in environmental regulations. The development of international investment law and its capacity to accommodate changes in its normative environment through its interpretation and application by investment tribunals, partly explains why investment law is considered as having significant normative implications on the implementation of environmental obligations. In particular, the interpretation of investment disciplines by investment tribunals can result in limiting the regulatory discretion that the host State maintains in complying with its environmental obligations. Primarily, for these reasons, the next section of this chapter focuses on investment awards to elucidate the potential effect of investment protection obligations on the implementation of the duty to protect and preserve the marine environment.

3. The impact of IIA and IEL interactions on the implementation of international obligations for the protection of the marine environment

Having examined above the potential normative effects of environmental obligations on the international standards of investment protection in the context of offshore energy investments, this section inversely explores how investment obligations may affect the exercise of the right of States, and the duty under environmental law, to adopt measures to protect the marine environment, insofar as those measures can adversely affect investments. States must also consider their international commitments to protect foreign investments when they implement their obligation to protect the marine environment. The reconciliation of those obligations might qualify the implementation of environmental rules. Allegedly, the requirement of legal stability, as an element of the FET standard under IIAs, can have a significant impact on the way the host State implements environmental obligations which have implications for the operation of foreign investments. However, legal stability in investment law does not require an absolute regulatory standstill, nor can such a type of stability be reasonably expected by foreign investors in the energy sector. The FET standard reflects mostly a pursuit for balance between States' interest in maintaining discretion in, *inter alia*, the implementation of environmental obligations and investors' interest in a minimum standard of legal safety.³⁵¹ In the words of the arbitral award in *Suez v Argentina*, "...in interpreting the meaning of fair and equitable treatment to be accorded to investors, the tribunal must balance the legitimate and reasonable expectations of the claimants with Argentina's right to regulate the provision of a vital public service".³⁵²

Despite the debates in literature, there is insufficient evidence that IIAs bring about "regulatory chill"³⁵³ because it is difficult to collect accurate data on

350 A Newcombe (2005) 'The Boundaries of Regulatory Expropriation in International Law', available online at: <https://dx.doi.org/10.2139/ssrn.703244>, 5.

351 Newcombe (2005) *supra* n. 350, 33.

352 *Suez v Argentina*, *supra* n. 210, para 236.

353 Regulatory chill refers to the general conception that States might refrain from updating and upgrading environmental standards in order to maintain their competitive advantage against third States in attracting foreign investments or due to the fear that such environmental regulation could increase the risk for investor-State arbitration and the consequent awarding of compensation to the investors. Even though it can be argued that there might be a correlation, one cannot prove with certainty which are exactly the underpinning reasons for such inaction on behalf of States. See K Miles (2008) 'International Investment Law and Climate Change: Issues in the Transition to

the motives behind the reluctance of States to adopt environmental protection measures in furtherance of their international obligations.³⁵⁴ While States retain the sovereign right to take appropriate environmental measures, subject to their duties under environmental agreements, the exercise of that right is limited, *inter alia*, by their investment protection obligations. In that respect, this section examines the extent to which investment disciplines have the potential to impose restraints on the implementation of substantive rules of marine environmental law. Through, primarily, analysing relevant investment awards, this section discusses the extent of such restrictions on the host State's regulatory discretion. Building upon the above discussion of specific investment awards, this section analyses normative interactions from an opposite angle to demonstrate that investment disciplines can also accommodate environmental considerations and have increasingly been applied by investment tribunals in a fashion that allows discretion to the host State in exercising its right and duty to regulate offshore activities for the protection of the marine environment. For this section, the analysis will focus on two investment protection standards, which are mainly invoked by investors in cases involving the right of States to regulate, namely the protection against (indirect) expropriation standard and the FET standard.

3.1. The impact of the protection against indirect expropriation standard on the right of States to adopt environmental measures

In the majority of the environmentally relevant investment disputes, investors claim that the introduction, amendment, or termination of environmental measures amount to indirect or regulatory expropriation of their investment. If arbitral tribunals were to accept that host States are liable to pay compensation for any reduction of the value of investments caused by the introduction of changes in environmental regulation, it would spell disaster for States' economic survival. This assertion is particularly significant in the offshore energy sector, where environmental standards are regularly updated to respond to changes in technology and scientific evidence. Therefore, the typical commercial risks associated with the regulation of offshore activities should not be considered as amounting to indirect expropriation. With a few exceptions, where tribunals in early cases adopted the sole effects doctrine,³⁵⁵ arbitral tribunals have indeed managed to strike a balance between the competing interests of environmental and investment protection in the context of the application of the protection against indirect expropriation standard.

3.1.1. *Environmental measures and their degree of interference with the value of the investment*

One of the most contentious factors examined concerning indirect expropriation is the degree of interference with the property or the value of the investment. The threshold of the degree of interference is crucial when it comes to environmental

a Low Carbon World' *SIEL Working Paper 27/28*, available online at: <https://dx.doi.org/10.2139/ssrn.1154588>, 22-24.

354 D Gaukrodger (2017) 'The Balance Between Investor Protection and the Right to Regulate in Investment Treaties: A Scoping Paper', *OECD Working Papers on International Investment 2017/02*, 21-26.

355 See *Santa Elena v Costa Rica*, *Metaclad v Mexico*, *supra* n. 275-276 and accompanying text.

measures because such measures will rarely deprive the investor of its property rights or destroy all the economic value of the investment.³⁵⁶ Instead, changes in the environmental framework regulating the investment usually tend to reduce its expected profits, while the investor remains the owner of its economically devalued assets.³⁵⁷ The idea that legitimate changes in the legal framework can adversely affect the economic viability of an investment without amounting to indirect expropriation is captured illustratively in the reasoning of the tribunal in the *Fedman v Mexico* case, which considered a claim that amendments in the legal framework of Mexico prevented the company from accessing the expected returns from the export of cigarettes.³⁵⁸ The tribunal rejected the indirect expropriation claim, declaring that

“not all government regulatory activity that makes it difficult or impossible for an investor to carry out a particular business, change in the law or change in the application of existing laws that makes it uneconomical to continue a particular business, is an expropriation... Governments, in their exercise of regulatory power, frequently change their laws in response to changing economic circumstances or changing political, economic or social considerations. Those changes may well make certain activities less profitable or even uneconomic to continue”.³⁵⁹

Recent awards in investment disputes have agreed that a high threshold of interference with the investment is required for regulatory measures to amount to indirect expropriation, and so have mostly rejected the relevant claims. For instance, in the *Philip Morris* case, the tribunal stated that “in order to be considered an indirect expropriation, the government’s measures interference with the investor’s rights must have a major adverse impact on the claimant’s investments”.³⁶⁰ In that respect, it clarified that this “major adverse impact” test required measures to lead to the substantial deprivation of the value, use, or enjoyment of the affected investment.³⁶¹ In addition, the tribunal noted that the intensity and duration of the economic deprivation suffered by the investor are also to be considered in examining whether the measures constitute substantial deprivation amounting to indirect expropriation.³⁶² Applying the test to the facts of the case, the tribunal concluded that, despite the implementation of the challenged measures, the value of the investment remained sufficient, as it was still profitable.³⁶³ On that account, the measures adopted by Uruguay did not amount to indirect expropriation.

The tribunal in the *Windstream v Canada* case followed similar reasoning to examine whether the moratorium imposed on offshore wind projects in Lake Ontario constituted indirect expropriation. The tribunal, in its reasoning, agreed with Canada that the moratorium was just a temporary measure, which did not affect the prior contractual arrangement with the claimant since the feed-in tariff agreement granted

356 Wälde and Kolo (2001) *supra* n. 15, 837-838.

357 M Hirsch (2011) ‘Between Fair and Equitable Treatment and Stabilization Clause: Stable Legal Environment and Regulatory Change in International Investment Law’, *Journal of World Investment and Trade*, 783.

358 ICSID, *Marvin Feldman v Mexico*, ICSID Case No ARB/99/1, Award of 16 December 2002.

359 *Ibid.*, para 112.

360 *Philip Morris v Uruguay*, *supra* n. 178, para 192.

361 *Ibid.*

362 *Ibid.*, para 195.

363 *Ibid.*, paras 284-285.

to the investor was not terminated.³⁶⁴ Most importantly, concerning the effects of the measures on the property of the investor, the tribunal considered that the 6 million CAD security deposit was still in place and was not confiscated or rendered otherwise worthless as a result of any action taken by the host State.³⁶⁵ The court then emphasised that, under the contractual clauses, it was still possible for the parties to renegotiate its terms taking into account the imposed moratorium. Moreover, under the feed-in tariff agreement, the investor maintained the right to unilaterally terminate the contract and retain the security deposit if the project were to be delayed for an aggregate of more than 24 months, as was the case. Under these circumstances, the tribunal concluded that the challenged moratorium and the relevant measures adopted by Canada could not amount to indirect expropriation.³⁶⁶

The reasoning of investment tribunals in the recent wave of disputes initiated by investors in the renewable energy sector against the reforms in their legal framework by several EU States³⁶⁷ confirms that regulatory measures are rarely so intrusive as to qualify as indirect expropriation. Following a series of EU directives promoting renewable energy generation, several EU Member States enacted legislation offering attractive incentives, such as feed-in tariffs, the priority of dispatch and tax allowances, to attract investments in renewable energy production facilities.³⁶⁸ These incentives were designed to account for the challenges faced by renewable energy production investments, including the significant upfront costs associated with the new renewable energy technologies, the initial high level of capital required as well as the competition from conventional production of energy in the EU.³⁶⁹ However, after investments were made, several Member States withdrew or reduced those incentives, prompting a vast number of investment claims under the ECT.³⁷⁰ States claimed that the original incentives had been over-generous and became disproportionate because production costs decreased significantly.³⁷¹ Some of them even argued that they could no longer afford them due to the economic crisis.³⁷² Despite their divergent findings regarding the violation of the FET standard, tribunals have generally accepted that the withdrawal or reduction of investment promotion incentives, even when it

364 *Windstream v Canada*, *supra* n. 166, para 290.

365 *Ibid*, paras 762-763.

366 *Ibid*, para 291.

367 Energy Charter Treaty Secretariat, 'List of all Investment Dispute Settlement Cases', available online at: <http://www.energycharter.org/?id=345>, F Dias Simoes (2017) 'When Green Incentives Go Pale: Investment Arbitration and Renewable Energy Policymaking', *Denver Journal of International Law and Policy*, 251.

368 Y Selivanova (2018) 'Changes in Renewables Support Policy and Investment Protection under the Energy Charter Treaty: Analysis of Jurisprudence and Outlook for the Current Arbitration Cases', *ICSID Review*, 434, N Gallagher (2018) 'ECT and Renewable Energy Disputes', in Scherer (ed) *supra* n. 27, 252-256, Sullivan and Kirsey (2017) *supra* n. 116, 104-105.

369 K Talus (2016) 'Float Like a Butterfly, Sting Like a Bee: Judicial Challenges to Renewable-Energy Support Schemes in Europe', *Climate Law*, 252-254.

370 A de Luca (2014) 'Withdrawing Incentives to Attract FDI: Can Host Countries Put the Genie Back in the Bottle?', *Columbia Center on Sustainable International Investment*, available online at: <https://academiccommons.columbia.edu/doi/10.7916/D8154FZH>.

371 F Dias Simoes, 'Investment Law and Renewable Energy: Green Expectations in Grey Times', in G Ulrich, and I Ziemele (eds) *How International Law Works in Times of Crisis* (Oxford University Press, 2019) 207.

372 D Behn, O Fauchald, and L Letourneau-Tremblay (2017) 'Promoting Renewable Energy in the EU: Shifting Trends in Member State Policy Space', *European Business Law Review*, 222.

was applied retroactively, are not considered as amounting to a grave devaluation of the investors' property.³⁷³ For example, in the *Novenergia II v Spain* award, the investor argued that the complete elimination of the special incentives regime and the imposition of tax on renewable energy producers amounted to expropriation under article 13(1) of the ECT.³⁷⁴ The tribunal considered that, even if the value of the investment had diminished as a result of the challenged measures, the property of the investor (industrial property and assets in the companies involved in the investment which the investor directly or indirectly owned or controlled) was neither expropriated nor affected by measures having effects equivalent to expropriation. In the tribunal's view, what matters was that the claimant was still the owner of the installations and the direct and indirect holder of the companies' shares.³⁷⁵ Thus, the investors had not suffered severe or "radical" loss.³⁷⁶

As the above cases indicate, environmental measures that cause a mere reduction in the profitability of the investment do not qualify as indirect expropriation. Generally, the case law has suggested that interference must be so severe that the effect of the measures, either individually or cumulatively in the case of several measures (creeping expropriation), is equivalent to that of deprivation of property rights. Nevertheless, investment tribunals have not established a precise test regarding the degree of interference to determine the permissible balance between the investor's interest in regulatory stability and the need of the State to address new environmental risks or comply with new environmental standards. Tribunals retain the discretion to determine, on a case-by-case basis, whether the challenged environmental measures have rendered the value of the investment so marginal or unprofitable as to effectively deprive investments of their character.³⁷⁷

Another relevant factor in determining whether environmental measures intrude to such a degree as to be considered expropriation is the breach of a prior contractual commitment of the host State towards the investor.³⁷⁸ The question of legitimate expectations is one of risk allocation between the investor and the host State.³⁷⁹ In the context of offshore energy investments, such contractual commitments can take the form of concessions, production sharing agreements, or licences issued in a contractual form which are adhered to by the investor and are required for the operation of the investment, as was the case with the feed-in tariff agreement in the *Windstream v Canada* case. Arguably, such contractual arrangements create legitimate expectations for the investor that the host State will honour its commitments in good faith. The existence of such contractual arrangements does not relinquish the sovereign right (and duty under environmental agreements) of the host State to enact or amend the environmental framework

373 E Fernandez Masia (2017) 'Spain before the International Arbitration for the Cut to Renewable Energies: A Representation in Three Acts, for Now', *Cuadernos de Derecho Transnacional*, 673.

374 *Novenergia II - Energy & Environment (SCA) (Grand Duchy of Luxembourg), SICAR v The Kingdom of Spain*, SCC Case No 063/2015, Award of 15 February 2018.

375 *Ibid*, para 758. Similarly, other tribunals considered that, despite the changes in the legal framework "investors continued to be shareholders in the company, which continued to operate and earn revenue", see *Charanne BV and Construction Investments S.A.R.L v Spain*, *supra* n. 164, para 462.

376 See also *Isolux Infrastructure Netherlands v Spain*, *supra* n. 164, para 852.

377 Paine (2018) *supra* n. 348, 203-204.

378 Wälde and Kolo (2001) *supra* n. 15, 843.

379 Newcombe (2005) *supra* n. 350, 33.

regulating the investment. However, when the environmental measures adopted by the State amount to such a grave interference with the property of the investor, the prior contractual commitments are to be considered as a factor in evaluating the confiscatory nature of the measures in question.³⁸⁰ Other facts can also be relevant to evaluate whether the measures breaching prior contractual commitment amount to expropriation. For example, when the frustration of contractual arrangements is not justified by a substantial change in scientific awareness regarding the environmental risks of the investment or changes in environmental standards having implications for the investment in question, it is more likely to qualify as compensable indirect expropriation under IIAs. In a case where such substantial changes have not taken place, fairness indicates that the investor should be accorded legal certainty that the environmental framework regulating its investment will not change dramatically.³⁸¹

Moreover, as has already been discussed, the development of the police powers doctrine has enabled arbitral tribunals to accommodate changes in the environmental framework governing investments. In the *Philip Morris* case, the tribunal explicitly applied article 31(3)(c) of the VCLT to introduce the police powers principle in the expropriation provision of the BIT in question.³⁸² In the tribunal's view, "*it is an accepted principle of customary international law that where economic injury results from a bona fide non-discriminatory regulation within the police powers of the State, compensation is not required*".³⁸³ As already mentioned, the tribunal associated the exercise of police powers with the obligations of Uruguay under the FCTC,³⁸⁴ accepting that the implementation of those obligations constitutes a legitimate public policy purpose justifying the challenged regulatory measures, as long as they were applied in good faith and they were proportional in achieving the objective of the international rules.³⁸⁵

3.1.2. *The proportionality and reasonableness of the contested environmental measures*

The tribunal referred to the proportionality test to highlight the relationship between the legitimate public purpose underpinning the impugned measures and their effects on the investment.³⁸⁶ Many investment tribunals have also referred to proportionality analysis to balance competing interests in examining claims of indirect expropriation.³⁸⁷ For instance, in the *Tecmed v Mexico* award, the tribunal noted that "*there must be a reasonable relationship of proportionality between the charge or weight imposed to the foreign investor and the aim sought to be realized by any expropriatory*

380 Wälde and Kolo (2001) *supra* n. 15, 844.

381 *Ibid.*, 845.

382 *Philip Morris v Uruguay*, *supra* n. 178, para 290.

383 *Ibid.*, para 294.

384 *Ibid.*, para 304.

385 *Ibid.*, para 305. For a critique on the reasoning of the tribunal and its application of article 31(3)(c) of the VCLT to read the police powers doctrine in the BIT, see P Ranjan (2018) 'Police Powers, Indirect Expropriation in International Investment Law, and Article 31(3)(c) of the VCLT: A Critique of Philip Morris v Uruguay', *Asian Journal of International Law*, 1-17.

386 Y Radi (2018) 'Case Comment: Philip Morris v Uruguay – Regulatory Measures in International Investment Law: To Be or Not to Be Compensated?', *ICSID Review*, 80.

387 F Ortino (2017) 'Investment Treaties, Sustainable Development and Reasonableness Review: A Case Against Strict Proportionality Balancing', *Leiden Journal of International Law*, 73, C Henckels (2012) 'Indirect Expropriation and the Right to Regulate: Revisiting Proportionality Analysis and the Standard of Review in Investor-State Arbitration', *Journal of International Economic Law*, 235.

measure”.³⁸⁸ In the tribunal’s opinion, a compensable indirect expropriation will only occur when measures result in disproportional restrictions on the interests of the investor. In evaluating the measure’s proportionality, the tribunal considered several factors, including the importance of the objective pursued by the host State, the weight and the effects on the investor’s property as well as the legitimate expectations of the investor.³⁸⁹ Bearing in mind that the host State could have adopted measures that would have had less excessive effect on the investor’s property,³⁹⁰ the tribunal concluded that the challenged measures affected the investment disproportionately and, thus, amounted to indirect expropriation.

As reflected in the reasoning of many international and domestic courts and tribunals, proportionality analysis entails three cumulative sub-elements. First, it requires the challenged measures to be effective in contributing to the purported objective (suitability); second, they must be necessary to achieve the objective (necessity); and third, the measures must not bear an excessive impact on the claimant’s interest compared with the benefits to the community or public interest (proportionality *stricto sensu*).³⁹¹ Among them, the third element of the proportionality analysis, namely the *stricto sensu* proportionality of the examined measures, can be quite malleable to judicial preferences.³⁹² That is because the third stage of review requires the tribunal to weigh the two competing interests to evaluate whether, in its opinion, the measure’s impact is too severe in comparison with the gain that it purports to achieve. In that respect, it has been suggested that investment tribunals should adopt a more deferential implementation of the third stage of the proportionality analysis to respect the discretion of the host State in choosing the exact measures that the State regards as *stricto sensu* necessary to deal with a complex environmental problem.³⁹³ Despite the inconsistency in the manner in which arbitral tribunals analyse proportionality, their increasing tendency to examine the reasonableness³⁹⁴ of the challenged measures in the context of indirect expropriation could indicate that at least some elements of the proportionality analysis are crystallising as a requirement for the police powers doctrine to defeat a claim of compensable expropriation.³⁹⁵ Proportionality analysis can operate as a useful tool in accommodating the host State’s interest in complying with its environmental

388 *Tecmed v Mexico*, *supra* n. 182, para 112.

389 *Ibid.*, para 149.

390 Similarly, in the *SD Myers v Canada* award, the tribunal balanced the purpose and effects of the measure and examined whether the State could have adopted alternative measures with a milder effect on the investment to determine whether the challenged measure would be justified as within the police powers of Canada, *SD Myers v Canada*, *supra* n. 260, paras 215, 221.

391 Henckels (2012) *supra* n. 387, 225-227.

392 B Kingsbury, and S Schill, ‘Public Law Concepts to Balance Investor’s Rights with State Regulatory Actions in the Public Interest – The Concept of Proportionality’, in S Schill (2010) *supra* n. 170, 78.

393 Ortino (2017) *supra* n. 387, 87-90.

394 Besides the proportionality analysis, tribunals have often referred to the test of reasonableness to examine whether there is an “*appropriate correlation between the State’s public policy objective and the measure adopted to achieve it*”. Reasonableness is associated with both the nature of the measures and the way they are implemented. See *AES v Hungary*, ICSID Case No ARB/07/22, Award of 22 September 2010, para 10.3.7-10.3.9. See also V Vadi, *Proportionality, Reasonableness and Standards of Review in Investment Treaty Arbitration* (Edward Elgar, 2018).

395 Henckels (2012) *supra* n. 387, 254.

obligations, as it facilitates the balancing of the interest of investment protection with competing community interests such as the protection of the marine environment.³⁹⁶

Therefore, given its interpretation and application by investment tribunals, the protection against indirect expropriation standard does not oppressively restrain the regulatory discretion of States to impose, amend or abolish environmental regulations governing foreign investments. In the context of offshore energy investments, States retain considerable discretion in adopting environmental measures in compliance with the evolving content of their environmental duties, without that amounting to compensable expropriation. Most of the time, such environmental measures will not interfere with the investment to such a degree as to deprive it entirely of its value, but they can affect the revenues and even the economic viability of the investment. Nevertheless, environmental measures should be proportionate in achieving the objective of the relevant international obligations.

The reasoning of the tribunal in the *Philip Morris v Uruguay* case exemplifies how the relevant obligations of the host State to protect and preserve the marine environment can be used as a guide in evaluating the suitability and the necessity of the adopted measures to achieve the environmental protection objective. The award highlighted how scientific evidence provided by international organisations or treaty bodies to environmental agreements could serve as a yardstick against which tribunals can evaluate the reasonableness of the measures. Still, the final analytical step of the proportionality analysis allows arbitral tribunals to weigh the competing interests and therefore arrive at their subjective conclusion on whether or not the challenged measures have a disproportionate impact on investors' property compared with the benefit of achieving the purported environmental goal. It is submitted that tribunals should not substitute themselves in the role of the host State but rather examine whether the effects of the measures in question are obviously disproportionate compared with the pursued environmental protection objective. Considering the international environmental obligations of the host State, investment tribunals should adopt a more deferential standard of review.³⁹⁷ Therefore, they should strive not to be overly intrusive when dealing with the State's discretion in selecting the appropriate environmental measures at the stage of assessing their proportionality *stricto sensu*.³⁹⁸

3.2. The claim for regulatory stability under the FET standard and the right (and duty) of the host State to regulate for the protection of the marine environment

The FET standard has often operated as the "default" standard of investment protection in recent investment disputes.³⁹⁹ Notably, when the challenged measures do not affect the property of the investor to such a degree as to amount to indirect

396 Sometimes investment tribunals use the concept of "reasonableness" instead to connote the same concept, see Ortino (2017) *supra* n. 387, 87, P Bertoli, and Z Crespi Raghizzi, 'Regulatory Measures, Standards of Treatment and the Law Applicable to Investment Disputes' in Treves, Seatzu, Trevisanut (2014) *supra* n. 2, 42.

397 Gaukrodger (2017) *supra* n. 354, 31-33.

398 Acconci (2014) *supra* n. 346, 182-183.

399 Nonetheless, arbitral tribunals had for a long time abstained from applying the FET standard. In the words of Schreuer "the FET standard has existed as a sleeping beauty for about 50 years tucked away in a number of documents, but was rarely, if ever, kissed away", C Schreuer (2007) 'Fair and Equitable Treatment in Investment Treaty Law: Introduction in F Ortino, L Liberti, A Sheppard,

expropriation, claimants often rely on the FET standard.⁴⁰⁰ The tension often arises out of the fact that foreign investors in long-term and capital-intensive projects operating in a heavily regulated environment, such as offshore energy production, need to calculate their investment's regulatory risks in advance because changes in the legal framework imposed by the host State have the potential to frustrate their expectations regarding economic revenues.⁴⁰¹ From the host State's perspective, it is essential to maintain some discretion in responding to changes in environmental standards, to the increasing level of risk posed by technological developments in production activities, as well as to the developing scientific awareness about those risks and the measures that are appropriate in mitigating them. In the words of the tribunal in the *Madimoil v Albania* award,

“economic, social, environmental, and legal circumstances and problems are by their very nature dynamic and bound to constant change. It is indispensable for successful public infrastructure and public services to exist that they are adaptable to these changes. Accordingly, State policy must be able to evolve in order to guarantee adequate infrastructure and services in time and thereby the fair and equitable treatment of investments.”⁴⁰²

Therefore, if the FET standard were to be interpreted and applied as imposing excessive restrictions on the host State's right and duty to regulate, *inter alia*, for the protection of the marine environment, that would seriously undermine the State's discretion in complying with the gradually evolving normative content of its environmental obligations. In that respect, the following sub-section examines the implications of specific elements of the FET standard for the implementation of environmental obligations by the host State. Specifically, it analyses the potential effects of the requirements to provide legal stability and respect the legitimate expectations of investors, as two of the most frequently invoked elements of the FET standard in investment disputes concerning environmental measures. It then moves on to evaluate how the test of reasonableness and proportionality analysis under the FET standard can offer valuable balancing tools between the relevant environmental and investment obligations of the host State.

3.2.1. *The implications of the requirement to provide legal stability under the FET standard for the implementation of environmental obligations*

As already stressed in section 2.2.2., the most contested aspect of the FET standard relates to the degree to which it creates a requirement of legal stability in the host State.⁴⁰³ In the absence of elaborate definitions of the FET standard in many IIAs, early interpretations of its content by arbitral tribunals had considered it inseparable

and H Warner (eds) *Investment Treaty Law: Current Issues II* (British Institute of International and Comparative Law, 2007) 92.

400 Dolzer and Scheuer (2008) *supra* n. 160, 130.

401 Hirsch (2011) *supra* n. 357, 783.

402 *Madimoil v Albania*, *supra* n. 162, para 617.

403 F Ortino (2018) “The Obligation of Regulatory Stability in the Fair and Equitable Treatment Standard: How Far Have We Come?”, *Journal of International Economic Law*, 847, J Paine (2018) *supra* n. 348, 186.

from the requirement of legal stability in the host State's legal environment.⁴⁰⁴ In that sense, arbitral tribunals had supported the idea that investors could form a legitimate expectation that the general legal environment applicable at the time their investment was made would remain intact, even without any specific commitments by the host State to that end.⁴⁰⁵ On that premise, the tribunal in the *Tecmed v Mexico* case suggested that the investor had the right to know the whole legal framework governing its investment before its establishment, to be able to plan its operation accordingly.⁴⁰⁶

However, recently, investment tribunals have concluded that the FET standard does not prevent host States from amending the legal framework regulating foreign investments, arguing that the obligation of the host State to create stable conditions for investors does not equate with a stabilisation clause, but allows States to adjust their regulation in the light of changing conditions.⁴⁰⁷ Tribunals have accepted that “a legal framework is by definition subject to change as it adapts to new circumstances day by day and a state has the sovereign right to exercise its powers which include legislative acts”.⁴⁰⁸ The requirement of fairness does not imply that the legal framework must remain untouched, but regulatory amendments must be “made fairly, consistently and predictably, taking into account the circumstances of the investment”.⁴⁰⁹

Recently, in the *Blusun v Italy* award the tribunal stated that when a host State needs to modify regulatory measures, it should do so in a manner which is not “disproportionate to the aim of the legislative amendment” and with due regard to the “reasonable reliance interests of recipients who may have committed substantial resources on the basis of the earlier regime”.⁴¹⁰ In response to the investor's claim that the challenged measures must be evaluated in an aggregate manner, the tribunal admitted that the FET standard “could be breached by a single transformative act aimed at an investment, or by a program of more minor measures, or by a series of measures taken without plan or coordination but having the prohibited effect”.⁴¹¹ However, it concluded that the FET standard, including the obligation to provide legal stability to foreign investors, has a relatively high threshold, and is only triggered in the case of “subversion of the legal regime”.⁴¹² The majority of the recent awards have recognised that the FET standard does not require a regulatory chill, as such an absolute requirement would violate the sovereignty and sovereign rights of the host State.⁴¹³

404 ICSID, *CMS Gas Transmission Co v Argentina*, ICSID Case No ARB/01/8, Award of 12 May 2005, paras 276-277.

405 R Klanger, ‘Fair and Equitable Treatment and Sustainable Development’ in Cordonier-Segger, Gehring, Newcombe (2011) *supra* n. 74, 247-248.

406 *Tecmed v Mexico*, *supra* n. 182, para 154. Similarly, the *Metaclad v Mexico* award stated that “all relevant legal requirements for the purpose of initiating, completing and successfully operating investments made, or intended to be made, under the Agreement should be capable of being readily known to all affected investors of another Party”, *supra* n. 276, para 76.

407 Coop and Seif (2018) *supra* n. 27, 232.

408 *AES v Hungary*, *supra* n. 394, para 9.3.29.

409 *Electrabel v Hungary*, *supra* n. 219, para 7.77.

410 ICSID, *Blusun SA, Jean-Pierre Lecorcier and Michael Stein v Italy*, ICSID Case No ARB/14/3, Award of 27 December 2016, para 319(5).

411 *Ibid*, para 362.

412 *Ibid*, para 363.

413 For instance, see *Eiser Infrastructure Limited and Energía Solar Luxembourg S.à r.l. v. Kingdom of Spain*, ICSID Case No. ARB/13/36, Award of 4 May 2017, para 362.

However, the FET standard obliges States to exercise their sovereign rights in a certain way to accord a level of protection to foreign investors. The crux of the matter is what kind of stability do States have to create for investments in offshore energy production. Interestingly, the tribunal in the *Philip Morris v Uruguay* award opined that the FET standard does not prevent changes to the legal environment of investments as long as these changes do not “exceed the exercise of the host State’s normal regulatory power in the pursuance of a public interest” and do not “modify the regulatory framework relied upon by the investor at the time of its investment outside of the acceptable margin of change”.⁴¹⁴ However, the tribunal did not clarify what exactly is the acceptable margin of change beyond which regulatory amendments would amount to a breach of the FET standard; nor did it explain which measures would exceed the exercise of the host State’s normal regulatory powers.⁴¹⁵

The series of renewable energy investment disputes in the EU have, *inter alia*, examined what is the “acceptable margin of change” within the host State’s regulatory system to determine whether the challenged regulatory reforms constituted breaches of the FET standard. The tribunal, in one of the first awards concerning the regulatory changes imposed by Spain in 2010 (*Charanne v Spain*), considered that the challenged measures did not unduly eliminate the fundamental characteristics of the existing legal framework since the investors remained entitled to feed-in tariffs and retained their priority in the sale to the system of the electricity which they produced.⁴¹⁶ In the tribunal’s view, the 2010 changes were reasonable, made in the public interest, and not retroactive.⁴¹⁷ However, between 2012 and 2014, the Spanish government introduced more drastic – partly retroactive – changes in the legal framework, which had severe repercussions on the value of investments in renewable energy production.⁴¹⁸ Those measures came under scrutiny by the arbitral tribunal in the *Eiser v Spain* award.⁴¹⁹ The tribunal confirmed that, in the absence of specific commitments by the host State, the FET standard could not support a reasonable expectation that the legal framework governing renewable energy production would remain untouched.⁴²⁰ However, it entitled the investors to expect that the host State would not drastically and abruptly revise the regime, on which their investment depended, in a way that destroyed its value.⁴²¹ In the view of the tribunal, the regulatory changes adopted between 2012 and 2014 by the Spanish government crossed the red line of the margin of acceptable regulatory change because they cumulatively resulted in fundamental and unreasonable changes in the legal environment of the investments.⁴²² The tribunal explicitly referred to the *Charanne v Spain* award and the first regulatory changes in 2010 in juxtaposition to the much more severe measures in question. In its opinion, the first case “addressed much less sweeping changes to the photovoltaic regulatory regime, changes that produced far less drastic economic consequences for the *Charanne*

414 *Philip Morris v Uruguay*, *supra* n. 178, para 423.

415 Ortino (2018) *supra* n. 403, 859.

416 *Charanne v Spain*, *supra* n. 164, para 533.

417 *Ibid*, para 539.

418 Selivanova (2018) *supra* n. 368, 450.

419 ICSID, *Eiser v Spain*, *supra* n. 413.

420 *Ibid*, paras 362-363.

421 *Ibid*, para 387.

422 *Ibid*, para 365.

*claimants*⁴²³. The tribunal implicitly applied a proportionality test when it stated that, despite the indisputable reasonableness of the adopted regulatory changes, their effect on the investment was so grave that they deprived it essentially of all its value. Therefore, tacitly, the tribunal accepted that, due to their unforeseeable, unfair, and inequitable nature⁴²⁴ and their excessive effects on the investment, the new regulatory changes were not *stricto sensu* proportionate and amounted to a breach of the FET standard.⁴²⁵

The tribunal in *Isolux v Spain* also dealt with the second wave of radical regulatory changes enforced by Spain in 2012-2014 but found that, given the facts of that case, there was no breach of the FET standard.⁴²⁶ What weighed differently in the reasoning of the tribunal in the *Isolux v Spain* case was that the investments were made in 2012, much later than the investments in *Eiser*, which were made in 2007 relying on the incentives provided by the initial regulatory framework.⁴²⁷ For that reason, the tribunal concluded that investors commencing activities in 2012 should have anticipated the regulatory changes since the regime applicable to the production of renewable energy had already undergone significant amendments since 2010, and several studies had demonstrated that these changes were inevitable.⁴²⁸ Conversely, investment tribunals have recently applied the reasoning of the award in *Eiser v Spain* in the *Masdar v Spain and Novenergia II v Spain* awards.⁴²⁹ Both of the awards found for the investor, concluding that the retroactive measures adopted by Spain in 2012-2014 constituted fundamental and unreasonable changes to the regime of renewables.⁴³⁰ Even though it is not possible to predict the outcome of the numerous pending cases on the same matter,⁴³¹ the awards issued so far concerning the regulatory changes adopted by Spain in relation to investments in photovoltaic plants display some consistency with regard to the acceptable margin of change under the FET standard. While the regulatory framework needs to be adaptable and reflective of changes, it cannot be radically changed to deprive the investors of the total value of their investments.

3.2.2. *Legitimate expectations of the investors under the FET standard and the host State's regulatory discretion*

Forming an essential element of the FET standard, the legitimate expectations of an investor are frustrated “when a State repudiates former assurances or refuses to give assurances that it will comply with its obligations depriving the investor in whole or significant part, of the use or reasonably-to-be expected economic benefit of its

423 *Ibid*, para 369.

424 *Ibid*, para 365.

425 *Ibid*, para 418. Characteristically with respect to the devaluation of the investment, the award mentions a testimony according to which “the investment was valued at 4 million [Euros], compared to an investment which we made, invested in the plants of about 125 million”.

426 *Isolux Netherlands v Kingdom of Spain*, *supra* n. 164.

427 Selivanova (2018) *supra* n. 368, 452.

428 *Isolux v Spain*, *supra* n. 164, para 789.

429 ICSID, *Masdar Solar & Wind Cooperatief UA v The Kingdom of Spain*, ICSID Case No ARB/14/1, Award of 16 May 2018, *Novenergia II v Spain*, *supra* n. 374.

430 *Masdar v Spain*, *supra* n. 429, para 521-522, *Novenergia II v Spain*, *supra* n. 374, para 191.

431 D Behn (2016) ‘Spain Wins First PV Solar Arbitration: A Word of Caution in Using this Case to Predict Outcome in the more than Three Dozen Cases to Come’, available online at: <https://www.jus.uio.no/pluricourts/english/blog/daniel-friedrich-behn/2016-01-26-arbitration-spain.html>.

investment”.⁴³² However, an investor cannot claim that he has formed legitimate expectations based only on the generally applicable legal framework at the time of making its investment.⁴³³ The expectation that the legal regime is not going to be radically changed cannot shield the investor from ordinary business risk. Instead, expectations must have been reasonable and legitimate in the context in which the investment was made.⁴³⁴

Legitimate expectations must be based on specific assurances or representations made by the host State, without them necessarily being included in a contractual arrangement.⁴³⁵ According to the prevailing approach among tribunals, these assurances and promises need to be explicitly offered to the foreign investor.⁴³⁶ For instance, in the *Charanne v Spain* award, the tribunal rejected the claim that general statements made in investment promotion documents by Spain created legitimate expectations to the investors that the legal framework regulating renewables would not be modified.⁴³⁷ Investment tribunals have generally admitted that, in the absence of a stabilisation clause in the investment contract, the investors cannot legitimately expect that the regulatory framework regarding their investment will remain static.⁴³⁸ Therefore, establishing legitimate expectation becomes more complicated when the claimants seek to rely on assurances of a generic nature, such as the regulatory framework laid down when they made their investment.⁴³⁹

Generally, in the absence of specific assurances or contractual commitments to the investors, they have failed to defend their claim that the general legal framework reasonably created their legitimate expectations. In *Charanne v Spain*, the tribunal rejected the potential of the legal framework, even if that relates to a specific group of investors, to give rise to legitimate expectations. In the tribunal’s words,

“the rules at issue do not lose the general nature that characterizes any law or regulation by their specific scope. To convert a regulatory standard into a specific commitment of the state, by the limited character of the persons who may be

432 *Azurix Corp v Argentine Republic*, *supra* n. 331, para 287.

433 Selivanova (2018) *supra* n. 368, 441.

434 *Saluka v Czech Republic*, *supra* n. 107, para 304.

435 *Total SA v Argentine Republic*, *supra* n. 213, para 121.

436 *Ibid*, see also PCA, *JSW Solar and Wirtgen v. Czech Republic*, Award of 11 October 2017, paras 445-446.

437 *Charanne v Spain*, *supra* n. 164, para 496-497.

438 *Saluka v Czech Republic*, *supra* n. 107, para 442, *Antaris v the Czech Republic*, *supra* n. 246, para 437.

439 “In such instances, investor’s expectations are rooted in regulation of a normative and administrative nature that is not specifically addressed to the relevant investor. This type of regulation is not shielded from subsequent changes under the applicable law. This notwithstanding, a claim to stability can be based on the inherently prospective nature of the regulation at issue aimed at providing a defined framework for future operations. This is the case for regimes, which are applicable to long-term investments and operations, and/or providing for fall backs or contingent rights in case the relevant framework would be changed in unforeseen circumstances or in case certain listed events materialize. In such cases, reference to commonly recognized and applied financial and economic principles to be followed for the regular operation of investments of that type (be they domestic or foreign) may provide a yardstick. This is the case for capital intensive and long-term investments and operation of utilities under a license, natural resources exploration and exploitation, project financing or Build Operate and Transfer schemes. The concept of regulatory fairness or regulatory certainty has been used in this respect. In light of those criteria when a State is empowered to fix the tariffs of a public utility it must do so in such a way that the concessionaire is able to recover its operations costs, amortize its investments and make a reasonable return over time...”, *Total SA v Argentine Republic*, *supra* n. 213, paras 121-122.

affected, would constitute an excessive limitation on the power of states to regulate the economy in accordance with the public interest”.⁴⁴⁰

However, some tribunals in recent awards have challenged that reasoning, accepting that State conduct or even statements, which objectively create such expectations (regardless of the intention of the host State), are sufficient grounds for the establishment of legitimate expectations.⁴⁴¹ In *Masdar v Spain*, the tribunal examined not only the Spanish legal framework but also the existence of specific commitments to conclude that the modifications of the legal framework constituted a breach of the FET standard.⁴⁴² Similarly, in *Antin v Spain*, the tribunal stressed that investors’ legitimate expectations might be frustrated if the host state “eliminates the essential features of the regulatory framework relied upon by the investor in making a long-term investment”.⁴⁴³ However, in those cases, the regulatory changes by Spain were rather exceptional in terms of their severe impact on the investments.⁴⁴⁴ Those uniquely severe – for the investments – regulatory changes can justify the different positions of the tribunals, which upheld that there was a breach of the legitimate expectations created which had been based on general statements by the host State.⁴⁴⁵ Despite the somewhat dissimilar reasoning of different investment tribunals, it remains clear that host States should at least not back out from specific representations which they made to attract foreign investors and upon which the investors relied to make their decision to proceed with their projects.

As was discussed in section 2.2.2., the environmental obligations of the State can significantly impact the content of the legitimate expectations of the investors. In light of the dynamic environmental obligations of the State, the investors can only reasonably expect that domestic regulation will change and progressively become more stringent.⁴⁴⁶ With regard to the implications of EU directives promoting the development of renewable energy in Europe on the legitimate expectations of foreign investors, the *Blusun v Italy* award noted that

“international law does not make binding that which was not binding in the first place, nor render perpetual what was temporary only. In the present case, the expectations are even less powerful because European law had already lowered them: it was clear that the incentives offered were subject to modification in light, inter alia, of changing costs and improved technology”.⁴⁴⁷

In that respect, the FET standard does not preclude States from adopting novel measures in compliance with their international obligations, even if these measures

440 *Charanne v Spain*, *supra* n. 164, para 493.

441 *Masdar v Spain*, *supra* n. 429, para 512, *Novenergia v Spain*, *supra* n. 374, para 681.

442 *Ibid.*, 511-522.

443 ICSID, *Infrastructure Services Luxembourg S.à.r.l. and Energia Termosolar B.V. (formerly Antin Infrastructure Services Luxembourg S.à.r.l. and Antin Energia Termosolar B.V.) v Kingdom of Spain*, ICSID Case No. ARB/13/31, Award of 15 June 2018, para 556.

444 The awards refer in juxtaposition to the more lenient measures taken in 2010, which were dealt with in the *Charanne* case, to demonstrate that the measures in 2013 and 2014 “dismantled all the regime and therefore all the features” of the preexisting legal framework, see *Antin v Spain*, *supra* n. 443, paras 558, 560.

445 Hirsch (2011) *supra* n. 357, 784.

446 *Philip Morris v Uruguay*, *supra* n. 178, para 430.

447 *Blusun v Italy*, *supra* n. 410, para 371, see also *Antaris v the Czech Republic*, *supra* n. 246, para 437, 445.

are in advance of international practice, provided that these have some rational basis and are not discriminatory.⁴⁴⁸

When it comes to investments in offshore energy production, the host State must comply with its international obligations, for instance concerning marine safety and preparedness against accidents, for the investments to operate smoothly. Such investments in offshore infrastructure can be severely affected if the host State does not show due diligence in protecting the marine environment within which they operate. Considering the severe repercussions of the Deepwater Horizon accident for the industry and all other economic activities in proximity, serious marine environmental harm can be assumed to hinder investments located in the marine area of a major accident.⁴⁴⁹ While they create a reasonable expectation that the domestic environmental legal framework can become gradually more stringent,⁴⁵⁰ it is arguable that the environmental obligations of the State do not equate the issuance of specific commitments to the investors. Given the discretion which States maintain in the implementation of most of their environmental duties, an investor cannot reasonably expect that the host State will adopt a specific set of environmental measures in furtherance of those duties.

The question of whether an investor can derive legitimate expectations from environmental law obligations was dealt with by the tribunal in the *Allard v Barbados* case.⁴⁵¹ The claimant, a Canadian investor who owned a nature sanctuary in Barbados, complained that the alleged failure by the host State to take specific measures in implementing its obligations under the Ramsar Convention on Wetlands and the Convention on Biological Diversity, resulted in the pollution of his eco-tourism sanctuary, depriving him of the value of the investment. Specifically, the investor claimed that Barbados had failed to accord to his investment Full Protection and Security (FPS) under the 1996 Barbados-Canada BIT because it failed to prevent a State agency from repeatedly discharging polluted substances into the wetlands in violation of both Barbados' domestic environmental law and obligations under environmental agreements. Furthermore, the investor claimed that Barbados had failed to provide him FET because he had legitimate expectations that the host State would enforce its environmentally friendly regulatory framework. The tribunal admitted in an *obiter dictum* that, although the environmental obligations of the host State can be relevant in the application of FET and full security and protection (FPS) standards,⁴⁵² they are probably too general to create legitimate expectations regarding specific conduct by the host State.⁴⁵³ The tribunal implied that the host State maintains some discretion in adopting environmental measures since States often need to consider a multitude of interests besides the economic interests of a specific investor.

448 *Ibid.*

449 T Scovazzi, 'Maritime Accidents with Particular Emphasis on Liability and Compensation for Damage from the Exploitation of Mineral Resources of the Seabed' in A de Guttery, M Gestri, and G Venturini (eds) *International Disaster Response Law* (Springer, 2012) 287.

450 *Clayton and Bilcon of Dalaware Inc v Canada*, PCA Case No 2009-04, Award on Jurisdiction and Liability of 17 March 2015, para 738.

451 *Peter A Allard v the Government of Barbados*, PCA Case No 2012-06, Award of 27 June 2016.

452 *Ibid.*, para 244.

453 *Ibid.*, para 208.

Nonetheless, as a matter of principle, the *Allard v Barbados* award is of high relevance for offshore energy production investments as it appears to leave room for arguing that a host State can be held liable under an IIA for failing to duly comply with its environmental obligations.⁴⁵⁴ It needs to be acknowledged, though, that the new generation of IIAs, have introduced specific interpretative clauses in the FET standard stipulating, *inter alia*, that “[f]or greater certainty, a breach of another provision of this Agreement or of any other international agreement does not constitute a breach of this Article”.⁴⁵⁵ However, it would be hard to assume that this interpretative guideline is introduced to exclude the interpretation of the FET standard in light of the environmental obligations of the State under article 31(3)(c) of the VCLT.⁴⁵⁶ These provisions should be read as excluding the possibility of directly equating the breach of other international agreements with breaches of the FET standard. Nonetheless, they cannot preclude their interpreter from considering other international rules to elucidate the normative content of the investment protection standard.

The investor’s diligence is also a significant element in evaluating the legitimacy and reasonableness of investor’s expectations under the FET standard.⁴⁵⁷ The investor is expected to showcase diligence by becoming aware of the legal framework governing its projected activities, as well as the foreseeable amendments to such a framework during the life-cycle of the investment.⁴⁵⁸ That is particularly important for investments in offshore energy production, since the foreign companies are usually sophisticated actors in the energy sector which cannot reasonably expect that no regulatory changes will interfere with their investments during their long-term operation. That point was highlighted in the *Charanne v Spain* case, where the tribunal explicitly declared that investors in the renewable energy sector are reasonably expected to show a high standard of diligence.⁴⁵⁹ *Mutatis mutandis*, the legitimate expectations of foreign investors in offshore energy production projects should be evaluated considering the level of diligence they are reasonably expected to display, at least with regard to being aware of the legal framework and the likelihood

454 J Paine (2017) ‘Failure to Take Reasonable Environmental Measures as a Breach of Investment Treaty?’ *Journal of World Investment and Trade*, 746.

455 See, article 9(6) of the 2018 Dutch Model BIT.

456 It needs to be mentioned though that in the case of *Grand River v USA*, the investment tribunal rejected the argument of the claimant that it should take into account the obligations of the host State towards indigenous populations in the interpretation of the FET standard on the basis of the Interpretative Note by the NAFTA Commission. According to that Note, the FET standard should be equated to the minimum standard of protection of aliens under customary international law. In that respect, the tribunal emphasised that it did not have an obligation to take into account the other rules of international law “to provide a license to import into NAFTA legal elements from other treaties, or to allow alteration of an interpretation established through the normal interpretative process of the Vienna Convention. The Tribunal is particularly mindful in this regard of the Free Trade Commission’s directive that a violation of an obligation under another treaty does not give rise to a breach of Article 1105”; ICSID, *Grand River Enterprises Six Nations Ltd v USA*, ICSID Case No ARB/10/5, Award of 12 January 2011, para 71.

457 J Viñuales (2017) ‘Investor Diligence in Investment Arbitration: Sources and Arguments’, *ICSID Review*, 362.

458 *Plama v Bulgaria*, *supra* n. 247, para 219-221.

459 In the words of the tribunal, “at least that is the level of care that would be expected of a foreign investor in a highly regulated sector as the energy sector, where a preliminary and comprehensive legal framework applicable to the sector analysis is essential to proceed with the investment”, *Charanne v Spain*, *supra* n. 164, para 507, see also *Antaris v the Czech Republic*, *supra* n. 246, para 434.

of amendments, which can affect their investments. The reasonableness of their expectations needs to be examined in the light of the particularities of the sector, including “*business risk or industry’s regular patterns*”.⁴⁶⁰

3.2.3. Reasonableness and proportionality analysis under the FET standard

In any event, regulatory measures need to be proportional to their purported objective. In the context of the FET standard, a proportionality analysis should consider the investor’s legitimate expectations, as well as the State’s sovereign right and duty to take all necessary measures for the protection of the public interest, such as the environment.⁴⁶¹ States must be allowed to exercise some discretion in implementing their environmental obligations, but they should not abuse this flexibility to the detriment of foreign investors.⁴⁶² Therefore, the proportionality test under the FET standard enables tribunals to balance, on the one hand, the need for regulatory autonomy on behalf of the host State and, on the other hand, the reasonable interests of the foreign investors. The question is then which standard of review has to be applied in examining the proportionality of the challenged measures.

In line with the reasoning of the tribunal in the *Philip Morris v Uruguay* case, tribunals should refer and give appropriate weight to the host State’s obligations under environmental law. Therefore, tribunals should adopt a deferential standard of review to allow States a margin of appreciation to ensure that they do not unduly restrain the States’ ability to respect those obligations. In that respect, a higher sensitivity towards the choices of the host States when analysing the proportionality of challenged measures seems appropriate.⁴⁶³ Relevantly, the tribunal in the *Philip Morris v Uruguay* case placed weight primarily on the lack of apparent disproportionality, focusing on the host State’s efforts to comply effectively with its international obligations under the FCTC. In other words, the tribunal acknowledged the State’s sovereign right but also the duty under its international commitments to adopt the measures to protect public health, and for that reason restricted its review to whether there was a manifest lack of reasons for the challenged measures and whether they were adopted in bad faith.⁴⁶⁴ It further accepted that it should defer to scientific findings which are made following due process and on a non-discriminatory and non-arbitrary basis.⁴⁶⁵ In the tribunal’s opinion, there should be a margin of appreciation, especially when it comes to the evaluation of scientific evidence that supports the proportionality of the challenged measures. It held that there was no need to prove the actual effectiveness or utility of the measures so long as the measures were deemed to be reasonable when

460 Viñuales (2017) *supra* n. 457, 362.

461 *Total v Argentine Republic*, *supra* n. 213, para 123.

462 Selivanova (2018) *supra* n. 368, 14.

463 Foster (2017) *supra* n. 179, 288, Kingsbury and Schill (2010) *supra* n. 392, 103, E Benvenisti (2013) ‘Sovereigns as Trustees of Humanity: On the Accountability of States to Foreign Stakeholders’, *American Journal of International Law*, 317.

464 P-K Yang (2018) ‘The Margin of Appreciation Debate over Novel Cigarette Packaging Regulations in *Philip Morris v Uruguay* – A Step Toward a Balanced Standard of Review in Investment Disputes’, *Brill Open Law*, 100.

465 The tribunal upheld that measures passed the test of reasonableness because they addressed a public purpose and were not “*arbitrary, grossly unfair, unjust, discriminatory or disproportionate*”, *Philip Morris v Uruguay*, *supra* n. 178, para 410.

adopted by the host State.⁴⁶⁶ Uruguay's reliance on its obligations, soft law guidelines by the COP to the FCTC and the relevant scientific evidence provided through due process by international bodies, such as the secretariat of the WHO, were adequate proof that it had exercised due diligence, and, therefore, the challenged measures could not be considered to be grossly disproportionate.

A similar standard of deference in assessing the proportionality of measures based on scientific evidence was supported by the tribunal in the *Chemtura v Canada* case, according to which "it is not within the scope of its task to second-guess the correctness of the science-based decision-making of highly specialized national regulatory agencies".⁴⁶⁷ Therefore, it can be argued that environmental measures in compliance with international obligations of the State, which are adopted following the scientific findings of treaty bodies and competent international organisations should be presumed to be suitable to achieve their purported objective. In the case of environmental measures, which are often adopted based on scientific evidence, the tribunals could merely check whether the host State followed a due process in identifying the suitability and necessity of the measures. Therefore, international environmental norms and scientific evidence produced by treaty bodies to environmental agreements can be used as evidence regarding the reasonableness of the domestic implementation measures. For instance, reliance on guidelines on the implementation of EIAs by the CoP to the CBD or scientific evidence by the Scientific Committee of the Whaling Convention could serve as evidence that the host State adopted appropriate measures to mitigate environmental risks arising from the operation of marine renewable energy generation devices. The lack of absolute scientific certainty cannot render such measures arbitrary.⁴⁶⁸ On the contrary, the host State can take novel measures for the protection of the marine environment, provided that they are reasonably efficient in achieving their goal.⁴⁶⁹ The test of reasonableness requires the host State to prove that there is a correlation between the objective and the measures adopted in its pursuit. Nonetheless, the stage of *stricto sensu* proportionality enables arbitral tribunals to find in favour of investors in a case where the measures are appropriate but have obviously excessive effects on the investments, as shown by recent awards concerning the regulatory reform of the renewable's regime in Spain.⁴⁷⁰

3.2.4. The requirements of non-discrimination and due process under the FET standard

Moreover, as investment awards have indicated,⁴⁷¹ the implementation of the regulatory measures is arguably as important as the content of the measures themselves. Even though investment disciplines allow considerable discretion to

466 *Ibid*, paras 408-409.

467 *Chemtura v Canada*, *supra* n. 174, para 134. See also *SD Myers v Canada*, where the tribunal opined that its evaluation on the reasonableness of the challenged measures "must be made in light of the high measure of deference that international law generally extends to the right of domestic authorities to regulate matters within their own borders", *supra* n. 260, para 263.

468 See *Windstream v Canada*, *supra* n. 166.

469 See *Philip Morris v Uruguay*, *supra* n. 178.

470 *Masdar v Spain*, *supra* n. 429, para 512, *Novenergia v Spain*, *supra* n. 374, para 681.

471 See for instance, *Nykomb v Latvia*, where the tribunal concluded that, even though the amendment of energy law was not in itself a breach of the standards of investment protection, the discriminatory application of the amended law by Latvia against the complainant amounted to a breach of the

the host State in implementing its environmental obligations, their application in a non-discriminatory manner is indispensable. If these measures are applied in a discriminatory manner to investments that are operating in like circumstances, then the host State is likely to be in breach of its obligation not to take discriminatory measures under the FET, or the national and MFN treatment standards of protection. This conclusion was recently reaffirmed by an ICSID investment tribunal, which found that Serbia breached the FET standard by not enforcing its environmental regulations in an even-handed manner, allowing the claimant's local competitors to dispose of their waste more cheaply without complying with the relevant environmental rules.⁴⁷² Last but not least, the host State should ensure that environmental measures affecting foreign investments are adopted with due process. The State must ensure the impartiality of the decision making, the issuance of the right to be heard before targeted environmental measures and must refrain from unjustified severe delays in the regulatory process.⁴⁷³ Even in this case, arbitral tribunals have set quite a high threshold for the breach of the standard of the due process, examining whether the host State has shown more than a perceived unfairness.⁴⁷⁴ The standard of due process does not require perfection in the procedure of implementation of measures: State conduct would only breach the FET standard when the process is “*manifestly unfair or unreasonable such as would shock, or at least surprise a sense of judicial propriety*.”⁴⁷⁵

Given the considerable discretion of investment tribunals in the interpretation of such terms, it has been suggested that it is necessary to consolidate the interpretative approaches applied by investment tribunals in the interpretation and implementation of investment disciplines to improve legal stability for both States and investments.⁴⁷⁶ However, as is discussed in the following section, even such guidelines on the interpretation of commonly used investment standards could not completely control the predominant role of investment tribunals which is to apply the notoriously fact-specific investment obligations on a case-by-case basis.⁴⁷⁷

4. Recalibrating IIAs: the way forward towards integrating environmental obligations?

The significant influence of investment tribunals on the (sometimes inconsistent) application of investment protection standards has given rise to political backlash⁴⁷⁸ and considerable criticism about the legitimacy of international investment law and its dispute settlement mechanisms.⁴⁷⁹ States have adopted different strategies in response to these concerns, some of them denouncing the ICSID Convention, and even

prohibition of discrimination under the ECT. *Nykomb Synergetics Technology Holding AB v Republic of Latvia*, SCC Case No 118/2001, Award of 16 December 2003, para 27.

472 Investment Arbitrator Reporter (2018) ‘Serbia Held Liable at ICSID in Case Alleging Failure to Enforce Environmental Regulations’, available online at: <https://www.iareporter.com/articles/serbia-held-liable-at-icsid-in-case-alleging-failure-to-enforce-environmental-regulations/>.

473 Y Zhu (2018) ‘Fair and Equitable Treatment of Foreign Investors in an Era of Sustainable Development’, *Natural Resources Journal*, 360-361.

474 Harrison (2020) *supra* n. 145, 498.

475 *AES Summit v Hungary*, *supra* n. 394, para 9.3.40.

476 Selivanova (2018) *supra* n. 368, 23.

477 Paine (2018) *supra* n. 348, 206.

478 Burke-White (2015) *supra* n. 73, 10.

479 S Franck (2005) ‘The Legitimacy Crisis in Investment Treaty Arbitration: Privatizing Public International Law Through Inconsistent Decisions’, *Fordham Law Review*, 1521.

terminating or withdrawing from IIAs.⁴⁸⁰ To the same end, States have also sought to intervene through law-making to regain control over investment arbitrators' discretion in their interpretation and application. Notably, over the past few years, as the numbers of investment claims have been increasing exponentially, many States have been actively involved in redrafting and renegotiating provisions under existing IIAs to limit the discretion that broadly formulated investment disciplines allowed to investment tribunals in their implementation.⁴⁸¹

In practice, the vague wording (intentionally or not) used in the formulation of investment protection standards has been a double-edged sword. On the one hand, it increased the flexibility of investment rules to accommodate changes in their normative environment, but on the other hand, it created uncertainty regarding exactly what they prescribed.⁴⁸² Indeed, the use of vague, evaluative language in investment protection provisions has been a critical factor enabling the adoption of various approaches in their interpretation and application by investment tribunals.⁴⁸³ In that context, the recalibration of IIAs aims to increase the regulatory space for host States.⁴⁸⁴ Recently, some States have also issued joint interpretations of their existing IIAs to address the tension between investment protection and their right and duty to regulate in compliance with their non-investment obligations.⁴⁸⁵ For instance, the parties of the Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union have issued a Joint Interpretative Instrument, which offers interpretative guidance for the application of the relevant obligations under the agreement, to ensure that its standards will not be interpreted more broadly than the parties intended.⁴⁸⁶

First-generation IIAs provided little guidance on how to reconcile competing international obligations of the host State. Most of them did not even acknowledge that the host State has the right and duty to adopt measures to achieve objectives other than the protection of investments.⁴⁸⁷ Normative interactions could be better

480 On 31 December 2014, Italy notified the ECT Depository of its intention to withdraw from the ECT and formally withdrew on 1 January 2016. Nevertheless, protection under the investment chapter of ECT will continue to cover investments that were made in Italy up to 1 January 2016, until the expiration of 20 years on 31 December 2035, in accordance with article 47 of the ECT. See, Energy Charter Treaty Secretariat, List of Members and Observers, available online at: <https://energycharter.org/who-we-are/members-observers/countries/italy/>.

481 K Gordon, and J Pohl (2015) 'Investment Treaties over Time – Treaty Practice and Interpretation in a Changing World', *OECD Working Papers on International Investment*, available online at: <http://www.oecd.org/investment/investment-policy/WP-2015-02.pdf>, 37.

482 C Tietje, and K Crow, 'The Reform of Investment Protection Rules in CETA, TTIP, and Other Recent EU FTAs: Convincing?' in S Griller, W Obwexer, and E Vranes (eds) *Mega-Regional Trade Agreements: CETA, TTIP, and TiSA – New Orientations for EU External Economic Relations* (Oxford University Press, 2017) 88.

483 K Polackova Van der Ploeg (2018) 'Protection of Regulatory Autonomy and Investor Obligations: Latest Trends in Investment Treaty Design', *International Lawyer*, 112.

484 Spears (2010) *supra* n. 69, 1037-1075.

485 Gazzini (2016) *supra* n. 147, 337.

486 Joint Interpretative Instrument on the Comprehensive Economic and Trade Agreement between Canada and the European Union and its Member States, 27 October 2016, 5. Such instruments must be considered for the interpretation of the respective investment agreements as subsequent agreements between the parties under article 31(3)(a) of the VCLT.

487 Some treaties have already addressed the issue by including a "no lowering environmental standards" clause, as in the case of article 1114(2) of NAFTA, which states that it is "inappropriate to encourage investment by relaxing domestic health, safety or environmental measures".

addressed if new generations of IIAs incorporated explicit provisions concerning the relationship of investment disciplines with rights and duties under other international agreements and specified how potential conflicts among them should be resolved.⁴⁸⁸ However, integrating environmental duties in the implementation of investment law can also be achieved in more indirect ways.⁴⁸⁹ The reorientation of IIAs has taken the form of modification of various investment provisions, including the incorporation of non-investment objectives in their preambular language, the refinement of substantive protection standards, and the introduction of exception clauses that explicitly refer to the regulatory autonomy of host States to adopt environmental measures. The CETA and the new free trade agreement between the US, Mexico, and Canada (USMCA), which will replace NAFTA,⁴⁹⁰ contain chapters on environmental protection with various references to environmental agreements to which their contracting States are parties. That way, these agreements reaffirm the commitments of each party to “*effectively implement in its law and practices, in its whole territory, the multilateral environmental agreements to which it is party*.”⁴⁹¹ Interestingly, the environmental chapter of the USMCA refers to UNCLOS, even though the US is not a party to it,⁴⁹² and explicitly refers to the obligation of contracting States to take measures to prevent marine pollution.⁴⁹³

This section examines whether these new developments in investment law treaty-making can reinforce the synergistic interactions between investment and marine environmental obligations,⁴⁹⁴ and allow host States broader discretion in complying with their duty to adopt all necessary measures to protect and preserve the marine environment. At this point, one can only speculate about how the innovative provisions – either already having been adopted in investment treaty practice or currently being discussed among practitioners and scholars – will impact the interaction between investment law and environmental law, since the provisions of new generation IIAs have not yet been submitted to scrutiny by arbitral tribunals. It is, however, safe to at least assume that the more elaborate wording of these provisions referring explicitly to environmental concerns enhances the likelihood that investment tribunals will attach more weight to the duty of States to regulate for the protection of the (marine) environment.

488 That said, creating specific conflict clauses can work counterproductively, in the sense that it can overly limit the room for balancing between competing rules at the stage of their implementation.

489 Prislán (2013) *supra* n. 78, 476.

490 The agreement is expected to come into force on 1 July 2020 after the US takes the final procedural steps, see <https://mx.usembassy.gov/usmca-to-enter-into-force-july-1-after-united-states-takes-final-procedural-steps/>.

491 Article 23(5) of CETA, Chapter 24 of the USMCA. See also International Institute for Sustainable Development (2018) ‘USMCA Versus NAFTA on the Environment’, available online at: <https://www.iisd.org/blog/usmca-nafta-environment>.

492 The reference to UNCLOS in this context reaffirms the customary nature of its relevant environmental provisions.

493 Government of Canada, USMCA Environmental Chapter Summary, available online at: <http://international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/usmca-aemc/enviro.aspx?lang=eng>.

494 Firger and Gerrard (2014) *supra* n. 81, 261.

4.1. Preambular provisions and the integration of environmental protection: towards a more balanced object and purpose of IIAs

The preambles to first-generation IIAs were often brief, emphasising merely their primary objective of promoting and protecting foreign investments or creating favourable conditions for the economic cooperation among their parties.⁴⁹⁵ Non-investment objectives did not have a place as autonomous objectives in the preambles of those IIAs, nor were there any other provisions implying that other international obligations of the host State could affect the implementation of investment disciplines.⁴⁹⁶ That “gap” had significant repercussions on the interaction between investment and environmental duties (or the lack thereof) in the context of investment disputes. Preambles have played an essential role in the interpretation of those treaties since investment tribunals have often relied on their wording to determine the object and purpose of the IIAs in question.⁴⁹⁷ The object and purpose of the agreement can support the interpretation approach of tribunals, especially in the light of the broad discretion granted by evaluative terms in substantive provisions.⁴⁹⁸ That led several tribunals to adopt an *in dubio pro investment* presumption in interpreting the provisions of IIAs. For example, the Court of Appeal in the *Ecuador v Occidental Exploitation* case opined that

“the object and purpose of a BIT (including this BIT) is to provide effective protection for investors of one state (here OEPC) in the territory of another state (here Ecuador) and that an important feature of protection is the availability of recourse to international arbitration as a safeguard for the investor. In these circumstances, it is permissible to resolve uncertainties in its interpretation in favor of the investor.”⁴⁹⁹

Considering the interpretative conclusions drawn by investment tribunals, it is somewhat understandable that a common feature of many new-generation IIAs is the inclusion of explicit references to the promotion of environmental protection,⁵⁰⁰ sustainable development objectives,⁵⁰¹ or, more rarely, to specific environmental

495 F Ortino (2005) ‘The Social Dimension of International Investment Agreements: Drafting a New BIT/MIT Model?’, *International Law Forum du Droit International*, 243.

496 Spears (2010) *supra* n. 69, 1064.

497 K Berner, ‘Reconciling Investment Protection and Sustainable Development: A Plea for an Interpretative U-Turn’, in Hindelang and Krajewski (2016) *supra* n. 70, 185-186, Gazzini (2016) *supra* n. 147, 157-158.

498 M Gehring, and A Kent, ‘International Investment Agreements and the Emerging Green Economy: Rising to the Challenge’, in Baetens (2013) *supra* n. 78, 202.

499 Court of Appeal, *Republic of Ecuador v Occidental Exploitation*, Judgment of 27 February 2007, para 28. See also, ICSID, *SGS v Philippines*, ICSID Case No ARB/02/6, Award on Jurisdiction of 29 January 2004, para 116.

500 See 2009 BIT between Belgium- Luxemburg Economic Union and Tajikistan, which provides that in “recognizing the right of each contracting party to establish its own levels of domestic environmental protection and environmental development policies and priorities, and to adopt or modify accordingly its environmental legislation, each contracting party shall strive to ensure that its legislation provides for high levels of environmental protection and shall strive to continue to improve its legislation”.

501 See, *inter alia*, the preamble of the 2018 Netherland’s Model BIT, which states “Considering that these objectives can be achieved without compromising the right of the Contracting Parties to regulate within their territories through measures necessary to achieve legitimate policy objectives, such as the protection of public health, safety, environment, public morals, labor rights, animal welfare, social or consumer protection or for prudential financial reason”.

agreements⁵⁰² in their preambles.⁵⁰³ Those preambles indicate that, while investment protection remains the primary objective of IIAs, it should not be pursued as an end at all costs.⁵⁰⁴ The preambles to some of the most recent IIAs further highlight that their parties' commitments under other environmental agreements may require them to adopt specific implementation measures. For instance, the 2015 Norwegian Model BIT states in the preamble that the treaty's objectives are to be achieved "*in aiming at high levels of environmental ... protection in accordance with relevant internationally recognized standards and agreements in these fields to which they are parties*", as well as that "*the provisions of this agreement and provisions of international agreements relating to the environment shall be interpreted in a mutually supportive manner*".

Such preambular clauses highlight the potential of environmental concerns to inform the interpretation of investment obligations, attaching due consideration to the environmental duties of the host State.⁵⁰⁵ The tribunal's reasoning in the *SD Myers v Canada* case appears to support such an argument on the importance of including environmental considerations in the preamble to an investment agreement.⁵⁰⁶ The tribunal considered the fact that NAFTA's preamble mentions that its parties must implement investment obligations consistently with environmental protection considerations, when assessing whether Canada had violated its obligations under NAFTA.⁵⁰⁷ Studying the preambular language, the tribunal declared that environmental and investment protection can and should be mutually supportive objectives.⁵⁰⁸ Therefore, more balanced preambles to IIAs can foster a harmonised interpretation of the investment disciplines and promote more coherence with the environmental obligations of the host State. Nonetheless, the potential of the preambles in guiding the application of the respective treaty should not be exaggerated. As the outcome of the *SD Myers c Canada* dispute indicates,⁵⁰⁹ the impact of the preamble relies heavily on the perspective adopted by each investment tribunal. As discussed in the following sub-section, it appears that the integration of environmental obligations of the host State could be enhanced when elaborate substantive investment protection provisions accompany such balanced preambles.

4.2. Refining the content of substantive investment protection standards

More importantly, there has been a noticeable move in investment treaty-making towards adding higher precision to the content of substantive investment protection provisions in order to moderate the interpretative discretion entrusted to investment tribunals. As illustrated by recent model BITs and the current negotiations for the

502 For instance the preamble to the ECT states that "*recalling the United Nations Framework Convention on Climate Change, the Convention on Long-Range Transboundary Air Pollution and its protocols, and other international environmental agreements with energy-related aspects*" and "*recognizing the increasingly urgent need for measures to protect the environment, including the decommissioning of energy installations and waste disposal, and for internationally-agreed objectives and criteria for these objectives*".

503 Nowrot (2014) *supra* n. 204, 630.

504 Spears (2010) *supra* n. 69, 1067.

505 Boisson de Chazournes (2016) *supra* n. 392, 382.

506 *SD Myers v Canada*, *supra* n. 260, para 221.

507 *Ibid*, para 196.

508 *Ibid*, para 221.

509 *Supra* n. 506 and accompanying text.

US-EU Transatlantic Trade and Investment Partnership (TTIP) and the recently concluded Trans-Pacific Partnership Agreement (TPP) and the CETA, States have included elaborate substantive provisions to refine the standards of investment protection. *Inter alia*, these new provisions aim to explicitly narrow down the scope of indirect expropriation or provide interpretative guidance for the vague and, therefore, highly unpredictable FET standard. This sub-section focuses on such attempts to refine the content of the FET and indirect expropriation standards since their interpretation and application by investment tribunals can be rather influential on the regulatory discretion of host States to meet their commitments under environmental agreements.

4.2.1. *Setting the normative parameters for the implementation of the FET standard*

The FET standard is the most frequently invoked investment protection standard and, at the same time, the most contentious one with regard to its normative contours.⁵¹⁰ That is mostly due to the lack of textual guidance in the FET provisions under most IIAs, which briefly mention that the host State must accord fair and equitable treatment to foreign investors.⁵¹¹ Despite the mostly unqualified commitment of States to provide FET to investors, investment tribunals have focused on reviewing legislative and other measures adopted by the host State concerning their impact on legal stability and the legitimate or reasonable expectations created in the investors by specific commitments and representations. Additionally, tribunals have examined the reasonableness (proportionality) of challenged measures and their non-discretionary application following due process.

Some IIAs have relied on the reference to the customary standard of protection under the FET to raise the threshold of State liability, in terms of the degree of unfairness or inequitable treatment, which amounts to a breach.⁵¹² For instance, the TPP provides that States must accord “*treatment in accordance with applicable customary international law principles, including the fair and equitable treatment*” while clarifying that States are not obliged to offer treatment “*in addition to or beyond that which is required by the customary international law minimum standard of treatment of aliens*”.⁵¹³ In 2001, the NAFTA Free Trade Commission also issued an interpretation notice to clarify that the FET standard has to be read as reflecting the customary standard of protection of aliens.⁵¹⁴ The narrow customary standard of treatment, as investment tribunals initially interpreted it, would only apply to “egregious” or “outrageous” conduct by a host State and, therefore, sets a high threshold for its breach.⁵¹⁵ However, such reference to the customary minimum standard of protection of aliens does not guarantee any certainty regarding the threshold of review of environmental measures, since the content of the customary

510 UNCTAD (2015) ‘International Policy Framework for Sustainable Development’, available online at: https://unctad.org/en/PublicationsLibrary/diaepcb2015d5_en.pdf, 43.

511 R Klager (2016) ‘Revisiting Treatment Standards – Fair and Equitable Treatment in Light of Sustainable Development’, in Hindelang and Krajewski (eds) *supra* n. 70, 67.

512 *Ibid*, 51, C Henckels (2016) ‘Protecting Regulatory Autonomy through Greater Precision in Investment Treaties: The TPP, CETA and TTIP’, *Journal of International Economic Law*, 34.

513 Article 9.6 of TPP.

514 For a discussion on the bindingness of this interpretative note as subsequent agreement on the interpretation of NAFTA, see Gazzini (2016) *supra* n. 147, 199.

515 Firger and Gerrard (2014) *supra* n. 81, 263.

rule is not static. Investment tribunals have found that this standard has evolved to hold States to more exacting standards of treatment.⁵¹⁶ Therefore, reliance on the customary standard of treatment does not resolve the problem of uncertainty regarding the FET standard but rather perpetuates the discretion of arbitral tribunals to spell out its normative contours.

Another option, used by CETA and TTIP, is the incorporation of an exhaustive list of State obligations under the FET standard.⁵¹⁷ This novel approach to defining the content of the FET standard aims to clarify which State conduct can violate the provision as well as the degree of gravity that would amount to breach.⁵¹⁸ The requirement under those agreements that the treatment afforded by the host State must be “*manifestly arbitrary*” to violate the FET standard is indicative of the intention of the contracting parties to set a high threshold for its breach.⁵¹⁹ In terms of procedural fairness, these provisions require a fundamental violation of due process, thus suggesting that the due process principle under the FET standard can only be breached where there is a substantial level of severity. Concerning the legitimate expectations of the investor, the new provisions stipulate that a tribunal “*may take into account whether a Party made a specific representation to an investor to induce a covered investment, that created a legitimate expectation, and upon which the investor relied in deciding to make or maintain the covered investment, but that the Party subsequently frustrated*”.⁵²⁰ Therefore, they make it clear that legitimate expectations can only be protected when a specific representation of the State has been made which creates such expectations.

The list of commitments appears to incorporate the recent developments in investment awards, which have, in general, agreed on specific sub-elements of the FET standard. However, even these more elaborate FET provisions contain vague and evaluative language, which is malleable to inconsistent and potentially expansive interpretation by investment tribunals. The use of open-ended terms, such as “manifestly”, “fundamental”, and “due process”, provides ample room for interpretation. The added value of adjectives in specifying the high degree of severity of the State’s conduct required to amount to a breach of the FET standard could also be considered as redundant since tribunals tend not to find a violation of the FET standard lightly.⁵²¹ Regarding the legitimate expectations, the provisions still do not clarify whether the specific representations by the host State have to take

516 R Klager, *Fair and Equitable Treatment in International Investment Law* (Cambridge University Press, 2011) 48-61, Spears (2010) *supra* n. 69, 1056.

517 Article 9 (1) of the 2018 Dutch Model BIT also includes such a list in article 9(2) stating: “A Contracting Party breaches the aforementioned obligation of fair and equitable treatment where a measure or series of measures constitutes: a) Denial of justice in criminal, civil or administrative proceedings, b) Fundamental breach of due process, including a fundamental breach of transparency, in judicial and administrative proceedings, c) Manifest arbitrariness, d) Direct or targeted indirect discrimination on wrongful grounds, such as gender, race, nationality, sexual orientation or religious belief, e) Abusive treatment of investors such as harassment, coercion, abuse of power, corrupt practices or similar bad faith conduct or, f) A breach of any further elements of the fair and equitable treatment obligation adopted by the Contracting Parties in accordance with paragraph 3 of this Article”. See also the EU-Singapore and EU-Vietnam FTAs”

518 Henckels (2016) *supra* n. 512, 36.

519 *Ibid*, 36-37.

520 Article 8.10 of CETA, article 3(4) of TTIP, 2018, article 9(4) of the Dutch Model BIT.

521 Klager (2016) *supra* n. 511, 75.

a particular form, nor do they specify whether a State can depart from legitimate expectations when that is deemed necessary, for example, to honour commitments under environmental agreements. In addition, the incorporation of an exhaustive list of obligations cannot prevent investment tribunals from drawing upon elements of the evolving customary rule on the treatment of aliens to interpret and apply the FET standard. As a matter of evidence, the tribunal in *Philip Morris v Canada*, despite the lack of textual reference in the BIT in question, referred to article 31(3)(c) of the VCLT to incorporate the customary principle of police powers in its interpretation of the indirect expropriation standard.⁵²²

4.2.2. *Delimiting the cases of indirect expropriation – carving out the police powers doctrine*

Similarly, there have been inconsistent arbitral awards concerning the application of the police powers doctrine, which justifies non-discriminatory measures adopted under specific requirements, in the context of indirect expropriation. Earlier IIAs do not offer much guidance for distinguishing indirect expropriation from non-compensable regulatory measures pursuing a legitimate public policy objective, such as the protection of the environment in the host State. For that reason, States have attempted to narrow down the instances that may amount to a breach of the expropriation standard.⁵²³

The 2012 US Model BIT⁵²⁴ directs arbitral tribunals to engage in “*a case-by-case, fact-based inquiry*”, considering, among other factors, the economic impact of the challenged measures, the extent to which they interfere with reasonable investment-backed expectations and the character of the measures.⁵²⁵ The provision further clarifies that “*except in rare circumstances, non-discriminatory regulatory actions by a Party that are designed and applied to protect legitimate public welfare objectives such as public health, safety and the environment, do not constitute indirect expropriations*”.⁵²⁶ Several other IIAs have included these model provisions.⁵²⁷ They aim to create a rebuttable presumption that such non-discriminatory regulatory measures do not constitute an expropriation. Expressly, they do not purport to entirely exclude such measures from the scope of compensable expropriation, but rather allow the tribunal to check when the facts can refute this presumption under rare circumstances. The CETA provision on expropriation has also explicitly added the duration of the challenged measures as a factor to be examined by the investment tribunal in assessing alleged breaches of the standard.⁵²⁸ CETA’s relevant provision further seeks to clarify the content of “rare circumstances”, stipulating that “*except in the rare circumstance where the impact of the measure or series of measures is so severe in light of its purpose that it appears manifestly excessive, non-discriminatory measures of a Party that are designed and applied to protect legitimate public welfare objectives,*

522 *Supra* n. 385 and accompanying text.

523 L Stifter, and A Reinisch, ‘Expropriation in the Light of the UNCTAD Investment Policy Framework for Sustainable Development’, in Hindelang and Krajewski (2016) *supra* n. 70, 90.

524 The 2004 Canadian Model FIPA contains an identical provision on expropriation, see Annex B.13(1).

525 Annex B(4)(a) of 2012 US Model BIT.

526 Annex B(4)(b) of 2012 US Model BIT.

527 Stifter and Reinisch (2016) *supra* n. 523, 92 with references to multiple BITs, fn 62.

528 Annex X.11(2) of CETA.

such as health, safety and the environment, do not constitute indirect expropriation”.⁵²⁹ The added value of this provision is that it determines when rare circumstances refute the presumption that regulatory measures are not expropriatory. To that end, it unequivocally introduces a requirement for proportionality analysis of the challenged measures.

These expropriation provisions are expected to result in some legal certainty and more consistent investment awards by defining the methodology and criteria to determine a violation of the standard. The fine-tuning of the normative content of indirect expropriation may enlarge the host State’s discretion in adopting environmental measures, by specifying that non-discriminatory environmental regulations, especially when relevant international obligations reaffirm their legitimacy, do not qualify as compensable expropriation. Also, these provisions seem to direct investment tribunals to engage in proportionality analysis to determine when the challenged measures are so severe in light of their purpose that they appear manifestly excessive. In such “rare circumstances”, the tribunals are called to weigh the severity of the measures against their impact on the investment.⁵³⁰

However, as was the case with the “renewed” FET provisions, the indirect expropriation clauses contain vague and malleable terms.⁵³¹ The factors that have to be considered by the tribunal are not exhaustively enumerated. Instead, several factors need to be taken into account on a case-by-case basis in a fact-based inquiry. Therefore, delimiting the interpretative basis of the tribunals will not necessarily limit their discretion in the application of the indirect expropriation standard, which, like most of the investment disciplines, is notoriously fact-specific.⁵³² In the case of provisions drafted following the US BIT model, tribunals obtain broad discretion in deciding when a challenged measure falls within the rare circumstances that lead to their characterisation as indirect expropriation.

Regarding the proportionality analysis required by some of the provisions,⁵³³ it needs to be remembered that the test holds excellent potential in balancing competing interests. However, its impact on the regulatory autonomy of the host State will greatly depend on the standard of review adopted each time by the investment tribunal. A more intrusive standard of review increases the possibility that the challenged measures are found to be excessively affecting the interests of the investor compared with the gain for the pursued environmental objective. Using adjectives like “manifestly” to indicate the severity of disproportionality of the measures can be of little added value when the investment tribunal has the last word in clarifying the margin of acceptable regulatory autonomy of the host State. Perhaps a reference to the “margin of appreciation” doctrine, as applied by some investment tribunals, could indicate that a more deferential standard of review is more appropriate, at least in the case of environmental measures, which are supported by relevant scientific evidence, acquired through due process.

529 Annex X.11(3) of CETA.

530 Henckels (2016) *supra* n. 512, 43.

531 *Ibid.*, 42.

532 C Martini (2017) ‘Balancing Investor’s Rights with Environmental Protection in International Investment Arbitration: An Assessment of Recent Trends in Investment Treaty Drafting’, *International Lawyer*, 575-576.

533 For instance, in the case of CETA, Annex 9-B(3), TTIP Annex I(3).

4.2.3. *Environmental considerations in exception provisions: added value or added uncertainty regarding non-conforming environmental measures?*

Like exception clauses in international trade law, exception clauses (or non-precluded measures provisions) in IIAs allow a host State, subject to specific requirements to prevent abuse, to adopt measures pursuing a regulatory objective, such as the protection of the environment, that would otherwise be deemed inconsistent with the substantive investment protection standards.⁵³⁴ Rather than directing the tribunal to achieve a balance between competing interests, exception clauses guide them in balancing the objectives of the challenged measures in assessing when such measures are justified as breaches of investment disciplines. Whereas such provisions were quite scarce in earlier IIAs, recently concluded IIAs have often introduced them, indicating the will of host States to safeguard their regulatory flexibility when it comes to adopting environmental measures.⁵³⁵ New generation IIAs have further tried to attach greater precision to the objectives that trigger the application of exception clauses. For instance, the CETA, elaborating on the meaning of permissible environmental measures, makes it clear that these are measures necessary to protect human, animal or plant life or health and that they include measures aimed at the conservation of both living and non-living exhaustible natural resources.⁵³⁶

Despite their more precise formulation, there remains significant uncertainty about the potential interpretation of such clauses by investment tribunals. These exception clauses state that a non-conforming with the investment standards measure must be necessary for, related to, or otherwise connected with one of the permissible objectives.⁵³⁷ Therefore, the terms used to describe the nexus between the adopted measures and the eligible objectives allow investment tribunals a broad discretion in evaluating what sorts of measures are necessary for, related to, or connected with those objectives.⁵³⁸ For instance, the term “necessary” can be interpreted in a continuum between a very restrictive approach, which would require the measures to be the only available ones and indispensable in achieving the purported environmental objective, and a very lenient approach, which would cover any measures that could contribute to achieving that objective. In practice, tribunals have adopted widely inconsistent positions on that matter.⁵³⁹ Perhaps, exception clauses could become a bit more specific and precise regarding the test that has to be applied by investment tribunals to avoid incoherence in their jurisprudence. Besides the ambiguity regarding their relationship with substantive investment standards, such as the protection from expropriation, the likelihood of introducing an exhaustive list of objectives, which would be interpreted very restrictively by investment tribunals as exceptions that justify regulatory measures might result in imposing additional limits to the discretion of States to take steps to honour their environmental obligations.⁵⁴⁰ Therefore, the

534 Martini (2017) *supra* n. 532, 576-577, Henckels (2016) *supra* n. 512, 46-47.

535 Boisson de Chazournes (2016) *supra* n. 392, 385-386, UNCTAD (2015) *supra* n. 510, 44, Spears (2010) *supra* n. 69, 1043.

536 Article 28.3(1) of CETA.

537 Henckels (2016) *supra* n. 512, 48.

538 Spears (2010) *supra* n. 69, 1063.

539 Henckels (2016) *supra* n. 512, 48, A Newcombe, ‘General Exceptions in International Investment Agreements’ in Cordonier-Segger, Gehring, Newcombe (2011) *supra* 74, 361-365.

540 Nowrot (2014) *supra* n. 204, 634, Newcombe (2011) *supra* n. 539, 355.

importance of exception clauses should not be overestimated, considering that, in several cases, arbitral tribunals have accepted that measures aimed at the protection of public policy objectives do not amount to violations of investment standards.

Interim conclusions

International investment law and international marine environmental law have mainly developed independently from each other. Nonetheless, these fragments of international law sometimes speak to the same facts. Specifically, they are both aiming to restrain the sovereign discretion of the host State to regulate foreign investments. International environmental law purports to regulate the environmental externalities of activities, such as the production of offshore energy. On the other hand, international investment law attempts to restrain the exercise of regulatory discretion of the host State to ascertain an internationally accepted level of protection to foreign investors in such economic activities. As these branches of international law progressively evolve, and their normative content becomes concrete, they can create overlapping duties for host States. Therefore, there is increasing potential for normative interactions between them, both in the form of conflicts and normative cross-fertilisation.

These interactions usually occur during the interpretation and implementation of the relevant obligations. This chapter has examined how the systemic interpretation of investment and environmental rules is facilitated by the generic, evolutionary terms contained in IIAs and the rule of systemic integration under article 31(3)(c) of the VCLT. The wording of both substantive and jurisdictional provisions under IIAs might enable or obstruct normative interactions between those international regimes. The crux of the matter is their potential to lead to genuine normative conflicts, which require the host State to make a political decision and prioritise one duty over the other. However, in such a case, the host State might face the consequences of breaching its competing duty. The nature of the duty to protect the marine environment as an *erga omnes* or integral obligation cannot resolve this problem since it cannot absolve the State of its concurrent duty to protect foreign investments. Likewise, the anticipated universal recognition of an autonomous right to a healthy environment does not necessarily mean that such right would enjoy any kind of normative priority over investment protection duties, despite its potential to enhance marine environmental protection.⁵⁴¹ They can only assist in establishing a value-based hierarchy on a case-by-case basis, which can guide the interpreter of the duties. In that context, it appears that investment tribunals maintain a fundamental role in addressing normative interactions. Their stance towards non-investment obligations can have significant repercussions for the State's discretion in adopting measures for the protection of the marine environment. As discussed, the interpretation and implementation of investment protection obligations by international tribunals might condition the implementation of the duty to protect the marine environment.

In light of the stance of investment tribunals towards non-investment obligations, scholars have expressed concerns with regard to the impacts of investment treaty protection standards on the ability of States to comply with their international

541 Knox (2020, forthc) *supra* n. 305 with accompanying text.

environmental obligations.⁵⁴² However, considering the above analysis, it seems that the allegations concerning the far-reaching impact of investment disciplines on the discretion of States to adopt environmental measures in compliance with their international obligations, are overemphasised. As far as indirect expropriation is concerned, the host State maintains a broad discretion in choosing the necessary environmental measures without breaching the standard of investment protection and therefore, without risking being held liable to pay compensation to the foreign investor. In response to indirect expropriation claims, arbitral tribunals have determined that environmental measures can rarely have such a grave impact on the property of an investment as effectively depriving the investor of all its value. Moreover, recent awards examining indirect expropriation claims tend to adopt the police powers doctrine, which justifies regulatory measures adopted for public policy reasons, as long as they are not discriminatory and grossly disproportionate.

Tribunals have generally accepted that, in the absence of stabilisation clauses, the FET standard does not impose an obligation of strict regulatory stability, as any such claim would violate the sovereign right (and duty under environmental agreements) of States to take all necessary measures to respond to changing environmental needs and evolving environmental standards. The host State should not renege on specific commitments and representations made to the investors, primarily when these created the basis for their decision to invest in the first place, and when their frustration could result in serious adverse effects on its economic viability. States have the right to impose, amend, or abolish environmental measures governing the operation of investments so long as these do not exceed the margin of acceptable change, and they are proportionate. As suggested in the reasoning of recent investment awards, investment tribunals are keen to adopt a more lenient standard of review when testing the proportionality of challenged environmental measures. They have recognised a margin of appreciation to the host State, which allows it to base its decisions on scientific evidence, albeit evidence retrieved with due process. The host State can rely on interpretative guidance and scientific findings by treaty bodies to environmental agreements or competent international organisations to choose the most appropriate measures in compliance with its environmental obligations. Basing the implementation measures on such instruments is evidence that the State has acted diligently in examining the reasonableness of the adopted measures.

Nevertheless, investment tribunals have a strong say in the implementation of investment disciplines as they can interpret and apply malleable concepts such as “the acceptable margin of regulatory change” or “*stricto sensu* proportionality” to reach their subjective conclusions on the appropriate balance between investment protection and protection of common interests, such as the protection of the marine environment. Given the considerable discretion of investment tribunals in the interpretation of such terms, State practice suggests that it is necessary to consolidate the interpretative approaches applied by investment tribunals in the interpretation and implementation of investment disciplines to improve legal stability for both States and investors.⁵⁴³ For that reason, IIAs have been undergoing a significant reorientation, aiming to offer increased flexibility to host States in adopting necessary

542 Spears (2010) *supra* n. 69, 1039.

543 Selivanova (2018) *supra* n. 368, 23.

environmental measures in compliance with their environmental obligations. The recalibration of the preambles, substantive provisions, and exception clauses in IIAs can water down the broad interpretative discretion of arbitral tribunals, which was partly due to the highly unqualified and evaluative language of earlier IIAs. Greater precision in the formulation of the IIAs is expected to exert greater control on behalf of States over the interpretation of investment protection standards⁵⁴⁴ and encourage investment tribunals to engage in a balancing exercise paying due consideration to the sovereign right and duty of the host State to take environmental measures. That balance is especially relevant in environmentally sensitive sectors, such as offshore energy production.

Nonetheless, the jury is still out on the potential of the emerging trends in investment law treaty-making to integrate environmental obligations. In the offshore energy sector, it is crucial both for the environmental protection and the protection of investments in infrastructure that a fair balance is struck between these sometimes-competing interests. As the development of the offshore energy sector largely depends on foreign investments, their protection under international law has played a significant role in attracting foreign investors. Therefore, undermining the investment protection regime would not only affect investors in the offshore energy sector but could also undermine the capacity of host States to safeguard energy security as well as to comply with their commitments to gradually move towards low-carbon energy generation.⁵⁴⁵ At the same time, marine environmental protection is equally critical for the continuance of the operation of such investments. Only time can tell whether the new generation IIAs will fulfil their potential in enhancing the regulatory discretion of States in adopting environmental measures induced by their relevant international obligations, as well as safeguarding the legitimacy of international investment law as a more balanced and, thus, sustainable international regime.

544 Henckels (2016) *supra* n. 512, 49.

545 Besides their duties under the UNFCCC regime and relevant environmental agreements, States also bear the duty to mitigate the effects of climate change and the deterioration of the marine environment in order to comply with their human rights obligations, see Report by the Special Rapporteur on Human Rights and the Environment, *supra* n. 296, A/HRC/40/55.

CHAPTER 5

Regionalism in marine environmental protection and offshore energy production

Introduction

Despite the progress achieved in the international environmental regulation of offshore energy production activities, there are still significant normative gaps insofar as globally applicable environmental standards are concerned.¹ Although the interactions between UNCLOS and global environmental agreements, as well as other relevant instruments, can enhance the normative concreteness of the Convention's environmental obligations, they cannot address all the issues relating to the environmental externalities of offshore energy production. The lack of specific global rules is particularly apparent in the case of marine renewables. That gap has to be considered against the backdrop of the increasing scientific awareness about the potential environmental effects of the projected commercial-scale deployment of marine renewables.² Even though there is sufficient scientific evidence, backing the need for specific environmental rules and standards, to regulate these activities at the international level,³ marine renewable energy projects are still only incidentally governed by environmental obligations, such as the duty to conduct EIAs and the rules under nature conservation agreements, as discussed in chapter 3.⁴

Having examined the international environmental rules with implications for offshore energy production at the global level, the focus of the study now moves to the relevant normative developments at the regional level. Regional instruments and norms are not considered here as an alternative and self-standing rules in relation to the existing global legal framework, but as implementing, supplementing and complementing that framework. On that account, this chapter examines regional environmental rules applicable to offshore energy production activities against the

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- 1 As discussed in the previous chapters of the thesis, there are global environmental obligations with implications for the regulation of offshore energy production activities. However, most of them are obligations of conduct, whose operationalisation depends upon the existence of specific standards. These serve as benchmarks for assessing the compliance of States. In that respect, the present study refers to normative gaps on the premise that the vague global rules are not sufficient for the environmental regulation of such potential harmful activities. Instead, the adoption of more detailed rules, like the ones created under specific regional agreements is a more effective form of environmental regulation. Admittedly, the identification of normative gaps is a challenging largely subjective task. For instance, it is debatable whether we can talk about normative gaps even though there are elaborate environmental rules at the regional level, because these are not globally applicable. On the concept of normative gaps, see also D French, and L Kotze (2019) 'Towards a Global Pact for the Environment: International Environmental Law's Factual, Technical and (Unmentionable) Normative Gaps', *Review of European, Comparative and International Environmental Law*, 28-29.
 - 2 The absence of specific rules could also be regarded as a deference to domestic law, which should adopt the relevant standards to operationalise the general international environmental obligations in the context of marine renewables. However, the author posits that there is a normative gap because of the obligation of States to adopt international rules, standards, recommended practices and procedures under article 208(5) of UNCLOS.
 - 3 See chapter 3, introduction.
 - 4 See chapter 3, sub-section 1.3.2.

background of their relationship with the global legal framework and particularly, with the rules of UNCLOS. This choice is justified given the existing normative mosaic devoted to tackling the issue of marine environmental protection.⁵ To be more precise, the international legal framework for the protection of the marine environment against risks from offshore energy production projects is characterised by the parallel existence of an array of sometimes overlapping treaties and norms, both at the global and regional levels.⁶ The way these norms fit together has been illustratively described as a Russian doll: the global rules and standards encompass the usually more elaborate, in terms of normative concreteness and specificity, regional agreements.⁷ However, that does not mean that the relationship between global and regional rules is always harmonious.⁸

The reluctance of States to accept restrictions on the exercise of their sovereignty and sovereign rights over marine energy resources, through entering into more specific international commitments at the global level, partly explains the fragmented nature of the international environmental rules (often indirectly) applicable to offshore production activities.⁹ Relevant international rules develop incrementally in a dynamic context to address new environmental challenges brought about by technological and scientific developments related to the expansion of the offshore industry.¹⁰ In that context, the co-existence of different global and regional environmental rules can result in a complex normative jigsaw puzzle,¹¹ whose various pieces might not always fit perfectly with each other.¹² The implementation of the overlapping obligations regarding the protection of the marine environment may constitute one of the major bottlenecks in arriving at an effective international regime for the environmental protection of the oceans.¹³

UNCLOS offers some indications concerning the appropriate level of international cooperation in respect of specific matters.¹⁴ For instance, in the case of shipping activities, there is a clear emphasis on universal rules. However, in the context of seabed activities within national jurisdiction, the protection of the

5 See also chapter 2, sub-section 3.3.

6 Y Tanaka (2016) 'Four Models on Interaction between Global and Regional Legal Frameworks on Environmental Protection against Marine Pollution: The Case of the Marine Arctic', *Ocean Yearbook*, 345.

7 S Sadowski, 'Protection of the Marine Environment of the North Sea: The Russian Doll Effect' in H Righom (ed) *Competing Norms in the Law of Marine Environmental Protection* (Kluwer Law International, 1997) 110.

8 P Birnie, A Boyle and C Redgwell, *International Law and the Environment* (Oxford University Press, 3rd edition, 2009) 393, where the authors claim that some regional agreements do pose problems of conformity with UNCLOS, referring, for example, to the 1981 Lima Convention and its article 1 on the area of application.

9 E Molenaar, D Rothwell, and A Oude Elferink, 'Interactions between Global and Regional Regimes: Trends and Prospects' in E Molenaar, A Oude Elferink, and D Rothwell (eds) *The Law of the Sea and the Polar Regions: Interactions between Global and Regional Regimes* (Martinus Nijhoff/Brill, 2013) 400.

10 D VanderZwaag, 'Regionalism and Arctic Marine Environmental Protection: Drifting between Blurry Boundaries and Hazy Horizons' in H Righom (1997) *supra* n. 7, 246.

11 H Righom, 'Introduction' in H Righom (1997) *supra* n. 7, 7.

12 E Franckx (1998) 'Regional Marine Environment Protection Regimes in the Context of UNCLOS', *International Journal of Marine and Coastal Law*, 321.

13 A Oude Elferink, E Molenaar, and D Rothwell, 'The Regional Implementation of the Law of the sea and the Polar Regions in Molenaar, Oude Elferink and Rothwell (2013) *supra* n. 9, 7.

14 *Ibid.*, 4.

marine environment heavily depends on the development of regional rules. These regional environmental instruments cannot be implemented in isolation from the global legal framework. Regional agreements cannot be effective in pursuing marine environmental protection unless they take into account their relationship and interaction with the globally applicable rules.¹⁵ As further explained below, UNCLOS does not confer exclusive rights and duties concerning the protection of the marine environment on the States bordering a specific enclosed or semi-enclosed sea.¹⁶ Therefore, coastal States bordering such a marine region have precisely the same rights and duties under UNCLOS with regard to the protection of the marine environment as the States bordering any other marine area. Given the interdependency of rights and obligations of States, it is essential that these regional and global arrangements are compatible and do not work against one another. Ideally, these rules should be mutually supportive in identifying the standard of due diligence, which is required by States in regulating offshore energy activities to protect and preserve the marine environment.

Despite its cardinal importance, regionalism in the international protection of the marine environment has been the subject of relatively little conceptual analysis in the legal literature and merits a brief review introducing the second part of the thesis. This chapter proceeds by first identifying what is meant by regionalism in the context of the law of the sea, and specifically for marine environmental protection. In that context, section 1 examines the relevance of regionalism as an approach for marine environmental protection in general, before examining its significance for the environmental regulation of offshore energy production activities. Then section 2 discusses the gradual development of regional rules to address specific marine environmental challenges across different marine regions and briefly reviews specific normative developments with implications for offshore energy production activities. Section 3 explores how marine regionalism is accommodated as a framework for environmental cooperation under the relevant provisions of UNCLOS. Section 4 succinctly reflects on the relationship between regional agreements and UNCLOS and its potential implications for the implementation of the duty to protect and preserve the marine environment in the context of offshore energy production activities.

1. Regionalism in the law of the sea and the protection of the marine environment

Dupuy has argued that a global approach to the law of the sea “*blends harmoniously with the principle of the freedom of the seas*” because it is linked to the oceans’ historical use as a medium for international shipping.¹⁷ Nonetheless, a regional approach to the making and implementation of the law of the sea focuses on overcoming challenges created by the use of ocean space for localised economic purposes, such as the exploitation of offshore energy resources.¹⁸ Although “*the law of the sea is inherently*

15 *Ibid.*

16 B Vukas (2013) ‘Enclosed or Semi-Enclosed Seas’, Max Planck Encyclopedia of Public International Law, 22.

17 R-J Dupuy, and D Vignes, *A Handbook on the New Law of the Sea* (Martinus Nijhoff, 1991) 44-45.

18 *Ibid.*

global”,¹⁹ not every environmental problem needs to be resolved at the global level, nor only at the global level, insofar as global considerations are not overriding.²⁰

1.1. Grasping the concept of “region” in the context of marine environmental protection

Before discussing the value of regionalism for the protection of the marine environment, it is essential first to comprehend its meaning and operation. The terms region and regional consist of concepts to define the physical and intellectual limits of a subject matter in the law-making or implementation process.²¹ In the general context of the law of the sea, regionalism has been perceived as referring either to regions of the marine environment or regional arrangements (agreements, other instruments and institutions) that are related to “*the management of oceans and their resources at the regional level through mechanisms designed to implement various types of cooperative activities among States, particularly those in a contiguous geographic area*”.²² In the latter case, regionalism refers to an approach for the management of a marine area defined by its geographic or physical characteristics, such as its enclosed or semi-enclosed character, concentrating on relevant patterns of its use through an agreement to cooperate of an interested group of States.

Despite the importance attached to regional arrangements for marine environmental protection under UNCLOS,²³ neither the Convention nor any other relevant international instrument clarifies what a marine region is.²⁴ It appears that the concepts of region and regional are not used symmetrically under the Convention.²⁵ Except for the slightly loose description of enclosed and semi-enclosed seas under its article 122,²⁶ UNCLOS does not contain any prescriptive definition of a marine region, nor does it contain a list of enclosed and semi-enclosed seas.²⁷ Furthermore, one cannot deduce a clear description of a marine region from the way in which the UNEP RSP treats the concept. For instance, the RSP has attributed the qualification of regional seas to the “*enclosed or semi-enclosed seas, as well as marine and coastal areas of regions with well-defined common problems*”.²⁸ In that respect, it is noticeable

19 A Boyle, ‘Globalism and Regionalism in the Protection of the Marine Environment’ in D Vidas (ed) *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention* (Cambridge University Press, 2000) 20.

20 D Alheritiere (1982) Marine Pollution control regulation: Regional Approaches, *Marine Policy*, 172.

21 A Chircop (1989) ‘Participation in Marine Regionalism: An Appraisal in a Mediterranean Context’, *Ocean Yearbook*, 404.

22 B Boczek (1984) ‘Global and Regional Approaches to the Protection and Preservation of the Marine Environment’, *Case Western Reserve Journal of International Law*, 39, L Alexander (1994) ‘New Trends in Marine Regionalism’, *Ocean Yearbook*, 1.

23 See also below, section 3.

24 The 1958 Geneva Conventions on the Law of the Sea referred to the word region only twice, see article 4(4) of the Convention on the Territorial Sea and the Contiguous Zone and article 12(2) of the Convention on the High Seas.

25 Chircop (1989) *supra* n. 21, 405-406, where Chircop enumerates five nuanced ways in which the concept of region is referred to in UNCLOS.

26 B Vukas, ‘The Mediterranean: An Enclosed or Semi-Enclosed Sea?’ in B Vukas (ed) *The Legal Regime of Enclosed or Semi-Enclosed Seas: The Particular Case of the Mediterranean* (Birotehnika, 1988) 40.

27 B Vukas, ‘United Nations Convention on the Law of the Sea and the Polar Marine Environment’, in D Vidas (2000) *supra* n. 19, 40.

28 A Vallega (2002) ‘The Regional Approach to the Ocean, the Ocean Regions, and Ocean Regionalisation – a Post Modern Dilemma’, *Ocean & Coastal Management*, 743-744.

that even regions that are regulated by regional sea agreements under the auspices of the RSP differ widely: some are oceanic, some are semi-enclosed, and others are based on island groupings. Therefore, the term region can cover marine areas of considerably different sizes.²⁹ It can refer to a broad range of marine areas, from a whole ocean to a smaller enclosed sea.

Based on the characteristics of various regions regulated under regional sea agreements, a marine region could arguably be defined as a maritime area which is geographically distinct and in which a group of States share a sense of solidarity, in the sense that they face common challenges and have similar interests to protect in collectively regulating ocean activities.³⁰ More specifically, for marine environmental protection, a marine region is such a geographically distinct maritime area where the environmental challenges call for the adoption of specific rules but also within which the development of coastal States can benefit from international cooperation.³¹ This connotation of the marine region has also been characterised as an “institutional”, “operational” or “functional” area:³² a site for which one or more international arrangements are in effect to tackle specific marine environmental challenges. Therefore, the definition of the term region does not seem to be necessary, since “*any kind of co-operation developed by States in any given part of the ocean is regional*”, regardless of whether the specific maritime area has features justifying its qualification as a region.³³

1.2. The significance of a regional approach in marine environmental law

Regardless of the differences between various regional arrangements, various reasons highlight the advantages of regional cooperation for marine environmental protection.³⁴ First and most importantly, geographical and ecosystem-related differences between various maritime regions can make efforts to establish globally applicable environmental rules and standards complicated and sometimes even unnecessary.³⁵ Indeed, the marine environment is not homogeneous: its vulnerability varies depending mostly on geographical and ecological factors as well as on the economic development of States surrounding it. Arguably, specific sources of marine pollution, such as land-based pollution and pollution from seabed activities, cannot be tackled appropriately at the global level.³⁶ In these cases, global agreements explicitly refer to the need for, and formally call for the adoption of, regional arrangements to

29 Oude Elferink, Molenaar and Rothwell (2013) *supra* n. 13, 5.

30 See article VIII of the 1972 Convention on the Prevention of marine Pollution by Dumping of Wastes and other Matter, according to which, States with common interests in protecting the marine environment in a given geographical area “*shall endeavour, taking into account characteristic regional features, to enter into regional agreements consistent with this Convention for the prevention of pollution, especially by dumping*”.

31 Vallega (2002) *supra* n. 28, 743.

32 Dupuy and Vignes, *supra* n. 17, 54.

33 A Vallega (1994) ‘The Regional Scale of Ocean Management and Marine Region Building’, *Ocean and Coastal Management*, 22-23.

34 C Okidi, ‘Protection of the Marine Environment Through Regional Arrangements’, in A H A Soons (ed) *Implementation of the Law of the Sea Convention Through International Institutions* (Law of the Sea Institute, 1990) 477.

35 M Gavouneli, *Pollution from Offshore Installations* (Graham & Trotman/Martinus Nijhoff, 1995) 43.

36 Boczek (1984) *supra* n. 22, 53, Tanaka (2016) *supra* n. 6, 346, G Moore, ‘Legal Aspects of Marine Pollution Control’, in E Johnston (ed) *Marine Pollution* (Academic Press, 1976) 590.

complement the general global rules and domestic environmental regulation.³⁷ For instance, the OPRC promotes the development of agreements at the regional level.³⁸ At the same time, the intensity of diverse forms of pollution varies depending on the level of development of economic activities around the world. For that reason, regional arrangements usually focus on tackling the most important sources of pollution in each region, considering the special ecosystem needs.³⁹ For instance, the OSPAR Convention has been, *inter alia*, focused on tackling pollution from offshore oil and gas activities, which have been traditionally a threat to the region, given their development.⁴⁰ In contrast, normative developments under the Helsinki Convention have not been on a par with those in the OSPAR Convention, because the Baltic States have not engaged in offshore oil and gas activities to the same degree.⁴¹

In addition, the intensity and methods of cooperation among coastal States bordering different marine regions differ substantially. As illustrated by the structural differences among the regional arrangements examined in chapter 6,⁴² achieving a higher degree of cooperation at the regional level is not inevitable. States must decide to invest both in terms of funding and relinquishing their right of decision making.⁴³ That form of deeper cooperation is even more apparent in the case of semi-enclosed seas, which coastal States consider as *mare nostrum*.⁴⁴ Despite the varying degrees of political willingness to enter into international commitments, international cooperation for the protection of the marine environment is generally more feasible at the regional level among neighbouring States. Regional treaties can offer some flexibility in their implementation and prove to be more appropriate tools for accommodating the individual needs of States in specific marine regions.⁴⁵ Regional conventions are often easier to negotiate and usually enter into force much more quickly than global ones,⁴⁶ where diverse competing interests make negotiations thornier and require more compromises.⁴⁷ Besides, the involvement of fewer States usually makes regional cooperation more cost-effective. Arguably, a regional approach encourages broader participation by the interested States, particularly

37 See for instance, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, article 8.

38 The OPRC includes several references to the significant role of regional agreements and institutions thereunder for the implementation of the obligations in responding to accidental oil pollution, see for instance, the preamble to OPRC and articles 5,6, 8 and 12. For further analysis of the regional rules on the prevention, response and preparedness for accidental oil pollution see chapter 6, section 3.

39 J Rochette, and R Bille (2013) 'Bridging the Gap between Legal and Institutional Developments within Regional Seas Frameworks', *International Journal of Marine and Coastal Law*, 437.

40 House of Lords (2015) 'The North Sea under Pressure: Is Regional Marine Co-operation the answer?', European Union Committee, 10th Report of Session 2014-15, 40.

41 See chapter 6, sub-section 4.2.

42 See chapter 6, section 4.

43 Alexander (1994) *supra* n. 22, 4.

44 J P Queneudec, 'Les tendances régionales dans le droit de la mer' in Société française pour le droit international (ed) *Régionalisme et universalisme dans le droit international contemporain* (Pedone, 1977) 258.

45 A Kiss, and D Shelton, *International Environmental Law* (Springer, 1991) 97.

46 However, see the example of the Offshore Protocol to the Barcelona Convention, whose negotiation and entry into force took several years, see below sub-section 2.3.

47 For instance, the negotiations for a global agreement on the protection of biodiversity in areas beyond national jurisdiction and the negotiations of UNCLOS serve as illustrative examples of the thorny issues of negotiating agreements at the global level.

less developed ones which might otherwise be reluctant to participate in a globally organised and technologically advanced system.⁴⁸ From the perspective of developing countries, regional arrangements are also beneficial in promoting technology and capacity transfer.⁴⁹

Regional arrangements not only implement⁵⁰ but can also supplement and complement the global rules on the environmental protection of the oceans.⁵¹ In many instances, regional agreements contain more robust international environmental obligations concerning a specific sea area than the corresponding global rules.⁵² For instance, the preamble to the OSPAR Convention acknowledges the potential for its parties to agree on the adoption of stricter regional rules of environmental protection than the ones provided for in global agreements.⁵³ Similarly, regional sea agreements imposed stricter standards for dumping compared with the ones under the 1972 London Convention.⁵⁴ It may be that States are keener on undertaking commitments dealing with environmental challenges that directly affect areas within their jurisdiction, and therefore, could impact their economic development. Besides substantive environmental standards, regional agreements often include more detailed procedural duties, such as the duty to conduct EIAs, take measures to respond to accidental pollution and provide information to other parties with regard to domestic implementation measures. For instance, even though there is no global agreement on EIAs, UN/ECE Espoo Convention covers potentially all European States and part of North America.⁵⁵

An equally important element is that regional agreements usually create an institutional framework supporting the implementation of their rules and monitoring compliance by States.⁵⁶ Some of these treaty bodies are mandated to develop the regional rules and standards further, adopt interpretative guidelines and offer assistance to the parties concerning the implementation of the treaty. The institutional framework can also play an essential role in the harmonisation of domestic measures, as required, for example, under article 208(4) of UNCLOS. In that respect, regional institutions serve as fora for the exchange of information among their contracting parties and further consultations on scientific, technological and legal developments.⁵⁷ The dynamism of

48 P Hayward (1984) 'Environmental Protection: Regional Approaches', *Marine Policy*, 118, J Harders (1987) 'Marine Regionalism – A Concept of International Law Evaluated', *Marine Policy*, 291.

49 Okidi (1990) *supra* n. 34, 478.

50 As discussed below, regional rules on pollution from vessels are mainly restricted to assisting in the enforcement and application of the global rules under UNCLOS and the relevant IMO agreements.

51 Alheritiere (1982) *supra* n. 20, 170.

52 With the exception of pollution from vessels, UNCLOS and other globally applicable environmental agreements do not prevent States from imposing stricter standards for marine environmental protection.

53 Convention for the Protection of the Marine Environment of the North-East Atlantic (22 September 1992) ILM 1069 (1993), preambular paragraph 11.

54 However, dumping at sea is almost entirely prohibited after the 1996 London Protocol, see Boyle (2000) *supra* n. 19, 23.

55 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context, see also chapter 6, sub-section 2.4.

56 For instance, in the North Sea and the Mediterranean, intergovernmental supervisory institutions have been established for the purpose of monitoring the implementation of regional environmental rules. There are though regions where the role played by institutions remain rather limited, Birnie, Boyle and Redgwell (2009) *supra* n. 9, 393.

57 Hayward (1984) *supra* n. 48, 119, Okidi (1990) *supra* n. 34, 179-180.

cooperation and the potential for better implementation of the regional agreements appear to be higher so long as the institutional framework is robust.⁵⁸ Although most regional marine environmental arrangements pursue common goals, they vary considerably with regard to their institutional framework as well as their regulatory approaches.⁵⁹ Finally, regional institutional mechanisms can be more readily made available in case of an environmental emergency.⁶⁰

Despite the concerns that the advancement of a regional approach can threaten the universality of the law of the sea and result in further fragmentation of the applicable marine environmental rules and standards,⁶¹ there is no proof that regional environmental cooperation has led to weakening the global legal framework. On the contrary, as posited in the following chapters, regional environmental rules and standards can strengthen the implementation of the general marine environmental obligations under UNCLOS, for instance, by offering specific normative content to the general duty to protect and preserve the marine environment. Perhaps one problematic issue, as highlighted in the current negotiations concerning the ILBI, is the lack of a global supervisory mechanism to address problems and disparities in different regions.⁶² Nonetheless, that remark is not so much a criticism of regionalism as a form of cooperation, but rather a reminder of the necessary complementarity and interaction of the global and regional arrangements. Regional arrangements need to interact with each other and the global framework to achieve an ecosystem approach.⁶³

1.3. The relevance of regionalism for the environmental regulation of offshore energy production activities

The necessity for regional cooperation in the development of environmental rules and standards is evident in the case of pollution stemming from offshore energy production activities.⁶⁴ As already discussed, for various reasons the global legal framework contains normative gaps and plays a somewhat limited role in the environmental regulation of offshore energy production activities.⁶⁵ Attempts to draft a global instrument regulating offshore energy activities have so far failed, and there is rather a lack of political will for the development of any specific global environmental standards. The environmental rules of UNCLOS and other relevant globally applicable environmental agreements provide a minimum standard of protection, which needs to be supplemented and strengthened by more elaborate and specific standards at the regional level. In practice, States have developed specific

58 Rochette and Bille (2013) *supra* n. 39, 435.

59 See chapter 6, section 4.

60 Boczek (1984) *supra* n. 22, 53. See for instance the example of REMPEC in the Mediterranean, chapter 6, sub-section 3.2.3.

61 Boyle (2000) *supra* n. 19, 32-33.

62 A Oude Elferink (2019) 'Exploring the Future of the Institutional Landscape of the Oceans Beyond National Jurisdiction', *Review of European, Comparative and International Environmental Law*, 241-242.

63 Oude Elferink, Molenaar, Rothwell (2013) *supra* n. 13, 7.

64 Article 208 (4) indicates that UNCLOS endorses regional cooperation regarding pollution from seabed activities subject to national jurisdiction, see also C Brown (1998) 'International Environmental Law in the Regulation of Offshore Installations and Seabed Activities: The Case for a South Pacific Regional Protocol', *Australian Mining & Petroleum Law Journal*, 126.

65 Reference to previous chapters, see also Tanaka (2016) *supra* n. 6, 354-356.

international rules dealing with this source of pollution almost exclusively at the regional level.⁶⁶ The lack of a competent international organisation, equivalent to the IMO for the regulation of pollution from vessels or the ISA for the regulation of mining in the Area, has also probably contributed to the virtual absence of global environmental standards for offshore energy production activities. Arguably, the existence of such an international organisation for the regulation of offshore energy activities could have significantly shaped international cooperation for the adoption of international standards, as States would probably not have been impelled to develop cooperative mechanisms under regional sea agreements for such regulation.⁶⁷

Since offshore energy generation activities so far take place within the limits of national jurisdiction, their localised environmental externalities can be better dealt with at the regional level by special agreements that take into consideration the diverse ecological conditions of each region.⁶⁸ Another critical factor in the case of offshore energy production is the strategic nature of these activities, which coastal States have traditionally had under their direct control. It is not a mere coincidence that, today, the offshore energy sector is the least internationally regulated ocean industry.⁶⁹ That situation is reinforced by the fact that UNCLOS primarily grants the right and duty for the development of appropriate laws and regulation to prevent pollution from such activities to the coastal States,⁷⁰ even though there is an apparent lack of globally applicable international norms and standards to operate as benchmarks against which to assess such domestic measures. The regulation of this sector illustrates a significant tension between economic development and environmental protection. Environmental measures to regulate these activities are associated with high costs and inescapably affect economic growth.⁷¹ Given the fundamental importance of marine energy resources, States are reluctant to enter into international agreements on the global plane that would restrain their broad sovereign discretion in the regulation of offshore energy production activities.⁷² They are more prone to enter

66 C Redgwell (2014) 'Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Sector', *International Journal of Marine and Coastal Law*, 611.

67 A comparison with the environmental regime for the Area under the Convention highlights the importance of a competent organisation for setting the minimum standard of protection. Specifically, in the case of mining activities in the Area, Part XI of the Convention grants the ISA the authority to develop the relevant environmental standards. Article 209(2) then requires States to also take measures for the protection of the Area in relation to mining activities, which must be no less effective than the ones adopted by the ISA. For a discussion on whether the environmental regulations of the ISA are relevant to seabed activities within national jurisdiction, see chapter 2, sub-section 3.1.3.

68 By contrast, a global approach seems more appropriate in relation to any projected offshore energy activities in connection to the Area.

69 J Rochette (2014) 'International Regulation of Offshore Oil and Gas Activities: Time to Head over the Parapet', *IDDRI Policy Brief 06/14*, 4.

70 Article 208(1) prescribes that Coastal states have an obligation to adopt domestic measures to prevent, reduce and control pollution arising from or in connection with seabed activities.

71 A Nollkaemper (1996) 'Balancing the Protection of Marine Environment systems with Economic Benefits from Land-Based Activities: The Quest for International Legal Barriers', *Ocean Development and International Law*, 154.

72 Gavouneli (1995) *supra* n. 35, 64.

into legal commitments which consider their need for economic development and can benefit their interests.⁷³

As the relevant State practice illustrates, States consider it more feasible to agree upon specific environmental rules for offshore energy activities within a marine area in which they share a common interest. Regional cooperation allows them a more extensive degree of sovereign discretion in deciding how far they want to advance their environmental obligations with relation to offshore energy activities within their jurisdiction.⁷⁴ Accordingly, cooperation at the regional level allows States to tailor the environmental norms regulating offshore energy activities to the specific regional needs, “taking into account the characteristic regional features” as required under article 197 of UNCLOS.⁷⁵ The development of regional environmental rules seems to be an appropriate middle-ground solution in a continuum from the highly abstract global obligations for the protection of the marine environment and exhortations for global cooperation to the often inadequate unilaterally formulated domestic environmental measures.⁷⁶ That conclusion seems to be validated by the fact that many regional sea agreements have included specific provisions dealing with environmental aspects of offshore energy generation activities.⁷⁷ These normative developments across various marine regions can operate as best practices and inspire the adoption of offshore energy-related protocols in the other areas.⁷⁸ Given the virtual lack of specific environmental standards in the global legal framework, this part of the study seeks to examine whether regional agreements have managed to develop legal tools to define further the content of the duty to protect and preserve the marine environment under the global legal framework, and, in that way further shape and restrain the broad discretion of States in the implementation of this duty.

2. The use of a regional approach to address specific environmental challenges

Initially, regional cooperation for the protection of the marine environment was precipitated as a necessary response to environmental crises in specific marine regions.⁷⁹ In that sense, the Torrey Canyon incident in 1967 served as a catalyst for the signing of the Bonn Agreement for the Co-operation in dealing with Pollution of the North Sea by Oil in 1969 by the coastal States in the North Sea.⁸⁰ The Bonn

73 Y Tanaka (2006) ‘Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis between Global and Regional Legal Frameworks’, *ZaōRV*, 548.

74 Boyle (2000) *supra* n. 19, 25.

75 See article 208(5) in comparison with article 207(4) of UNCLOS, which requires States to consider such regional particularities. It appears that article 208 does not explicitly mention the requirement for States to take into account regional specificities. However, article 208(5) has to be read in conjunction with the general duty to cooperate for the further development of the general environmental framework of UNCLOS under article 197.

76 However, there are cases where the elaborate domestic standards can be regarded as best practices, such as in the cases of Norway or the Netherlands.

77 See following chapter 6, section 4, on such normative developments in the selected marine regions.

78 J Rochette, M Wemaere, L Chabason, and S Callet (2014) ‘Seeing beyond the Horizon for Deepwater Oil and Gas: Strengthening the International Regulation of Offshore Exploration and Exploitation’, *IDDRI Study 01/14*, 28. See also the example of the Protocol to the Abidjan Convention in chapter 8.

79 C Whomerley (2016) ‘Regional Cooperation in the North Sea under Part IX of the Law of the Sea Convention’, *International Journal of Marine and Coastal Law*, 350.

80 Agreement for Co-operation in dealing with Pollution of the North Sea by Oil (Bonn, 9 June 1969, in force 9 August 1969) UK Treaty Series No. 78 (1969). See also, J Johnson, ‘The Bonn Convention

Agreement allegedly marked the starting point for legally organised regional cooperation arrangements to tackle marine pollution.⁸¹ The following steps in building a regional legal framework for the protection of the North-East Atlantic were the adoption of the 1972 Oslo Convention against dumping,⁸² and the Convention for the Prevention of Marine Pollution from Land-Based sources signed in Paris in 1974.⁸³ Only a few years later, following the Ekofisk offshore oil and gas platform blow-out in 1977, the coastal States bordering the North-Sea decided to expand the *ratione materiae* application of the 1969 Bonn Agreement also to cover oil pollution from offshore installations.⁸⁴ It appears that as the States bordering the North Sea perceived environmental challenges, they decided to conclude separate agreements to address them.⁸⁵

Parallel to the piecemeal approach of regional marine environmental protection in the North Sea,⁸⁶ the seven Baltic coastal States adopted a regional agreement (the 1974 Helsinki Convention),⁸⁷ which was the first to include provisions on the protection of the marine environment against pollution from all sources.⁸⁸ Its main focus was the prevention and abatement of marine pollution,⁸⁹ but, as a first-generation marine environmental instrument, it followed the black/grey list management approach for the regulation of substances.⁹⁰ A significant innovation of the agreement was the establishment of a permanent treaty body, the Baltic Marine Environmental Protection Commission (HELCOM), which was responsible for supervising the implementation of the Helsinki Convention.⁹¹ These developments took place against the backdrop of the Action Plan adopted at the 1972 Stockholm Conference on the Human Environment,⁹² which first gave impetus to the regional

and the Law of the Sea: Conservation of Marine Mammals' in Soons (1989) *supra* n. 34, 363-382, Hayward (1984) *supra* n. 48, 110.

81 Alheritiere (1982) *supra* n. 20, 162.

82 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircrafts (Oslo, 15 February 1972) 11 ILM 262 (1972).

83 Convention for the Prevention of Marine Pollution from Land-Based Sources (21 February 1974) ILM 352 (1974).

84 M Gavouneli (1995) *supra* n. 35, 47, P Birnie (1978) 'Did Failures in the North Sea Legal Regime Contribute to the Ekofisk Blow-out?', *Ocean Management*, 124.

85 S Andresen (1989) 'The Environmental North Sea Regime: A Successful Regional Approach?' *Ocean Yearbook*, 379.

86 Alheritiere (1982) *supra* n. 20, 170.

87 Convention on the Protection of the Marine Environment of the Baltic Sea Area (22 March 1974), ILM 546 (1974), article 3(1).

88 Article 12 of the Helsinki Convention specifically dealt with pollution from exploration and exploitation of the seabed and its resources. For an analysis of the Convention and its development, see B Boczek (1978) 'International Protection of the Baltic Sea Environment against Pollution: A Study in Marine Regionalism', *Amsterdam Journal of International Law*, 782-814.

89 1972 Helsinki Convention, article 3(1).

90 The 1974 Helsinki Convention, in comparison with the Paris Convention, did not have any special provisions relating to substances which were not listed under the black/grey lists, see M Fitzmaurice (1998) 'The Helsinki Conventions of 1974 and 1992', *International Journal of Marine and Coastal Law*, 383. Similarly, the Paris and Oslo Agreements in the North Sea adopted the black/grey lists approach to marine environmental regulation.

91 Helsinki Convention *supra* n. 87, article 19.

92 See Helsinki Convention, *supra* n. 87, preambular para 7 "RECALLING the pertinent provisions and principles of the 1972 Declaration of the Stockholm Conference on the Human Environment".

approach to marine environmental protection.⁹³ By that time, it had become obvious that regional environmental arrangements were imperative for the protection of the oceans.⁹⁴ In that context, regional cooperation in the North Sea and the Baltic stimulated the development of specialised environmental agreements in other marine regions.⁹⁵ They demonstrated the significance of a new level for marine environmental protection management between the, until then, predominant national approach and an emerging global one.⁹⁶

Parallel to these independent regional arrangements, since the 1970s⁹⁷ there has been a proliferation of regional marine environmental protection instruments under the auspices of the UN, mostly concerning semi-enclosed seas which were considered to be at a higher risk from pollution.⁹⁸ Specifically, the UN Environmental Programme (UNEP) formally recognised the importance of the regional approach in protecting the marine environment with the establishment of the UNEP Regional Seas Programme (RSP) in 1974.⁹⁹ The RSP was launched to act as a mechanism for mobilising cooperation between coastal States bordering a marine area.¹⁰⁰ Adopted in 1976, the initial Barcelona Convention for the Protection of the Mediterranean Sea against pollution marked the first regional seas instrument under the UNEP system. The regional agreements developed under the RSP follow a framework approach, where an umbrella convention contains the general obligations and principles concerning the protection of the marine environment and creates the institutional structures supporting its further development, oversight and implementation.¹⁰¹ These framework agreements are supplemented by specialised protocols and technical annexes, which include more specific rules and standards concerning certain sources of marine pollution as well as the local peculiarities of each region.¹⁰² Such an approach allows States, including developing ones, to adhere to general obligations on the protection of the marine environment, which do not immediately require specific conduct in their implementation, and gradually enter

93 UN Document A/CONF.48/14, Report of the United Nations Conference on the Human Environment (16 June 1972), Recommendations 86, 91 and 92, which recommended States to “*concert and co-ordinate their actions regionally and where appropriate on a wider international basis*”.

94 Boczek (1978) *supra* n. 88, 797.

95 Franckx (1998) *supra* n 12, 318.

96 J Rochette and L Chabason (2011) ‘A Regional Approach to Marine Environmental Protection: The Regional Seas Experience’, available online at: <http://regardssurlaterre.com/en/regional-approachto-marine-environmental-protection-regional-seas-experience>, C Okidi (1977) ‘Toward Regional Arrangements for the Regulation of Marine Pollution: An Appraisal of Options’, *Ocean Development and International Law*, 25.

97 It is argued that the earliest of the modern marine regional arrangements was the International Council for the Exploration of the Sea (ICES) in 1902, which was responsible for monitoring the abundance of fish stocks in the Baltic Sea and the North East Atlantic, see L Alexander (1994) ‘New Trends in Marine Regionalism’, *Ocean Yearbook*, 2.

98 Boczek (1984) *supra* n. 22, 57. See also, L Alexander, ‘Regionalism at Sea: Concept and Reality’ in D Johnston (ed) *Regionalism of the Law of the Sea* (Ballinger Publishing Company, 1978) 3.

99 UNEP (1982) Achievements and planned developments of UNEP’s Regional Seas Programme and Comparable Programmes Sponsored by Other Bodies, UNEP Regional Seas Reports and Studies, A Vallega (2002) *supra* n. 28, 734.

100 N Oral, ‘Forty Years of the UNEP Regional Seas Programme: from past to future’ in R Rayfuse (ed) *Research Handbook on International Marine Environmental Law* (Edward Elgar, 2015) 337.

101 Boczek (1984) *supra* n. 22, 59.

102 This system was first adopted by the coastal States in the Mediterranean Sea, see Convention for the Protection of the Mediterranean Sea Against Pollution (16 February 1976) ILM 290 (1976).

into more normatively precise commitments by the formulation of specific rules and standards through subsequent protocols.¹⁰³ In addition, UNEP plays a catalytic role by providing financial and institutional support, at least in the initial phases of the regional cooperation agreements.¹⁰⁴

2.1. The second generation of regional marine environmental agreements

During the momentum created by the Rio Conference in 1992,¹⁰⁵ the adoption of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) and the Convention on the Protection of the Baltic Sea (Helsinki Convention) kick-started the second generation of regional sea agreements.¹⁰⁶ Unlike the first-generation of mainly sectoral environmental agreements, the second generation adopts a more holistic approach, influenced by the 1992 United Nations Conference on Environment and Development.¹⁰⁷ As further discussed below, both agreements have incorporated the environmental principles, such as the precautionary principle, which emerged at the Rio Conference. On that account, their focus has moved from the traditional goal of pollution prevention, which is predominantly reflected under UNCLOS,¹⁰⁸ to a more integrated approach to marine environmental protection. Their approach has also been influential on regional agreements developed under the auspices of the RSP.

The 1992 Convention on the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) is the most crucial regional treaty for the protection of the North-East Atlantic, the North Sea and adjacent Arctic waters.¹⁰⁹ The OSPAR Convention purported to formulate more stringent rules than those applicable at the global level.¹¹⁰ To that end, much like all other second-generation regional marine environmental agreements,¹¹¹ the OSPAR Convention introduced recently developed concepts such as the precautionary principle, the polluter pays, best available techniques and best environmental practices. It broadened its objectives beyond the traditional pollution prevention focus of first-generation

103 T Mensah (1984) 'Environmental Protection: International Approaches, *Marine Policy*, 99-100.

104 B Kwiatkowska, 'The Role of Regional Organizations in Development Cooperation in Marine Affairs' in Soons (1989) *supra* n.34, 73.

105 In 1987 the Report of the World Commission on Environment and Development had already stressed the importance of regional cooperation for the protection of the marine environment, see WCED, *Our Future*.

106 P Sands, J Peel, A Fabra, and R Mackenzie (eds) *Principles of International Environmental Law* (Cambridge University Press, 4th edition, 2018) 461.

107 UNEP (2006) 'Guide for Negotiators of Multilateral Environmental Agreements', available online at: <https://www.cbd.int/doc/guidelines/MEAs-negotiators-guide-en.pdf>, 7.

108 See, however, articles 192 and 194 of UNCLOS.

109 The OSPAR Convention replaced and updated the 1972 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo Convention) and the 1974 Convention for the Prevention of Marine Pollution from Land-Based Sources (Paris Convention), which previously applied to the same region. The preexisting Conventions were primarily based on the black/grey lists approach, commonly used in environmental agreements during the 1970s. However, twenty years later, such approaches to marine environmental protection were becoming obsolete, especially because they did not take into account the precautionary principle.

110 OSPAR Convention, preamble.

111 T Treves, 'Regional Approaches to the Protection of the Marine Environment' in M Nordquist, J Norton Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Martinus Nijhoff, 2003) 145.

environmental agreements to protect ecosystems and marine biological diversity against the adverse impacts of human activities.¹¹² Equally importantly, it granted the OSPAR Commission the competence to develop a stricter environmental protection regime by way of binding decisions and non-binding recommendations.¹¹³

Despite some initial objections, its parties agreed that the structure of a framework convention, supplemented by annexes related to specific sources of marine pollution was optimal due to its flexibility.¹¹⁴ The initial four Annexes of the OSPAR Convention were drafted as an integral part of it, binding upon all its parties. It was negotiated as a package deal as no reservations are permitted.¹¹⁵ States adopted the same approach in the Baltic Sea under the Helsinki Convention. However, the OSPAR Convention is not an all-encompassing instrument for the protection of the marine environment from all sources of marine pollution. Article 7 of the Convention makes it clear that measures against pollution from sources not initially covered by the Oslo and Paris Conventions may only be adopted if they are not already the subject of effective regulation by other international organisations or prescribed by other conventions. In that respect, the OSPAR Convention does not deal with pollution from vessels, nor does it apply to air pollution caused by aircraft and offshore installations. Furthermore, it does not address prevention of, preparedness for and response to accidental pollution. Instead, the 1983 Bonn Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances covers that matter in the North Sea.¹¹⁶

Following the collapse of Communism, the 1992 Helsinki Convention¹¹⁷ has a broader scope and more ambitious objectives than its predecessor, namely to “*prevent and eliminate pollution in order to promote the ecological restoration of the Baltic Sea Area and the preservation of its ecological balance*”.¹¹⁸ It replaced the previous 1974 Helsinki Convention to keep abreast of the developments in international

112 In that respect it echoes the principles of the CBD, which opened for signature during the 1992 Rio Conference and is also perceived as a second-generation environmental agreement, in the sense that it address biological diversity as a whole instead of separate elements of it.

113 The OSPAR Convention also took over the considerable number of decisions, recommendations and other agreements that had been adopted within the framework of the Oslo and Paris Commission and codified most of the progress made in the forum of the International North Sea Conferences. R Lagoni, ‘Regional Protection of the Marine Environment in the Northeast Atlantic under the OSPAR Convention of 1992’ in Nordquist, Norton Moor and Mahmoudi (2003) *supra* n. 111, 184, J Hilf (1995) ‘The Convention for the Protection of the Marine Environment of the North-East Atlantic- New Approaches to an Old Problem?’ *ZaöRV*, 582.

114 In the opinion of the States bordering the North Sea, the advantages of annexes compared with additional Protocols, which were used as a rule in the UNEP administered regional sea agreements, consists in the fact that the former do not need a preamble and require only a single signature and ratification, see J J Ruiz, ‘L’Evolution des conventions régionales protégeant l’environnement marin de l’Atlantique du nord-est et de la Méditerranée’ in J-P Beurrier, A Kiss and S Mahmoudi (eds) *New Technologies and Law of the Marine Environment* (Kluwer Law International, 2000) 141.

115 Article 28 of the OSPAR Convention.

116 For other parts of the OSPAR maritime area that normative gap is filled by the Lisbon Accord of Cooperation of 1990 for the Protection of the Coasts and Waters of the Northeast Atlantic against Pollution due to Hydrocarbons or other Harmful Substances.

117 Upon the entry into force of the 1992 Convention the previous one ceased to apply, see article 36(4) of the 1992 Helsinki Convention

118 Article 3 of the 1992 Helsinki Convention.

environmental law.¹¹⁹ The 1992 Helsinki Convention, like the OSPAR Convention, was signed only a few months before the Rio Conference. Given the time of its adoption, it is not surprising that the new Helsinki Convention also included recently developed environmental principles and obligations, providing for the application of the precautionary and polluter pays principles, EIAs, application of best available technology and best environmental practices and access to information for the public. The 1992 Helsinki Convention expanded its application *rationae loci* also to cover the internal waters of its parties,¹²⁰ which were explicitly excluded from the scope of the previous agreement. Another significant change has been the broadening of its scope beyond the prevention of pollution to encompass the protection and preservation of marine biodiversity and ecosystems.¹²¹ As in the case of OSPAR, the Baltic States decided to safeguard continuity between the two successive agreements by maintaining the application of recommendations adopted by the HELCOM under the preexisting agreement.¹²²

In the Mediterranean, the Barcelona Convention underwent a major updating exercise twenty years after its original inception to adapt to the evolution of international environmental law.¹²³ By that time, the results of the Rio Conference in 1992 and the developments in the Baltic and North-East Atlantic were well known to the Mediterranean States negotiating the amendments to the Barcelona Convention. That probably explains why the new Barcelona Convention contains many references to the concepts of sustainable development and integrated management of coastal zones,¹²⁴ which are not mentioned in either the OSPAR or the Helsinki Conventions. Following the path of the OSPAR and Helsinki Conventions, it incorporates the precautionary and the polluter pays principles, the duty to conduct EIAs, the use of best available techniques and best environmental practices, as well as the promotion of environmentally sound technology, including clean energy.¹²⁵ As in the case of the Helsinki Convention, its geographical coverage was expanded to include internal waters¹²⁶ to cover the whole Mediterranean Sea, irrespective of the disputes on the delimitation of certain maritime areas. Concerning its structure, it is noticeable that, unlike the OSPAR and Helsinki Conventions, the amended 1995 Barcelona Convention¹²⁷ consists of a framework umbrella treaty, whose general rules are supplemented by additional protocols on different sources of pollution and environmental matters of concern for the Mediterranean Sea.

119 J Ebbesson (2000) 'A Critical Assessment of the 1992 Baltic Convention', *German Yearbook of International Law*, 38, T Treves (2003) *supra* n. 111, 144.

120 Article 1 of the 1992 Helsinki Convention.

121 Article 3 of the 1992 Helsinki Convention, see also J Ebbesson. 'Protection of the Marine Environment of the Baltic Sea Area – The Impact of the Stockholm Declaration' in Nordquist, Norton Moore and Mahmoudi (2003) *supra* n. 111, 155.

122 Article 36(5) and (6) of the 1992 Helsinki Convention.

123 M Gavouneli, 'New Forms of Cooperation in the Mediterranean System of Environmental Protection' in Nordquist, Norton Moor and Mahmoudi (2003) *supra* n. 111, 224.

124 See Chapter 17 of Rio Agenda 21.

125 Article 4 of the Barcelona Convention.

126 Article 1 of the Barcelona Convention.

127 The Convention has changed its name into Convention for the Protection of the Marine Environment and the Coastal Regions of the Mediterranean.

2.2. Further developments in regional marine environmental law: the cases of the Arctic and the EU

The Arctic Ocean is not subject to a binding regional agreement as a whole,¹²⁸ nor is it fully covered by regional bodies with standard-setting competence. An amalgam of binding and non-binding instruments is currently in place. Specifically, the regional framework established by the OSPAR Convention, and decisions and recommendations by the OSPAR Commission and its predecessors are only partly applicable to the Arctic Ocean.¹²⁹ Therefore, except for the part that is covered by the OSPAR framework, the Arctic was one of the last regions in the world to develop regional cooperation on marine environmental protection.¹³⁰ The single regional treaty involving the five Arctic States until the end of the Cold War was the 1973 Agreement on the Conservation of Polar Bears.¹³¹ Almost two decades later, in 1989, the Arctic States managed for the first time to initiate discussions regarding environmental cooperation in the Arctic.¹³² These attempts culminated in the creation of the Arctic Environmental Protection Strategy (AEPS), which is a non-binding strategy adopted by the eight Arctic States in 1991 to identify environmental issues in the Arctic and suggest ways to respond to them.¹³³

The AEPS was accompanied by the creation of four working groups to achieve the primary goal of assessing the environmental impact of all sources of pollution in the Arctic.¹³⁴ These working groups served primarily to operationalise the actions established in the AEPS by gathering environmental data and offering relevant recommendations.¹³⁵ The objectives set under the AEPS are also framed by statements of principles, which are designed to shape the measures of the Arctic Council as the Arctic States individually and collectively progress towards their achievement.¹³⁶ Given the particularly sensitive character of the Arctic region and its vulnerability to pollution, the Arctic States recognised that action needed to be taken immediately to avoid irreversible environmental degradation. For that reason, the AEPS called for the application of the precautionary principle in the region.

128 It has been argued that a specific environmental regime could be created for the Arctic, potentially on the basis of articles 122, 123 and 234 of UNCLOS, see H Corell (2007) 'Reflections on the Possibilities and Limitations of a Binding Legal Regime', *Environmental Policy and Law*, 322, see also T Koivurova and E J Molenaar (2009) 'International Governance and Regulation of the Marine Arctic – Overview and Gap Analysis', *Report for WWF International*, 68.

129 Besides the fact that the Arctic Ocean only partially falls within the geographical scope of application of the OSPAR Convention, three Arctic States, namely Canada, the United States and the Russian Federation, are not parties to it.

130 D VanderZwaag, R Huebert, and S Ferrara (2002) 'The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering While the Arctic Marine Environment Totters', *Denver Journal of International Law and Policy*, 142.

131 International Agreement on the Conservation of Polar Bears and Their Habitats, 15 November 1973, signed by Canada, Denmark, Norway, the United States and the Russian Federation.

132 L Nowlan, *Arctic Legal Regime for Environmental Protection* (IUCN Publications, 2001) 7.

133 Adopted by the Ministers for the Environment of the Arctic States in Rovaniemi, 14 June 1991.

134 The initial Arctic Council Working Groups were: Arctic Monitoring and Assessment Programme (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Emergency Prevention, Preparedness and Response (EPPR) and Protection of the Arctic Marine Environment (PAME).

135 D VanderZwaag (1997) 'International Law and Arctic Marine Conservation and Protection; A Slushy, Shifting Seascape', *Georgetown International Environmental Law Review*, 308.

136 T Koivurova, *Environmental Impact Assessment in the Arctic* (Routledge, 2002) 190.

Nonetheless, the scientific assessments and recommendations did not result in the establishment of a binding treaty for the protection of the marine Arctic environment, similar to the other examined regions. On the contrary, in 1996 the Protection of the Arctic Marine Environment (PAME) working group, following a study of the relevant international legal instruments for marine environmental protection in the Arctic, opposed the need for a new Arctic-specific agreement.¹³⁷ However, the creation of the AEPS marked the beginning of a *sui generis* framework for regional environmental cooperation in the Arctic, which has since then continuously evolved and has developed Arctic-specific environmental rules and standards, including ones devoted to offshore energy production activities through the forum of the Arctic Council.

Other regional organisations, such the European Union (EU) and the Association of South-East Asian Nations (ASEAN), have also been proactive in the formulation of regional rules and standards for the protection of the marine environment. In particular, the EU has become a party to regional marine environmental agreements applicable to the seas surrounding the EU Member States and at the same time has produced a considerable number of environmental regulations and directives, which are binding alongside those regional agreements.¹³⁸ The participation of the EU in those regional sea arrangements has a strong influence on the relationship between EU law and those regional environmental agreements.¹³⁹ In many instances, the EU Commission cooperates with the institutions of regional sea arrangements to promote the protection of the marine environment.¹⁴⁰ There seems to be a cross-fertilisation between EU secondary law and the regional sea agreements, which can strengthen their implementation.¹⁴¹ In that respect, chapters 7 and 8 of the thesis further examine to what extent EU law can complement and enhance the international rules and standards for the protection of the marine environment within and outside the EU.¹⁴²

2.3. The development of specific regional norms for offshore energy activities at the regional level

Initially, pollution from offshore hydrocarbon activities had not been considered as equally significant as other sources of marine pollution both at the global and the regional levels. The first specialised rules applying to offshore oil and gas activities appeared in the context of regional agreements on the protection of the North Sea. That is not surprising given that the North Sea has been a geographical area of significant importance for the offshore industry. Some initial important normative developments had already been achieved in the context of the above mentioned 1974

137 D VanderZwaag, 'Regionalism and Arctic Marine Environmental Protection: Drifting between Blurry Boundaries and Hazy Horizons' in D Vidas, W Ostreng et al (eds) *Order for the Oceans at the Turn of the Century* (The Fridtjof Nansen Institute Publications, 1999) 237.

138 V Frank, *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (Martinus Nijhoff, 2007) 88-120.

139 *Ibid.*, 171.

140 K Grip (2017) 'International Marine Environmental Governance: A Review', *Ambio*, 419.

141 See chapter 7.

142 See also, C Soria-Rodriguez (2016) 'Marine Renewable Energies and the European Regional Seas Conventions', *Climate Law*, 314-335.

Paris Convention on land-based pollution.¹⁴³ Although the 1974 Paris Convention did not contain any specific rules or standards exclusively applicable to offshore installations, it granted the Paris Commission the competence to establish such regulations.¹⁴⁴ The regulations adopted by the Paris Commission covered some of the substances related to operational pollution from offshore oil and gas installations, such as produced waters, drilling muds and drilling cuttings.¹⁴⁵ However, the Paris Commission did not deal with the problem of chemicals and other polluting materials, like garbage and sewages resulting from the operation of offshore energy installations.¹⁴⁶

The International Conferences on the Protection of the North Sea further influenced and contributed to the development of rules and standards for the prevention of operational pollution from offshore oil and gas installations by the Paris Commission. For instance, at the Bremen Conference, North Sea States agreed that any technical equipment used in offshore activities should be constructed and operated in conformity with the best available technology.¹⁴⁷ The Bremen Declaration incorporated specific technical provisions on the prevention of marine pollution by drilling mud and cuttings, and oily wastewaters and called for precautionary measures concerning emergencies and accidental pollution.¹⁴⁸ Subsequently, the London Ministerial Declaration of the Second Conference on the Protection of the North Sea encouraged the Paris Commission to develop environmental standards to reduce pollution from offshore installations.¹⁴⁹ Likewise, the Ministerial Declaration of the Third Conference on the Protection of the North Sea also addressed pollution from offshore hydrocarbon extraction installations.¹⁵⁰ While these declarations lack bindingness, they are legally relevant as they have primarily guided the Paris Commission to adopt measures to reduce operational discharges from offshore installations.¹⁵¹

A few years later, the OSPAR Convention incorporated those normative developments in its specific rules for offshore oil and gas activities. Under article 5 of the 1992 OSPAR Convention, its parties must take, individually or jointly, all possible measures to prevent and eliminate pollution from offshore sources. The keen interest of individual countries in offshore oil and gas activities, such as Norway and the UK, led to the adoption of the specialised Annex III on the prevention and

143 See article 3c iii) of the 1974 Paris Convention, which defines pollution from land-based sources to include the pollution “*from man-made structures placed under the jurisdiction of a Contracting Party within the limits of the area to which the present convention applies*”.

144 Article 15 of the 1974 Paris Convention.

145 S Vinogradov, and J Wagner, ‘International Law and Protection of the Marine Environment Against Operational Pollution from Offshore Activities’ in Z Gao (ed) *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998) 124. For a list of the relevant decisions and Recommendations of the Paris Commission, see 124-125. See also, W H v Heinegg, ‘The Development of Environmental Standards for the North-East Atlantic, Including the North Sea’ in P Ehlers, E Mann-Borgese, R Wolfrum (eds) *Marine Issues* (Kluwer Law International, 2002) 145-146.

146 T Ijlstra (1990) ‘Pollution from Offshore Installations: The Kuwait Protocol’, *Marine Pollution Bulletin*, 8-10.

147 See 1984 Bremen Declaration H1.

148 *Ibid*, see also Annexes 11,12 and 13.

149 London Ministerial Declaration, paras 34-38.

150 Hague Declaration 1990, paras 28-30 and Annex 3.

151 M Pallemers (1992) ‘The North Sea Ministerial Declarations from Bremen to the Hague: Does the Process Generate any Substance?’, *International Journal of Estuarine and Coastal Law*, 2-3.

elimination of pollution from offshore sources.¹⁵² The regulation of offshore oil and gas activities to a certain extent follows the norms established for the management of land-based pollution because before the OSPAR Convention, both these sources of marine pollution were regulated under the Paris Convention. As in the case of land-based sources, article 2 of Annex III creates an obligation to adopt measures and programmes using the best available techniques and the best environmental practices, and, where appropriate, clean technologies. As further explained in chapter 6, Annex III of the OSPAR agreement is primarily focused on dealing with operational pollution, the regulation of dumping and the disposal of disused offshore installations.¹⁵³ Surprisingly, it does not create any obligations relating to the prevention of, preparedness for and response to accidental pollution from offshore facilities.

The 1974 Helsinki Convention already contained provisions against pollution from the exploration and exploitation of seabed resources.¹⁵⁴ It partly regulated discharges from offshore installations under Annex IV following the regulatory approach of MARPOL, which included offshore platforms in its definition of ships.¹⁵⁵ However, Annex IV only addressed issues related to offshore oil and gas activities in very general terms and appeared to exclude all the operational discharges from installations.¹⁵⁶ For that reason, the 1974 Helsinki Convention was complemented by more specific HELCOM recommendations, which included detailed rules on the prevention of operational and accidental pollution from offshore oil and gas installations, in particular, recommendation 9/5 on the exploration of the seabed and its subsoil¹⁵⁷ and recommendation 10/10 on measures to minimise pollution from offshore installations.¹⁵⁸ While the latter was concerned with the environmental assessment of marine areas, the standards for operational pollution and the exchange of information between the State parties, the former prioritised measures for response to accidental pollution, such as the drafting of contingency plans. These recommendations, which have arguably resulted in significant improvements for the regulation of offshore oil and gas activities in the Baltic Sea, formed the basis for the new Annex VI under the 1992 Helsinki Convention.

The 1992 Helsinki Convention contains much more elaborate rules addressing pollution from offshore oil and gas activities. It requires parties to

152 Ruiz (2000) *supra* n. 114, 156.

153 See Annex III to the OSPAR Convention on the Prevention and Elimination of Pollution from Offshore Installations. However, article 9 of Annex III seems to be the only provision applicable to offshore oil and gas accidents. It creates a reporting obligation of any such incidents to the competent authority as well as notification of any other potentially affected state.

154 Article 10 of the 1974 Helsinki Convention. For a general discussion on the significance of the 1974 Helsinki Convention see M Fitzmaurice, 'The 1974 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area', in R Platzöder and P Verlaan (eds) *The Baltic Sea: New Developments in National Policies and International Cooperation* (Kluwer Law International, 1996) 313-329.

155 See Annex IV of the 1974 Helsinki Convention on Prevention of Pollution from Ships, Regulation 3, which defines ships also as including "fixed or floating platforms". Repeating the relevant provision under MARPOL, Annex IV of the 1974 Helsinki Convention also excluded from its scope "harmful substances directly arising from the exploration, exploitation and associated offshore processing of seabed mineral resources". See also, Gavouneli (1995) *supra* n. 35, 48.

156 *Ibid.*

157 HELCOM Recommendation 9/5, adopted 15 February 1988.

158 HELCOM Recommendation 10/10, adopted 15 February 1989.

“take all measures to prevent pollution resulting from exploration or exploitation of the seabed and subsoil thereof or from any associated activities thereon, as well as to ensure that adequate preparedness is maintained for immediate response actions against pollution incidents caused by such activities”¹⁵⁹

This general obligation is then supplemented by more specific measures and standards under Annex VI on Prevention of Pollution from Offshore Activities, which forms an integral part of the Convention and, therefore, applies to all its parties. As in the case of the OSPAR Convention, Annex VI focuses predominantly on operational pollution. It addresses a wide range of issues, including the application of BAT and BEP for the prevention of marine pollution, the duty to conduct EIAs and post-project monitoring and the regulation of discharges during the exploitation of oil and gas. However, both Annex VI and Annex VII on Response to Pollution incidents contain rules applicable to accidental oil pollution, such as the duties of notification, reporting and exchange of information, contingency planning and provision of assistance.

As for the Mediterranean, the 1975 Barcelona Convention contained a typical provision on the prevention of pollution resulting from the exploration and exploitation of the continental shelf.¹⁶⁰ In parallel to the negotiations of the 1989 Kuwait Offshore Protocol,¹⁶¹ the parties to the Barcelona Convention had been negotiating the adoption of an additional Protocol, aiming to establish a special legal regime concerning pollution from offshore exploration and exploitation activities.¹⁶² In implementation of article 7 of the 1976 Barcelona Convention and the relevant provisions of UNCLOS,¹⁶³ the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (hereinafter Mediterranean Offshore Protocol) has been the result of lengthy preparatory works and negotiations among the parties to the Barcelona Convention, which had already begun in 1978.¹⁶⁴ The serious negotiations among the parties for almost eighteen years were probably an omen for the future of the Protocol, which remained “dormant” for another seventeen years after its conclusion. Perhaps due to its advanced obligations for that time,¹⁶⁵ specifically the provisions on liability and compulsory insurance,¹⁶⁶ the adoption of the Protocol in 1994 was not “blessed” with the required ratifications by six parties

159 Article 12(1) of the 1992 Helsinki Convention.

160 See article 7 “*The Contracting Parties shall take all appropriate measures to prevent, abate and combat pollution of the Mediterranean Sea Area resulting from exploration and exploitation of the continental shelf and the sea-bed and its subsoil*”.

161 P H Sand, ‘The Rise of Regional Agreements for Marine Environmental Protection’, in Food and Agriculture Organization of the United Nations (ed) *The Law and the Sea: Essays in Memory of Jean Carroz* (FAO, 1987) 231.

162 IJlstra *supra* n. 146, 8.

163 Mediterranean Offshore Protocol, preamble.

164 For an analytical discussion of the preparatory works and negotiations among States see M L Rodriguez Lucas (1998) ‘La Protection de la Mer Méditerranée Contre la Pollution Résultant de l’Exploration et de l’Exploitation du Plateau Continental, du Fond de la Mer et de son Sous-Sol : Le Cinquième Protocole a la Convention de Barcelone’, *RHDI*, 449-455. For background on the preparatory work see also T Treves (1978) ‘La pollution résultant de l’exploration et de l’exploitation des fonds marins en droit international’, *Annuaire Français de Droit International*, 830.

165 L Schiano di Pepe, ‘Offshore Oil and Gas in the Mediterranean Sea: Regulatory Gaps, Recent Developments and Future Perspectives’ in V E Bou Franch, and J J Ruiz (eds) *Derecho del mar y sostenibilidad ambiental en el Mediterráneo* (2014) 375.

166 Article 27 of the Mediterranean Offshore Protocol.

to the Barcelona Convention until 2011.¹⁶⁷ The Mediterranean Offshore Protocol is today binding upon eight parties to the Barcelona Convention, namely seven States¹⁶⁸ and the European Union.

At the time of its adoption, scholars considered the Mediterranean Offshore Protocol to be a very progressive legal instrument from a marine environmental protection point of view.¹⁶⁹ It was the most elaborate legal instrument related to offshore oil and gas activities, containing 32 articles, seven annexes and one appendix. As was observed with regard to the second-generation regional agreements, its geographical coverage is broader than that of the 1975 Barcelona Convention, as it also applies to internal waters.¹⁷⁰ That difference is significant since offshore oil and gas exploitation activities in the Mediterranean are also carried out in this maritime area, although in other regions, as in the North Sea, there is a noticeable trend towards drilling in ultra-deep waters.¹⁷¹ In practice, the spatial scope of the Mediterranean Offshore Protocol covers the whole Mediterranean Sea, since there is no point in referring to a distance beyond 200 nautical miles from the nearest mainland or island. Taking into account the long-standing and mostly unsettled issues of maritime delimitation in this semi-enclosed sea, the Protocol makes it clear that it does not prejudice the rights of any State concerning the delimitation of the continental shelf.¹⁷² It sends out a strong message regarding the necessity of cooperation for the sake of the protection the marine environment against the rapidly expanding hydrocarbon extraction projects in the Mediterranean,¹⁷³ despite the complex legal disputes regarding continental shelf delimitation.

In terms of material scope, the Mediterranean Offshore Protocol similarly adopted an expansive approach, covering a broad range of activities associated with the exploration and exploitation of offshore hydrocarbons and creating duties that apply to both *de jure* and *de facto* operators of offshore installations.¹⁷⁴ The EU Commission has recently stressed the importance of the regulatory framework applicable to the Mediterranean, given the fact that “*the Mediterranean’s marine and coastal ecosystems house eight per cent of known marine species in only 0,8% of the global sea surface*” while at the same time hosting “*more than two hundred active offshore platforms, with more under consideration due to the discovery of large fossil fuels reserves*”.¹⁷⁵

167 The Protocol entered into force after Syria deposited the sixth ratification of the instrument, which caused it to enter into force according to its article 32(4) on 24 March 2011.

168 Those States are Albania, Croatia, Cyprus, Libya, Morocco, Syria and Tunisia.

169 T Scovazzi (1995) ‘The Fifth Protocol to the Barcelona Convention on the Protection of the Mediterranean’, *International Journal of Marine and Coastal Law*, 534.

170 Article 2(b) of the Mediterranean Offshore Protocol.

171 E Raftopoulos (2010) ‘Sustainable Governance of Offshore Oil and Gas Development in the Mediterranean: Revitalising the Dormant Mediterranean Offshore Protocol’, *MEPIELAN eBulletin*, available online at: <http://www.mepielan-ebulletin.gr/default.aspx?pid=18&CategoryId=4&ArticleId=29&Article=Sustainable-Governance>.

172 Article 2(3) of the Mediterranean Offshore Protocol.

173 Rodriguez Lucas (1998) *supra* n. 164, 456.

174 Article 1(d) and 1(g) of the Mediterranean Offshore Protocol. Noticeably, the Protocol also contains a wide definition of installations, which fall under its scope, see article 1(f).

175 See flyer by EU Commission, Mediterranean offshore activities: enhancing their environmental safety, 2012, available online at: <https://ec.europa.eu/environment/marine/pdf/FLYER%20offshore%20web.pdf>.

Despite its allegedly innovative character, many of the provisions of the Mediterranean Offshore Protocol have become outdated.¹⁷⁶ One of the reasons lies in the fact that its text is based on a project initiated in 1978. Several provisions of the Protocol reflect concepts and environmental management tools which have largely been abandoned following the crucial developments in environmental law brought about by the Rio Conference in 1992. For example, the definition of pollution adopted by the Protocol reflects the outdated definition of pollution formulated by the GESAMP in 1969.¹⁷⁷ Its content largely follows the relevant 1989 Kuwait Protocol.¹⁷⁸ However, as already explained above, the updated 1995 Barcelona Convention has incorporated the definition of pollution found in the second-generation environmental agreements, which reflects the precautionary principle. State parties recognised such regulatory problems of the “twenty-year-old” Mediterranean Offshore Protocol during the first meeting of the Mediterranean Offshore working group.¹⁷⁹ However, considering its turbulent past, States have agreed that a formal amendment is for the time being out of the question as it would take too long and would postpone the process of implementation of the Protocol. Therefore, they recommended that the provisions of the Protocol should be interpreted against the backdrop of new developments in environmental law and best practices in the sector.¹⁸⁰ Nevertheless, it seems that the biggest drawback of the Mediterranean Offshore Protocol is its somewhat limited application among States surrounding the Mediterranean.¹⁸¹

As previously mentioned, beyond the geographical scope of the OSPAR Convention, there is no other binding legal instrument relating to the prevention of operational pollution from offshore oil and gas activities in the Arctic Ocean. Recognising the possible negative impacts of the increased offshore oil and gas activities in the Arctic, the Arctic Ministers in 1996 delegated the PAME working group to develop “*guidelines for offshore petroleum activities in the Arctic, in particular guidelines for timely and effective measures for protection of the Arctic environment*”.¹⁸² The resulting Arctic Offshore Oil and Gas guidelines were initially issued in 1997 and were subsequently updated in 2002 and 2009. The Guidelines stress that they are not legally binding. However, they aim to guide the domestic regulatory authorities and the offshore industry by encouraging them to apply the highest standards currently available covering all stages of offshore oil and gas activities.¹⁸³ States are by no means prohibited from setting equivalent or stricter standards, where appropriate. Given

176 The text of the Protocol is based on a project drafted by the International Juridical Organization for Environment and Development, in cooperation with the Secretariat of the Mediterranean Action Plan, with the important involvement of the Oil Industry International Exploration and Production Forum, see E Raftopoulos (2010) *supra* n. 171, T Scovazzi (1995) *supra* n. 169, 543.

177 Rodriguez Lucas (1998) *supra* n. 164, 461.

178 Gavouneli (1995) *supra* n. 35, 43-44.

179 Report of the 1st Offshore Working Group Meeting, Malta 13-14 June 2013, UNEP(DEPI)/MED WG.384.4, 4 July 2013.

180 *Ibid.*, para 53.

181 E Raftopoulos, *supra* n. 171. In that respect, see discussion on the relevance of EU’s accession to the Mediterranean Offshore Protocol, chapter 7, sub-section 3.2.2.

182 Report of the Third Ministerial Conference on the Protection of the Arctic Environment, March 1996, para 2.3.5(ii).

183 Arctic Offshore Oil and Gas Guidelines 2009, 1.2.

the differences in the domestic regulation of the eight Arctic States,¹⁸⁴ the Guidelines can play a significant role in harmonising the environmental standards, which can apply consistently to all offshore Arctic oil and gas operators.¹⁸⁵ Therefore, they can serve as an essential catalyst in the implementation of the duty of the Arctic States under article 208(4) of UNCLOS.¹⁸⁶

Arguably, these Guidelines comprise the most comprehensive non-binding instrument on offshore oil and gas activities in the Arctic.¹⁸⁷ They touch upon a wide range of issues related to offshore oil and gas exploitations, namely the conduct of EIAs, public participation, the prevention of operational discharges as well as pollution preparedness, response and cooperation in case of accidental pollution. Furthermore, the Guidelines have formed the basis for the development of new initiatives, such as the 2014 Guidelines on Systems Safety Management and Safety Culture.¹⁸⁸ Nonetheless, scholars have criticised them for avoiding some of the more difficult issues, such as whether oil companies should be required to maintain the same season relief well capability¹⁸⁹ and the lack of regular evaluations of their implementation.¹⁹⁰

Remarkably, despite the fact that it has largely served as a form for knowledge-generation and a venue for cooperation based on non-binding instruments between the Arctic States, the Arctic Council has recently hosted the adoption of three binding instruments under its auspices. The second of them, namely the 2013 Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic, focuses on preparedness for and response to accidental pollution arising from offshore oil and gas activities and vessels. In implementation of their duties under the OPRC¹⁹¹ and following the alarming devastating consequences of the Deepwater Horizon accident, the eight Arctic coastal States agreed on the need to address the regional specificities of the Arctic marine region through the adoption of a region-specific treaty.¹⁹² Although the main part of the agreement is legally binding, it is supplemented by non-binding appendices, including an operational manual drafted by the EPPR working group.¹⁹³ It is commendable, especially when compared with

184 For an analysis of the different regulatory approaches of the Arctic coastal States, see D Shapolapova, 'Special Rules for the Arctic? The Analysis of Arctic-Specific Safety and Environmental Regulation of Offshore Petroleum Development in the Arctic Ocean States', in E Pogracz, Vi Pavlov, and N Hanninen (eds) *Arctic Marine Sustainability: Arctic Maritime Businesses and the Resilience of the Marine Environment* (Springer, 2020) 275-301.

185 *Ibid.*

186 As far as the USA is concerned, such duty stems from customary international law, as reflected in Part XII of UNCLOS.

187 D Shapolapova-Krout (2019) 'International Governance of Oil Spills from Upstream Petroleum Activities in the Arctic: Response over Prevention?', *International Journal of Marine and Coastal Law*, 25.

188 PAME (2014) *Systems Safety Management and Safety Culture: Avoiding Major Disasters in Arctic Offshore Oil and Gas Operations*.

189 M Byers, *International Law and the Arctic* (Cambridge University Press, 2014) 212.

190 T Koivurova, P Kankaanpaa, and A Stepien (2015) 'Innovative Environmental Protection: Lessons from the Arctic', *Journal of Environmental Law*, 297.

191 Article 10 of the OPRC promotes the conclusion of further bilateral and multilateral agreements for oil pollution preparedness and response.

192 Senior Arctic Officials Report to Ministers, May 2011, 6.

193 Appendix IV: Operational Manual.

the Mediterranean Offshore Protocol, that the agreement was adopted within a rather short two-year period¹⁹⁴ and has already been in force since 2016.¹⁹⁵

3. Regionalism as a framework of cooperation for marine environmental protection under UNCLOS

Regionalism in marine environmental protection had already gathered significant momentum by the time the Third United Nations Conference on the Law of the Sea was in its preparatory phases.¹⁹⁶ Scholars had been debating the relationship of the existing regional arrangements with a potential – at that period – global legal instrument on the law of the sea.¹⁹⁷ As is reflected in the final text of UNCLOS, the concept of regionalism was quite significant during the negotiations of the Convention.¹⁹⁸ UNCLOS, except for its Part IX on enclosed and semi-enclosed seas, does not include a specific section dedicated to regionalism.¹⁹⁹ However, it contains numerous references, both explicit and implicit, to the need for regional cooperation, regional rules and programmes.²⁰⁰ For instance, regional cooperation is required under the provisions for the management of living resources,²⁰¹ the development and transfer of marine technology,²⁰² the management of enclosed or semi-enclosed seas²⁰³ and the protection and preservation of the marine environment. Most of these provisions require the formulation of specific agreements for their implementation.²⁰⁴

Acknowledging that specific marine environmental issues can be regulated sufficiently at the regional level, the Convention aims to tackle localised marine environmental problems, which do not require the participation of the whole international community, by encouraging States to adopt separate regional solutions.²⁰⁵ The numerous references to regional rules and standards under Part XII of UNCLOS also consist of a pragmatic recognition of the State practice in adopting regional marine environmental agreements.²⁰⁶ In that respect, it appears that the

194 Shapovalova-Krout (2019) *supra* n. 187, 14.

195 Entered into force 25 March 2016.

196 Okidi (1990), *supra* n. 34, 474, Chircop (1989) *supra* n. 21, 402.

197 See the proceedings of the Eleventh Annual Conference of the Law of the Sea Institute, Johnston *supra* n. 98.

198 Many States were of the view that regional seas required a special regime under UNCLOS, but they failed to produce an agreement on that, see N Oral, *Regional Co-operation and Protection of the Marine Environment Under International Law* (Brill, 2013) 34.

199 Dupuy and Vignes (1991) *supra* n. 17, 43.

200 The four 1958 Geneva Conventions on the Law of the Sea only refer to the concept of regions in two instances, see article 4(4) of the Convention on the Territorial Sea and the Contiguous Zone and article 12(2) of the Convention on the High Seas.

201 Articles 61-64, 66, 69-70 and 118-119 of UNCLOS.

202 Articles 268, 270, 272-273, 275 and 277 of UNCLOS.

203 Articles 122-123 of UNCLOS.

204 B Baker (2013) 'The Developing Regional Regime for the Marine Arctic' in Oude Elferink, Molenaar, Rothwell (eds) *supra* n. 9, 48.

205 B Boer, R Ramsay, and D Rothwell (eds) *International Environmental Law in the Asia Pacific*, (Kluwer Law International, 1998) 19.

206 For example article 197 refers to the formulation of regional agreements by States, either individually or through international organizations, probably considering the already existing two categories of regional sea agreements: the ones that were adopted by States themselves in the North East Atlantic and the Baltic and the ones that were adopted under the auspices of the UNEP Regional Seas Programme.

environmental framework of UNCLOS allows States to augment it in the way they consider most appropriate.²⁰⁷

3.1. Regional cooperation under article 197 of UNCLOS

Building upon the pre-existing international environmental rules, among them, regional conventions, such as the 1972 Oslo and 1974 Paris agreements, the 1974 Helsinki agreement and the 1976 Barcelona Convention,²⁰⁸ article 197 of UNCLOS established the legal basis and duty to adopt further global and regional rules, standards and recommended practices and procedures, considering characteristic regional features.²⁰⁹ Such regional characteristics include “*coastal geography, the physical characteristics of an ocean area, the distribution of specific species or valuable ecosystems and the pathways along which marine pollutants spread*”.²¹⁰ Its article 197 is perhaps the strongest endorsement found in the Convention of the utility of regional instruments in addressing local particularities.²¹¹ Insofar as the provisions of Part XII -and particularly article 197- have acquired customary status,²¹² the obligation to adopt regional agreements in furtherance of the environmental rules and principles of UNCLOS are also binding upon non-parties to the Convention.²¹³ Specifically, the provision obliges States either individually or through competent organizations to cooperate at the global level and, as appropriate, on a regional basis to formulate such rules and standards.²¹⁴

The duty to cooperate for the furtherance of environmental rules, standards and recommended practices and procedures is also an acknowledgement that Part XII of UNCLOS was not intended to provide specific technical, environmental standards for the regulation of offshore activities. Therefore, subsequent regional marine environmental agreements may constitute a means of implementation of that obligation to cooperate in the development of regional rules under UNCLOS, provided that they are “*concluded in furtherance of the general principles and*

207 However, UNCLOS dictates that some sources of pollution, for instance from international shipping, need to be dealt with by the adoption of globally applicable rules.

208 Boyle (2000) *supra* n. 19, 22.

209 Similarly, the Basel Convention encourages States parties to conclude, *inter alia*, regional agreements regulating the transboundary movement of hazardous wastes as long as they do not derogate from the rules for environmentally sound management of such wastes (see article 11).

210 Oude Elferink, Molenaar, Rothwell (2013) *supra* n. 9, 5. See also *South China Sea* award, para 910(e).

211 J Morgan (1994) ‘The Marine Region’, *Ocean and Coastal Management*, 68. See also article 207(4) of UNCLOS referring to the requirement to consider regional features when developing rules and standards for the prevention of land-based sources of marine pollution.

212 With regard to the customary nature of article 197 see for instance the Preamble to the OSPAR Convention, which explicitly recalls “*the relevant provisions of customary international law reflected in Part XII of the [UNCLOS] and, in particular, Art. 197 on global and regional cooperation for the protection and preservation of the marine environment*”. See also the 1991 Arctic Environmental Protection Strategy (AEPS), which states that the implementation of the Strategy will be carried out in accordance with international law “*including customary international law as reflected in the 1982 Convention on the Law of the Sea*”. The involvement of the USA in the AEPS is noteworthy as a recognition of the customary nature of the environmental provisions of UNCLOS, since it is not a party to the Convention.

213 Boyle (2000) *supra* n. 19, 23.

214 It has been argued that the provision only creates an obligation for such cooperation at the global level, because of the qualification “*as appropriate*” in the case of regional cooperation for the development of international rules and standards, see R Wolfrum, N Matz, *Conflicts in International Environmental Law* (Springer, 2003) 39.

objectives of the Convention”.²¹⁵ For instance, in the *Mox Plant Case*, the UK argued that it had complied with its duty under article 197 of UNCLOS “*inter alia, through its ratification of the OSPAR Convention and also in its role as a Member State of the European Community and Euratom*”.²¹⁶ Regional sea agreements can be regarded as subsequent State practice, which could be used for the interpretation and the implementation of Part XII of the Convention under certain conditions.²¹⁷ Arguably, such State practice has contributed to the attribution of customary status to the environmental rules of UNCLOS.²¹⁸ In that respect, chapter 6 examines whether the selected regional seas arrangements have implemented the obligation under article 197 (and in the case of offshore energy activities, under the more specific provision of article 208), by substantiating and furthering the environmental rules of UNCLOS at the regional level, or whether they merely reiterate the general obligations found in the Convention.

Noticeably, article 197 of UNCLOS appears to qualify the duty to adopt regional rules and standards using the phrase “*as appropriate*”, without explaining when the regional approach is appropriate to tackle marine environmental threats. Arguably, the Convention does not intend to prioritise the adoption of globally applicable rules and standards, but, instead, allows States to decide whether cooperation for the adoption of rules at the regional level is more suitable or feasible to deal with particular challenges. However, the Convention shows a preference for the most appropriate level of cooperation in respect of specific sources of pollution.²¹⁹ An example of a situation where UNCLOS indicates that it is more appropriate to cooperate on the regional level for the formulation of environmental rules and standards is in respect of enclosed or semi-enclosed sea areas.²²⁰

3.2. Regional cooperation in the context of enclosed or semi-enclosed seas

During the negotiations of UNCLOS, many States expressed their concerns about the unique need for environmental protection of enclosed and semi-enclosed seas.²²¹ Among these concerns, the content and the legal nature of the provisions relating to enclosed and semi-enclosed seas were the two most contested topics during the negotiations of UNCLOS.²²² Various delegations argued that, due to the particular characteristics of those marine areas, an enhanced level of cooperation among coastal States might be necessary to protect them compared with the open oceans.²²³ Indeed, Part IX of UNCLOS on enclosed and semi-enclosed seas illustrates a clear preference

215 Article 237(1) of UNCLOS.

216 ITLOS, *MOX Plant Case (Ireland v. United Kingdom)*, Provisional Measures, Written Response of the United Kingdom, 15 November 2001, para 13.

217 See chapter 8, sub-section 2.2.

218 Boyle (2000) *supra* n. 19, 32.

219 Oude Elferink, Molenaar, Rothwell (2013) *supra* n. 9, 4.

220 PCA, *South China Sea Arbitration (Republic of the Philippines v People's Republic of China)* Award of 12 July 2016, para 946, where the tribunal emphasized the importance of regional cooperation in the case of semi-enclosed seas.

221 Oral (2013) *supra* n. 198, 36, referring, *inter alia*, to the Iranian Representative during the 38th meeting of the Second Committee, who pointed out that “*the problems raised by the semi-enclosed seas with regard to the management of their resources, international navigation and preservation of the marine environment justified granting them a particular status constituting the exception to the general rule*”.

222 *Ibid.*, 39.

223 Proelss, *United Nations Convention on the Law of the Sea: A Commentary* (Hart/Nomos, 2017) 1331.

for regional cooperation to address, *inter alia*, the issue of marine environmental protection.²²⁴ The preference for special regional rules in the case of enclosed or semi-enclosed seas seems to be justified by their unique characteristics such as the complexity of navigation due to poor connection with other seas and the high risk from all sources of pollution due to their small size and the difficulty in dispersing pollutants in adjacent seas.²²⁵

Article 123 of UNCLOS directs States bordering enclosed or semi-enclosed seas to cooperate, directly or through an appropriate regional organisation,²²⁶ when exercising their rights and complying with their obligations under the Convention. Notably, the provision dictates that States “*shall endeavour to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment*”.²²⁷ Scholars have argued that the provision should be interpreted as stimulating “*the cooperation of States and international organisations in respect of the use and protection of enclosed or semi-enclosed seas as well as to the adoption of regional and sub-regional rules concerning particular seas*”.²²⁸ The provision can also be read as requiring States bordering enclosed or semi-enclosed seas to ensure that the implementing measures they take to honour their obligation to protect and preserve the marine environment under UNCLOS are compatible with the actions taken by other coastal States in the same region for the sake of the marine environment’s ecological integrity.²²⁹

However, article 123 of UNCLOS does not necessarily require cooperation only among the coastal States surrounding an enclosed or semi-enclosed sea. In that respect, it provides that coastal States must endeavour “*to invite, as appropriate, other interested States or international organisations to cooperate with them in furtherance of the provisions of this article*”.²³⁰ Even though the wording of the provision indicates that coastal States bordering an enclosed or semi-enclosed sea retain discretion in inviting other interested States and international organisations to participate in their regional cooperation efforts for the protection of the marine environment, the Convention encourages broad inclusivity in terms of participants. The potential application of this duty to endeavour to invite interested States and international organisations could have significant repercussions in the context of regional cooperation in the Arctic Ocean.²³¹ Considering the reasons that justified the need for special rules on enclosed and semi-enclosed seas, as expressed during the UNCLOS negotiations,

224 Article 123 of UNCLOS.

225 B Vukas (2000) ‘United Nations Convention on the Law of the Sea and the Polar Marine Environment’, in Vidas *supra* n. 19, 40.

226 Regional coordination of activities to protect the marine environment had already been set up in certain marine areas under the auspices of the UNEP, see M Nordquist, N Grandy, S Nandan, and S Rosenne (eds) *United National Convention on the Law of the Sea 1982: A Commentary*, Volume III (Brill/Nijhoff, 1995) 367-368.

227 Article 123(b) of UNCLOS.

228 B Vukas, ‘The Mediterranean: An Enclosed or Semi-Enclosed Sea?’ in B Vukas (ed) *The Legal Regime of Enclosed or Semi-Enclosed Seas: The Particular Case of the Mediterranean* (Birotehnika, 1988) 64.

229 Proelss (2017) *supra* n. 223, 891.

230 Article 123(d) of UNCLOS.

231 Even though the Arctic Ocean is regarded as a semi-enclosed sea due to its geophysical characteristics, some scholars still debate whether it qualifies as such under article 122 UNCLOS, see B Baker (2013) *supra* n. 204, 51.

the Arctic Ocean would qualify as a semi-enclosed sea according to article 122 of the Convention.²³² As discussed in chapter 6, there is a growing interest of States and other actors outside the Arctic region to participate in its legal regime.²³³ In that respect, several non-Arctic States, organisations and treaty bodies have been granted the right to participate as observers in the working groups of the Arctic Council.²³⁴ However, at present, the EU's application to become an observer is still pending. In that context, the interpretation of article 123 of UNCLOS could legally be relevant to the EU's negotiating position for participating in the Arctic Council's meetings.²³⁵

Contrary to article 197, article 123 of UNCLOS is "*couched in the language of exhortation*"²³⁶ ("shall endeavour") to avoid imposing an unconditional duty to participate in a distinctive binding regional agreement upon coastal States which, for various reasons, are not willing to create or join such a regime. However, the fact that the provision guides States to "coordinate the implementation of their rights and duties" could be read as an indication that it was intended to create a legal obligation of cooperation in such marine areas.²³⁷ Arguably, the flexibility of the first sentence of article 123 of UNCLOS has been remedied by the wording of its second sentence, which requires States to endeavour to coordinate their activities.²³⁸ The obligation of coastal States bordering enclosed or semi-enclosed seas to coordinate the implementation of their duty to protect and preserve the marine environment appears justified, given the enhanced connectivity of the maritime zones falling under their jurisdiction.²³⁹ Consistent implementation measures for the protection of the marine environment in such areas are indispensable from an ecosystem approach perspective.

The wording of article 123 is a compromise struck between States calling for a particular legal regime concerning enclosed and semi-enclosed seas and those opposing the creation of a derogation from the generally applicable rules, during the negotiations of UNCLOS.²⁴⁰ Article 123 does not grant additional rights or obligations to coastal States in such marine areas compared with those that any

232 Vukas (2000) *supra* n. 225, 40.

233 See chapter 6, sub-section 4.4.

234 See Arctic Council's website: <https://arctic-council.org/en/about/observers/>.

235 For further discussion on the relevance of these observers as well as the potential of the EU to contribute to strengthening the legal framework applicable to offshore energy production activities in the marine Arctic, see chapter 7, sub-section 3.1.2.

236 Nordquist, Grandy, Nandan and Rosenne (1995) *supra* n. 226, 366.

237 C Linebaugh (2014) 'Joint Development in a Semi-Enclosed Sea: China's Duty to Cooperate in Developing the Natural Resources of the South China Sea', *Columbia Journal of Transnational Law*, 560, where Linebaugh claims that article 123 "*imposes a broad legal duty on coastal states to cooperate with regard to any exercise of their rights and duties under UNCLOS*".

238 For instance, Nandan and Rosenne argue that article 123 emphasises "*the need and desirability of cooperation between States bordering an enclosed or semi-enclosed sea*" and "*encourages States to initiate attempts to coordinate the functions, activities and policies*" mentioned therein. See Nordquist, Grandy, Nandan and Rosenne (1995) *supra* n. 226, 356, 366.

239 Nonetheless, that is not meant to undermine the interconnectedness of the seas in general and the need to apply compatible environmental measures in compliance with UNCLOS, especially given the scientific evidence that marine ecosystems interact over wide geographical scales, see J Mossop, and C Schofield (2020 *in press*) 'Adjacency and Due Regard: The Role of Coastal States in the BBNJ Treaty', *Marine Policy*, 5.

240 Proelss (2017) *supra* n. 223, 887.

coastal State obtains under UNCLOS.²⁴¹ The main concern was that creating specific rules to regulate enclosed or semi-enclosed seas could affect the rights and duties of third States, and especially the freedom of navigation.²⁴² In any case, article 123 of UNCLOS does not prevent States bordering enclosed and semi-enclosed seas from cooperating to adopt regionally applicable international rules and standards.²⁴³ In the author's view, a duty of coastal States surrounding enclosed or semi-enclosed seas to cooperate for the development of rules and standards for marine environmental protection can be deduced from the general duty of coastal States to cooperate at the regional level for the formulation of specific rules and standards, which is provided for explicitly under article 197 of UNCLOS.

States surrounding enclosed or semi-enclosed seas have to consider their duty to cooperate in the manner in which they exercise their rights and duties under UNCLOS.²⁴⁴ Once they decide to establish a cooperation framework to manage their activities within an enclosed or semi-enclosed sea, they must continue cooperating in good faith.²⁴⁵ It has been submitted that the provision introduced a *sui generis legal obligation* for cooperation, which would be breached if a State systematically rejected any negotiations for the protection and preservation of the marine environment.²⁴⁶ Arguably, the duty to cooperate under article 123 is linked to article 197 of UNCLOS and must be considered as an augmented obligation for States bordering enclosed and semi-enclosed seas. In that sense, in the *Mox Plant* case, Ireland argued that there was a "heightened" obligation for States bordering a semi-enclosed sea to cooperate under article 123 additional to the one reflected in article 197 of the Convention.²⁴⁷ According to Ireland's position, interpreting article 123 of UNCLOS as imposing an enhanced obligation of cooperation is justified on practical reasons, because such areas cannot disperse pollution effectively.²⁴⁸ In the author's opinion, though, the argument in favour of an enhanced obligation of cooperation imposed by article 123 seems to suggest its interpretation *de lege ferenda*. On another occasion, in the *Land Reclamation* case, Malaysia asked for provisional measures, alleging that Singapore had breached the obligation under article 123 of UNCLOS due to its failure to cooperate.²⁴⁹ While in both cases the tribunal rejected the provisional measures requested by Ireland and Malaysia respectively, it ordered the parties to cooperate in the exchange of information, to monitor the risks of the

241 Nordquist, Grandy, Nandan and Rosenne (1995) *supra* n. 226, 435.

242 Vukas (2000) *supra* n. 225, 39.

243 Compared with article 197 of UNCLOS, which makes it clear that the objective of the duty of cooperation is the formulation of international rules, standards and recommended practices and procedures, article 123 does not explicitly mention that goal.

244 M Grbec, *Extension of Coastal State Jurisdiction in Enclosed and Semi-Enclosed Seas: A Mediterranean and Adriatic Perspective* (Routledge, 2014) 40.

245 T Scovazzi (1981) 'Implications of the New Law of the Sea for the Mediterranean', *Marine Policy*, 307.

246 Vukas (2000) *supra* n. 27, 42. See also discussion below relating to *MOX Plant*, *Land Reclamation* and *South China Sea* cases on the potential interpretation of the duty as an obligation of conduct, which requires States bordering such seas to comply with certain procedural obligations, such as to exchange information and consult before devising the necessary environmental measures.

247 Request for Provisional Measures and Statement of the Case submitted on behalf of Ireland (*Ireland v United Kingdom*), para 58, see also Oral (2013) *supra* n. 198, 41.

248 *Ibid*, paras 59-60.

249 ITLOS, *Malaysia v Singapore Land Reclamation*, Request for Provisional Measures, para 18.

contested activities and to consult before devising all appropriate measures to protect the marine environment.²⁵⁰

In the *South China Sea Arbitration*, the Philippines claimed that China had breached its duty of cooperation under articles 197 and 123 of UNCLOS “the latter of which takes into account the characteristic regional features which would include the fundamental biological and ecological importance and fragile nature of the coral reef ecosystem of the South China Sea”.²⁵¹ The arbitral tribunal unequivocally referred to article 123 as the relevant provision regarding regional cooperation under UNCLOS without entering into details as to its normative content.²⁵² In that regard, the tribunal implied that article 123 of UNCLOS creates an obligation for States bordering a semi-enclosed sea to coordinate the implementation of their duties for the protection of the marine environment.²⁵³ In the tribunal’s view, the provision imposes an obligation of conduct,²⁵⁴ which at least entails an obligation to consult with the neighbouring States about measures of marine environmental protection.²⁵⁵ In light of the above, it could be deduced that article 123, read in combination with article 197 of UNCLOS, creates an obligation of conduct of States bordering enclosed or semi-enclosed seas to endeavour to cooperate in good faith in the development of further rules and standards on marine environmental protection.²⁵⁶ The two articles enjoy a “symbiotic legal relationship”,²⁵⁷ where article 123 plays the implementing function of the duty to cooperate in the context of enclosed and semi-enclosed seas. In that respect, it could be argued that regional sea agreements applying to enclosed and semi-enclosed seas remain the primary mechanism in the implementation of articles 197 and 123 of UNCLOS.

3.3. Regional cooperation in other marine areas under UNCLOS

As well as the case of enclosed and semi-enclosed seas, the physical and geographic specificities of other marine regions may similarly justify the adoption of specific regional rules and standards for marine environmental protection. For instance, the polar regions could qualify as particular marine environments,²⁵⁸ which require the formulation of more specific regional environmental rules and standards by the coastal States taking into consideration their unique ecological factors. The considerable normative developments under the auspices of the Arctic Council addressing environmental issues in the marine Arctic appear to attest to the validity of that argument.²⁵⁹ Regional cooperation is also deemed to be more appropriate in the case of pollution emergencies since the range of affected States is more limited and

250 MOX Plant Case, para 89, Land Reclamation Case, para 106.

251 *South China Sea*, para 910(e).

252 *Ibid*, para 946.

253 *Ibid*, para 986.

254 Grbec (2014) *supra* n. 244, 38, who also suggests that States are expected to act in a way conforming with their duty to coordinate, rather than achieve a certain result.

255 *South China Sea*, para 986.

256 Whomerley (2016) *supra* n. 79, 344.

257 Oral (2013) *supra* n. 198, 43.

258 See for instance article 234 of UNCLOS on ice-covered areas.

259 See chapter 6, sub-section 4.4 on the normative developments under the auspices of the Arctic Council.

regional structures can -in theory- react faster and more efficiently.²⁶⁰ Similarly, in the case of assessing the environmental status of the oceans and monitoring the effects of specific activities, regional cooperation appears to be more practical.²⁶¹ In that respect, article 200 of UNCLOS encourages States to “*participate actively in regional and global programmes to acquire knowledge for the assessment of the nature and extent of pollution, exposure to it, and its pathways, risks and remedies*”. The information acquired has to be used for the formulation and elaboration of international rules and standards for the prevention, reduction and control of pollution in the marine environment.²⁶² As illustrated in chapter 6, many treaty bodies under regional sea agreements and the Arctic Council focus on science-based decision making.²⁶³

4. The relationship between regional environmental agreements and UNCLOS and its implications for offshore energy production activities

UNCLOS reflects a realistic acceptance that specific sources of pollution may call for regional instead of, or in addition to, global solutions.²⁶⁴ The Convention does not imply that regionalism plays the same role in regulating all the sources of pollution covered under its Part XII. Specifically, UNCLOS largely restrains the possibility of derogation from globally applicable rules and standards in instances where the development and implementation of stricter regional rules would not be considered appropriate. The global approach seems to be somewhat justified by the Convention when the global legal framework is robust enough to tackle the environmental challenges, and the formulation of stricter regional rules may impinge on the freedom of navigation.²⁶⁵ According to Boyle, a “restrictive model of regionalism”²⁶⁶ is exemplified by the provisions of UNCLOS on pollution from vessels.²⁶⁷ Boyle suggests that UNCLOS adopts this approach because the formulation of independent regional rules to tackle pollution from vessels could have a significant impact on the exercise of the freedom of navigation. When it comes to pollution from vessels, the role of regional rules is usually limited to the implementation of global rules found in UNCLOS and the globally applicable IMO Conventions. However, it is noteworthy that MARPOL also provides for the adoption of stricter regionally applicable standards for discharges in specially designated areas.²⁶⁸ Regional or even unilateral rules are also not entirely precluded by the Convention, as they might be necessary for unique regions, such as the ice-covered areas in the Arctic.²⁶⁹

In light of the above, it is argued that UNCLOS foresees different relationships between global and regional rules in the context of marine environmental protection. For instance, Tanaka has suggested four models of the interplay between global

260 Birnie, Boyle and Redgwell, *supra* n. 8, 392.

261 See the relevant activities of regional sea conventions, for instance the scientific research conducted under the auspices of the OSPAR and the Arctic Council, chapter 6, sub-section 4.1.

262 Article 201 of UNCLOS.

263 See chapter 6, sub-sections 4.1. and 4.4.

264 See for example article 208(4) of UNCLOS.

265 Boyle (2000) *supra* n. 19, 25.

266 Boyle (2000) *supra* n. 19, 23, Tanaka (2016) *supra* n. 6, 358, who refers to it as the “global-single regional model”.

267 Articles 210-211 of UNCLOS.

268 Annex I, Regulations 9 and 10 of MARPOL 73/78.

269 Article 234 of UNCLOS, Tanaka (2016) *supra* n. 6, 359-360.

and regional legal frameworks in the international law of marine environmental protection.²⁷⁰ In Tanaka's view, depending on the source of marine pollution, regional rules might have a marginal or more substantial role in complementing or implementing the global environmental rules at the regional level.²⁷¹ In any case, the Convention does not prohibit the development of regional agreements but instead promotes (and sometimes constrains) regional cooperation under its Part XII.²⁷²

4.1. The rules of UNCLOS on its relationship with regional environmental agreements

Given the variety of regional agreements on marine environmental protection, the relationship between UNCLOS and regional agreements is critical to understanding how regional instruments inform the implementation of the Convention.²⁷³ UNCLOS establishes its relationship with existing and future agreements which deal with matters falling within its regulatory scope.²⁷⁴ As exemplified by its article 311, UNCLOS claims priority in relation to all other international agreements,²⁷⁵ but at the same time endorses its implementation by subsequent international agreements.²⁷⁶ It allows its parties to conclude other relevant agreements insofar as they are compatible with the Convention and do not infringe upon other parties' rights and duties.²⁷⁷ These requirements grant prevalence to UNCLOS over other relevant international agreements and ensure that States do not exercise conflicting rights and obligations arising from parallel treaties.²⁷⁸ Moreover, article 311 limits the freedom of two or more States parties to adopt *inter se* subsequent agreements modifying the provisions of UNCLOS, which are incompatible with the effective execution of the object and purpose of the Convention, affect the application of the basic principles embodied therein or the rights and obligations of other States parties to the Convention.²⁷⁹ This provision could be interpreted as a substantial constraint on the development of regional instruments by parties to UNCLOS.

However, in the context of marine environmental agreements, the most relevant provision is that of article 311(5) of UNCLOS, which makes it clear that the prohibition of subsequent agreements "*does not affect international agreements expressly permitted or preserved by other articles of this Convention*". That means that regional environmental agreements, which are permitted under article 237

270 Tanaka (2016) *supra* n. 6, 346-347.

271 *Ibid.* See also Boyle (2000) *supra* n. 19, 23-25, arguing that there are two contrasting models of regionalism within the global framework of marine environmental protection.

272 D Engleder, 'Regional Cooperation in Marine Environmental Law' in H-J Koch, D Konig, J Sanden, and R Verheyen (eds) *Legal Regimes for Environmental Protection: Governance for Climate Change and Ocean Resources* (Brill, 2015) 325-326.

273 On the relationship between UNCLOS and global environmental agreements, see chapter 3, section 2.

274 D Galligan (1980) 'Wrapping Up the UNCLOS III Package: At Long Last the Final Clauses', *Virginia Journal of International Law*, 391-392.

275 B Vukas, 'The Law of the Sea Convention and the Law of Treaties' in V Gotz, P Selmer and R Wolfrum (eds) *Liber amicorum Gunther Jaenicke* (Max Planck Institute, 1998) 649, who claims that article 311 "pretends to play the role similar to the one of article 103 of the United Nations Charter".

276 Proelss (2017) *supra* n. 223, 2010.

277 Article 311(2) of UNCLOS.

278 Boyle (2000) *supra* n 19, 21.

279 Article 311(3) of UNCLOS.

of the Convention,²⁸⁰ are not affected by the general prohibition under article 311. Article 237 is *lex specialis* in relation to article 311 since the former provision governs specifically the relationship between Part XII and other environmental agreements, while the latter generally regulates the relationship between UNCLOS and all other international treaties.²⁸¹ Notably, article 237 of UNCLOS preserves the right of States to adopt subsequent environmental agreements insofar as they are “concluded in furtherance of the general principles set forth in this Convention.”²⁸² The word “furtherance” indicates that the Convention allows the formulation of specific agreements to help it evolve successfully.²⁸³ Therefore, any regional agreements which might be considered as contributing to the achievement of the objectives of Part XII are encompassed by the provision. Article 237 highlights the role of UNCLOS as a framework for marine environmental protection, which only sets out general environmental duties, which then need to be further developed via the conclusion of other specific, usually sectoral, agreements. In that sense, the provision (also read in conjunction with article 197)²⁸⁴ facilitates the interaction of UNCLOS with subsequent marine environmental instruments, to develop its rules and principles through adopting more specific and normatively concrete standards at the regional level.²⁸⁵

Arguably, the reference to “agreements” in furtherance of the general principles of UNCLOS in article 237(2) not only encompasses international conventions but also includes instruments of a technical or administrative character which are signed by representatives of specific State departments and are not subject to ratification.²⁸⁶ Such an interpretation of the provision leaves room to argue that specific non-binding instruments and technical standards could further substantiate the environmental obligations under the Convention. In that sense, regional marine environmental rules and standards can significantly contribute to the implementation at the regional level of the obligations under UNCLOS.²⁸⁷ Their conformity with UNCLOS is indicative of their function as subsequent State agreements and practice substantiating the content of obligations under Part XII.²⁸⁸ The use of such subsequent agreements and practice in the interpretation of UNCLOS vividly reveals the flexibility and the evolutionary nature of the marine environmental protection provisions of the Convention.²⁸⁹

280 Article 237 of UNCLOS is entitled “Obligations under other conventions on the protection and preservation of the marine environment”.

281 Proelss (2017) *supra* n. 223, 1597.

282 Article 237(1) of UNCLOS.

283 Proelss (2017) *supra* n. 223, 1600.

284 ITLOS has stressed the importance of the duty to cooperate as a fundamental rule for the environmental protection of the oceans under Part XII of UNCLOS, see *MOX Plant Case (Ireland v United Kingdom)* Provisional Measures, Order of 3 December 2001, para 82.

285 See also *South China Sea Arbitration*, para 942.

286 Proelss (2017) *supra* n. 223, 1600.

287 Birnie, Boyle and Redgwell, *supra* n. 8, 391.

288 See chapter 8, sub-section 2.2.

289 Birnie, Boyle and Redgwell, *supra* n. 8, 394.

4.2. Article 208 UNCLOS as the springboard for normative interactions with regional environmental agreements

Concerning the regulation of pollution arising from seabed activities, including offshore energy production activities, article 208 provides more detailed rules regarding the potential relationship of subsequent regional agreements with UNCLOS. The provision creates a strict obligation (“shall establish” instead of endeavour)²⁹⁰ for States, acting especially through competent international organisations or diplomatic conference, to formulate global and regional rules, standards and recommended practices and procedures for the regulation of offshore energy activities.²⁹¹ The enumeration of instruments indicates that the obligation encompasses both strictly legally binding rules and non-binding standards, practices and procedures.²⁹² Regional sea arrangements, which contain rules on the prevention of pollution from offshore energy activities,²⁹³ offer illustrative examples of subsequent State practice in the implementation of that provision, regardless of whether they are independent or have been developed under the auspices of the UNEP. Moreover, rules and standards produced by the EU, as a regional organisation with competence related to the protection of the marine environment, could also be considered as an implementation of this obligation at the EU level.²⁹⁴

Most importantly, the provision obliges States to ensure that national law, regulations and measures adopted according to article 208(1) and (2) of UNCLOS are to be no less effective than international rules, standards and recommended practices and procedures. It is important to examine to what extent this rule also refers to international rules and standards formulated for specific marine regions. That would mean that such regional rules and standards can serve as benchmarks for the implementation of article 208(3) of UNCLOS, even for third States, which have not explicitly adhered to them.²⁹⁵ In comparison with article 210(6), the rule of reference under article 208(3) of UNCLOS does not refer to global rules but instead sets “international” rules, standards and recommended practices and procedures as the minimum standard with which domestic regulation must at least abide. However, as explained in relation to global rules in chapter 3, regional normative development must generally be accepted to function as such a global benchmark. In other words, such regional norms need to be replicated across a considerable

290 See, for instance, the different wording used with regard to the obligation to formulate international rules and standards for land-based pollution in article 207(4) of UNCLOS.

291 Article 208(5) of UNCLOS.

292 Proelss (2017) *supra* n. 223, 1398.

293 For instance, Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, 14 October 1994, Article 11 of the Convention on the Protection of the Black Sea against Pollution, 21 April 1992, Annex VI of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 17 January 2001, Annex III of the Convention for the Protection of the Marine Environment of the North East Atlantic, 22 September 1992.

294 However, it could be argued that the EU is considered as a coastal State for the purpose of the Convention, see article 1(2)(2) of UNCLOS. In that case, the EU cannot be regarded as a regional international organisation for article 208(5).

295 Proelss (2017) *supra* n. 223, 1397.

number of representative regions around the world so that they can function as a global benchmark.²⁹⁶

Given that the vast majority of rules and standards related to the regulation of offshore energy activities are formulated at the regional level, it is likely that such norms may (have) become generally accepted or “international” in the meaning of article 208(3) of UNCLOS. For instance, the well-developed State practice in developing marine environmental protection rules and principles at the regional level has influenced the rules under Part XII of UNCLOS.²⁹⁷ The general acceptance of these environmental obligations in different regions was an essential factor in the subsequent recognition that rules on environmental protection under Part XII UNCLOS acquired customary status.²⁹⁸ *A maiore ad minus*, even if the rules under regional sea agreements do not meet the necessary requirements to be considered customary, their almost universal adherence across different regions would be enough for them to qualify as generally acceptable. In other words, the consistent reiteration of regional rules and standards for the protection of the marine environment against pollution from offshore energy generation activities would testify to their generally accepted nature and, thus, they would fall within the scope of the rule of reference in article 208(3) of UNCLOS.²⁹⁹

Article 208(4) of UNCLOS also creates an obligation for States to endeavour to harmonise their policies, at the appropriate regional level, on the regulation of pollution from offshore energy activities. The “appropriate level” could be interpreted to refer to enclosed or semi-enclosed seas, where the environmental externalities of offshore energy activities are, arguably, more difficult to disperse. The provision specifies that States must endeavour to harmonise their domestic environmental policies, for instance, the requirements for EIAs before granting permission for the exploitation of offshore energy resources in a region, to avoid a mosaic-like legal structure.³⁰⁰ However, the wording of the provision (“shall endeavour”) leaves many unanswered questions relating to its normative content since it does not provide any interpretative guidance on the implementation of the duty. According to the tribunal in the *Chagos Marine Protected Area* arbitration, such an obligation only imposes a duty to use the best efforts to achieve the harmonisation of policies at the regional level.³⁰¹

Harmonisation of policies does not mean imposing identical rules for the whole marine region, but it does at least require aligning sets of domestic regulations and making them compatible.³⁰² Besides the critical role of regional sea agreements in the harmonisation of offshore energy policies in different marine regions, it seems that regional organisations can also have an equally significant influence. For instance, the

296 J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 215.

297 Boyle (2005) ‘Further Development of the Law of the Sea Convention: Mechanisms for Change’, *International Law and Comparative Law Quarterly*, 575.

298 *Supra* n. 61.

299 See further discussion, chapter 8.

300 Nordquist, Grandy, Nandan and Rosenne (1995) *supra* n. 226, 64.

301 PCA, *Chagos Marine Protected Area Arbitration (Mauritius v United Kingdom)*, Award of 18 March 2015, para 539.

302 B Baker (2012) ‘Offshore Oil and Gas Regulation in the Arctic: Room for Harmonization?’, *Yearbook of Polar Law*, 477.

EU directives related to the regulation of offshore energy production activities aim to harmonise the applicable legal framework in the Member States.³⁰³ As discussed in chapter 7, the EU Directive on MSP could contribute to the harmonisation and coordination of the fragmented domestic regulatory regimes governing offshore energy production activities in marine areas surrounding the EU.³⁰⁴ For instance, MSP can provide the basis for harmonising licensing procedures among the EU Member States.³⁰⁵ At the same time, in the case of enclosed or semi-enclosed seas, like the Mediterranean, MSP could be considered as the implementation of the obligation to coordinate the exercise of rights and obligations concerning the protection of the marine environment under article 123 UNCLOS.³⁰⁶

Interim conclusions

This chapter has highlighted the relevance of regionalism as an approach for the environmental regulation of offshore energy production activities. Regionalism refers to any kind of cooperation among States for the protection of any given part of the oceans. Besides the advantages of adopting a regional approach in that respect, the author's optimistic stance towards regionalism is also a realistic acknowledgement of the relevant State practice. Most of the specific environmental rules and standards have been promulgated at the regional level, usually in the aftermath of devastating marine pollution accidents. The selected marine regions offer illustrative examples of cooperation for the formulation of regional environmental rules and standards for offshore energy production activities. Gradually, these rules and standards have adapted to keep abreast of developments in international environmental law.

In light of the above discussion, it also follows that UNCLOS, as a global framework, has accommodated and, sometimes, explicitly advocated the development of regional agreements for the protection of the marine environment. The Convention's rules encourage and, at the same time, delineate the potential for regional development of environmental norms in respect of specific sources of pollution. On that account, there is no genuine incompatibility with UNCLOS provided that the regional agreements meet the requirements of its articles 237 and 311 and are consistent with the relevant environmental obligations under the Convention. Under these conditions, parties to UNCLOS are relatively free to augment their cooperation through the formulation of stricter environmental rules at the regional level.

Even though the selected regional agreements adopt different approaches to the protection of the marine environment, they have not resulted in any normative conflicts with UNCLOS.³⁰⁷ The success of the Convention is arguably attributable to the fact that it actively enables the substantial variation of localised norms depending on regional specificities, such as the diversity of marine ecosystems and modes of

303 For example, see Directive 2013/30/EU on safety of offshore oil and gas operations.

304 M Young (2015) 'Building the Blue Economy: The Role of Marine Spatial Planning in Facilitating Offshore Renewable Energy Development', *International Journal of Marine and Coastal Law*, 155.

305 *Ibid.*, 173.

306 N Oral (2008) 'Integrated Coastal Zone Management and Marine Spatial Planning for Hydrocarbon Activities in the Black Sea', *International Journal of Marine and Coastal Law*, 461.

307 Wolfrum and Matz (2003) *supra* n. 214, 40.

cooperation between States in different regions.³⁰⁸ Therefore, regional agreements on marine environmental protection can harmoniously co-exist and interact with UNCLOS, shaping the implementation of its duty to protect and preserve the marine environment in each region. The implementation of the Convention depends upon the States' will to cooperate at the appropriate level, be that global or regional, and substantiate normatively concrete and specific environmental standards to implement their duty to protect and preserve the marine environment. In this way, UNCLOS' environmental framework promotes the regional implementation of the duty to protect the marine environment. In turn, the regional agreements can bear significant influence on the implementation of UNCLOS, adding normative content to it while simultaneously serving as a normative example for other marine regions.

308 Birnie, Boyle, Redgwell, *supra* n. 8, 390-391.

CHAPTER 6

Offshore energy production activities under regional marine environmental agreements: enhancing the duty to protect and preserve the marine environment

Introduction

Marine regions differ considerably in terms of their geographical, environmental and socio-economic features. Notwithstanding the ambiguous normative contours of the duty to cooperate in enclosed and semi-enclosed seas under article 123 of UNCLOS,¹ these differences among marine regions might suggest that each of them should be subject to region-specific norms. For instance, the sensitive ecological characteristics of enclosed or semi-enclosed seas or the unique features of the Arctic Ocean appear to call for the adoption of stricter environmental standards than those suitable for other oceanic areas.² One would reasonably expect that the level of protection required by regional rules for sensitive regions is commensurate with the severity of the risks and uniqueness of challenges which these areas face.³ In light of State practice, cooperation at the regional level seems to be the most feasible framework for the formulation of environmental rules concerning offshore energy activities, mainly because it can offer tailor-made standards to address local needs and can lead to the adoption of more stringent standards than the globally applicable ones. In that respect, regional environmental rules and standards are expected to adapt the global standards to specific circumstances. That regional normative differentiation seems to have been preferred also by developing States in particular, which resisted the imposition of uniform standards for pollution prevention during the negotiations of UNCLOS.⁴

When it comes to pollution from seabed activities, States are required to establish and review, as necessary, regional rules, standards and recommended practices and procedures to prevent, reduce or control the environmental externalities of those projects.⁵ Even though UNCLOS vests coastal States with the power and duty to adopt domestic rules and regulations to prevent, minimise and control pollution arising from or in connection with offshore energy activities, it seeks to restrain their sovereign discretion concerning the content of those national implementation measures. In that respect, UNCLOS sets a minimum standard (“shall be no less

1 It could be argued, for instance, that article 123 UNCLOS urges the coastal states to engage in regional cooperation in respect of marine environmental protection, see T Koivurova, E Molenaar (2010) ‘International Governance and Regulation of the Marine Arctic’, Report prepared for the WWF International Arctic Programme, 68.

2 P Birnie, A Boyle, and C Redgwell, *International Law and the Environment* (Oxford University Press, 3rd edition, 2009) 392.

3 D Vidas, ‘The Polar Marine Environment in Regional Cooperation’ in D Vidas (ed) *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention* (Cambridge University Press, 2000) 88.

4 J Kindt (1979) ‘The Effect of Claims by Developing Countries on the Law of the Sea International Marine Pollution Negotiations’, *Virginia Journal of International Law*, 313.

5 Article 208(5) of UNCLOS.

effective than international rules, standards and recommended practices and procedures”) through the rule of reference of its article 208(3). This rule of reference appears to be closely interlinked with the obligation of States under article 208(5) of UNCLOS to establish regional rules, standards and recommended practices and procedures for the protection and preservation of the marine environment against pollution from offshore activities. States must comply with this obligation by developing substantive environmental rules and standards, which build upon the more abstract rules established at the global level. As already highlighted in chapter 3, the obligation under article 208(5) of UNCLOS remains largely unfulfilled at the global level. Given the scarcity of specific global rules and standards relating to the prevention of pollution from offshore energy activities, the establishment of regional rules dealing with such operations at sea is vital for the implementation of the duty to protect and preserve the environment under UNCLOS. It is, however, debatable whether and to what extent custom-built regional rules, which purport to respond to the needs of a particular region, can qualify as international rules for article 208(3) UNCLOS and, as such, serve as a benchmark for other marine areas.⁶

The need for international minimum standards is not merely a matter of theoretical interest. The recent report of the UN Secretary-General on the “gaps of international environmental law”⁷ identified, *inter alia*, the existing normative gap in the international environmental regulation of seabed activities. Specifically, the Report stressed that agreements concerning “*regional Seas reveal normative gaps concerning the control of pollution from seabed activities subject to national jurisdiction, as such treaties contain only very general and often limited obligations regarding the environmental impact assessment of proposed activities*”.⁸ Some regional sea agreements do not go beyond the brief restatement of the general obligation under UNCLOS to take all necessary measures to prevent, reduce and control this source of pollution.⁹ As in the case of UNCLOS, the obligation to protect the marine environment contained in regional agreements imposes a requirement to exercise due diligence,¹⁰ which can be interpreted as applicable to pollution or other disturbances arising from or connected with all types of offshore energy production activities.¹¹

This chapter examines how regional marine environmental protection instruments shape the implementation of the duty to protect and preserve the marine environment through substantive rules and standards, as well as institutional mechanisms and procedures to update, review and adapt those norms to region-specific needs. To that end, it comparatively analyses the relevant normative developments under four selected regions. The first section briefly analyses the general prevention obligation and selected environmental principles under the agreements in question. Then, the chapter looks into their treaty rules which have direct implications for offshore energy production activities, focusing on procedural

6 See chapter 8, sub-section 2.1.

7 UN Report of the Secretary General ‘Gaps in international environmental law and environmental-related instruments: towards a global pact for the environment’, A/73/419, 30 November 2018, para 58.

8 *Ibid.* It should be noted, though, that the Report does not address how or whether a proposed Global Pact for the Environment should deal with the normative gap.

9 Articles 194(3) and 208(1) of UNCLOS.

10 See discussion on the nature of the duty to protect the marine environment, chapters 2 and 3.

11 See article 17 of the Framework Convention for the Protection of the Marine Environment of the Caspian Sea.

obligations, such as the requirement to conduct EIAs, and specific duties on the prevention of operational and accidental pollution, the authorisation of offshore energy activities, and the use of BAT and BEP. Section 4 considers how the standard-setting competence of the institutional framework in each of these regions has contributed to the further development and implementation of rules and standards to address emerging environmental and scientific challenges. In that respect, it examines how regional rules have dynamically and progressively evolved through the adoption of decisions, strategies and recommendation by their respective treaty bodies. The chapter suggests that these regional instruments further define the normative content of the duty to protect and preserve the marine environment and influence its implementation by the parties to those regional agreements.

As was explained in chapter 5, the Mediterranean Sea, the Baltic Sea, the North-East Atlantic and the Arctic Oceans offer illustrative examples where regional cooperation has culminated in specific environmental rules and standards on offshore energy production activities. These marine regions serve as case studies for the present chapter, but references are also made to relevant normative and institutional developments in other areas to keep track of the global picture.

1. Comparative analysis of the general environmental duties and principles

In general, regional marine environmental agreements impose a due diligence obligation on their parties to take all appropriate measures to prevent marine pollution, which is substantiated by more specific rules and standards. In that sense, regional agreements are operationalised as a means of acknowledging, implementing and giving specific normative content to the normatively vague rules of UNCLOS.¹² Section 1 examines whether the regional instruments merely reiterate the general obligation to protect and preserve the marine environment found in UNCLOS, or whether they go further than that by adapting the general duty at the regional level, in the sense of modifying or adding region-specific normative content to it. Specifically, this section examines the adoption of an ecosystem-based approach and the prescription of the precautionary principle under agreements applicable in the selected marine regions.

1.1. The shift from the pollution prevention duty to addressing all the adverse impacts of offshore activities

There appears to be a clear link between the obligation to protect and preserve the marine environment under Part XII of UNCLOS and the relevant duties under the examined regional agreements. All three regional agreements, which respectively apply to the North-East Atlantic Ocean, the Mediterranean and the Baltic Seas, contain a broadly phrased commitment to reduce and mitigate the impacts of pollution,¹³ which is defined – introducing *verbatim* the definition of UNCLOS – in terms of substances or energy.¹⁴ Among them, the 1995 Barcelona Convention contains the most moderate formulation of the general obligation to prevent

12 Birnie, Boyle and Redgwell, *supra* n. 2, 393.

13 OSPAR Convention, article 2(a), Helsinki Convention, article 3(1), Barcelona Convention, article 4(1).

14 Notice, however, that the definition of pollution under the Barcelona Convention does not refer to potential harm to marine ecosystems, unlike the Helsinki and OSPAR Conventions.

pollution. Its article 4(1) stipulates that parties are to take all appropriate measures to prevent, combat “*and to the fullest possible extent eliminate pollution ...so as to contribute towards its sustainable development*”. Whereas the OSPAR and Helsinki Conventions contain more ambitious goals of ecological restoration, the Barcelona agreement adopts a quite pragmatic approach as it indicates that the economic interests of Mediterranean States can condition the appropriateness of protective measures. The explicit reference to sustainable development as the goal of preventive measures, an apparent influence of the Rio Declaration, means that environmental protection must be balanced with economic growth around the Mediterranean. Therefore, any implementing measures are not expected to eliminate pollution, nor to impose zero harmful discharges policies, as the adoption of such measures could curtail the economic development in the region.

Like UNCLOS, the definition of pollution under all three agreements does not refer only to the introduction of substances, but also to energy and, therefore, is broad enough to encompass underwater acoustic pollution.¹⁵ However, the Helsinki Convention is the sole one, among the examined agreements, which explicitly addresses acoustic marine pollution.¹⁶ In the context of the North-East Atlantic, noise was explicitly recognised as a form of pollution by the OSPAR Commission in 2005.¹⁷ However, the introduction of noise needs to result (or be likely to result) in deleterious effects for the marine environment to constitute pollution under the agreements. According to the definitions of pollution under these regional agreements, any introduction of noise, which would have a minor impact, would not fall under their scope of application.¹⁸ Of course, the ecological specificities of each region or sub-region must be considered in assessing the potential of energy introduction to bring about such effects. A low level of energy input might qualify as pollution in the case of a fragile marine area such as the sensitive Barents Sea, which might require a lower threshold of risk. In that respect, the standard of due diligence offers a valuable tool as a yardstick for evaluating the reasonableness of measures adopted in implementation of the duty to protect and preserve the marine environment, as its flexibility allows it to adjust to the circumstances of each case.

Furthermore, as in the case of UNCLOS, the definition of pollution in all the examined regional agreements contains an element of precaution, as it requires States

15 H Dotinga, and A Oude Elferink (2000) ‘Acoustic Pollution in the Oceans: The Search for Legal Standards, *Ocean Development and International Law*, 158-159, K Scott (2007) ‘Sound and Cetaceans: A Regional Response to Regulating Acoustic Marine Pollution’, *Journal of International Wildlife Law and Policy*, 179.

16 Pursuant to its article 9, the Helsinki Convention requires Parties to adopt special measures to abate the harmful effects of pleasure craft on the Baltic, which include air pollution, noise and hydrodynamic effects. It is, however, noteworthy that article 9 was intended to abate noise produced by pleasure craft on the Baltic and, thus, it is arguably not directly applicable to noise produced by other offshore activities, such as offshore energy production activities.

17 Report of the Meeting of the Working Group on Environmental Impact of Human Activities, November 2005, para 3.4.

18 OSPAR Convention requires that the introduction must result or be likely to result “*in hazards to human health, harm to the living resources and marine ecosystems, damage to amenities or interference with other legitimate uses of the sea*”. Similarly, the Helsinki Convention requires that the introduction must be liable to “*create hazards to human health, to harm living resources and marine ecosystems, to cause hindrance to legitimate uses of the sea including fishing, to impair the quality for use of sea water, and to lead to a reduction of amenities*”. The Barcelona Convention contains an almost identical definition.

to take measures to prevent the introduction of energy and substances which “*are likely to*” result in hazards to human health, harm to living resources and marine ecosystems, damage to amenities or interference with other legitimate uses of the sea.¹⁹ Nonetheless, all three definitions of pollution have maintained the reference to substances and energy, which has been eliminated in subsequent environmental treaties, because it was considered to be a limiting factor.²⁰ In practice, these general obligations to prevent, control and reduce pollution to the marine environment apply to offshore oil and gas activities, whose environmental externalities are limited to traditional marine pollutants and perhaps noise pollution. However, with regard to marine renewables, the three regional agreements are only applicable insofar as marine renewable energy installations cause or are liable to cause pollution, as defined by the conventions, and to the extent that the deployment of such devices involves any activities that are expressly regulated thereunder.²¹ For instance, their definition of pollution can cover specific environmental stressors associated with marine renewable energy production, such as the release of chemicals, noise pollution, or emission of electromagnetic fields.²² Therefore, the general pollution prevention obligations under these regional agreements seem broad enough to address specific environmental effects of offshore energy production activities.²³

As far as the Arctic marine region is concerned, even though there is no region-specific duty to take preventive measures, the identification, reduction, and as a final goal, elimination of marine pollution are expressly enumerated among the ambitious objectives of the 1991 AEPS.²⁴ The AEPS is not structured like an environmental treaty,²⁵ but it focuses on encouraging future cooperation and setting somewhat general action commitments.²⁶ Following the review of the Arctic-related pollution problems and the applicable international agreements,²⁷ the AEPS set out an action

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- 19 OSPAR Convention, article 1(d), Helsinki Convention, article 2(2), Barcelona Convention, article 2(a).
- 20 E Hey, T Ijlstra, and A Nollkaemper (1993) ‘1992 Paris Convention for the Protection of the Marine Environment of the North-East Atlantic: A Critical Analysis’, *International Journal of Marine and Coastal Law*, 8, J Hilf (1995) The Convention for the Protection of the Marine Environment of the North-East Atlantic- New Approaches to an Old Problem?, *ZaöRV*, 585.
- 21 C Soria-Rodriguez (2016) ‘Marine Renewable Energies and the European Regional Seas Conventions’, *Climate Law*, 320.
- 22 E Garel, C Camba Rey, O Ferreira, and M van Koningsveld (2014) ‘Applicability of the Frame of Reference Approach for Environmental Monitoring of Offshore Renewable Energy Projects’, *Journal of Environmental Management*, 18.
- 23 See also section 3.3.1.
- 24 The five main objectives of the AEPS are “(1) To protect the Arctic ecosystem, including humans, (2) to provide for the protection, enhancement and restoration of environmental quality and the sustainable utilization of natural resources, including their use by local populations and indigenous peoples in the Arctic, (3) to recognize and, to the extent possible, seek to accommodate the traditional and cultural needs, values and practices of the indigenous peoples as determined by themselves, related to the protection of the Arctic environment, (4) to review regularly the state of the Arctic environment, and (5) to identify, reduce and, as a final goal, eliminate pollution”.
- 25 It has been suggested that the AEPS is merely an agreement among the Arctic States to improve cooperation for environmental monitoring, P Samson, *Thin Ice: International Environmental Cooperation in the Arctic* (Pacific Press, 1997) 70.
- 26 D VanderZwaag (1997) ‘International Law and Arctic Marine Conservation and Protection; A Slushy, Shifting Seascape’, *Georgetown International Environmental Law Review*, 312.
- 27 Report to the Third Ministerial Conference on the Protection of the Arctic Environment, Inuvik, Canada, 1996.

plan²⁸ and encouraged cooperation in studying and, consequently, addressing six priority environmental problems. Importantly for offshore energy production activities, the AEPS identified oil pollution and underwater noise as two of the six main environmental stressors within the Arctic Ocean ecosystem.²⁹ In addition, the AEPS acknowledged the importance of addressing the issue of emergency prevention, preparedness and response, which is especially relevant for offshore hydrocarbon activities.³⁰

In the case of the OSPAR Convention, the parties decided to compensate for the narrow definition of pollution by broadening the scope of the general obligation under its article 2(1)(a). As well as the prevention of pollution, the provision requires States to take all possible steps to “*protect the maritime area against the adverse effects of human activities*”. That element brings any other threats and disturbances of the marine environment and its ecosystems under the scope of the general obligation to protect the marine environment, adding normative content to and going beyond the traditional pollution prevention duty as enshrined in UNCLOS and the other examined regions.³¹ As discussed in the next sub-section, all three regional agreements have expanded their scope of application to protect marine biodiversity as well and even to call for the restoration of damaged marine ecosystems.³² In that respect, all three regional agreements have entered a new era of marine environmental protection.

1.2. The obligation to protect, preserve and restore marine biodiversity

As a representative example of the second-generation environmental agreements, the OSPAR Convention goes beyond the requirement to prevent, reduce, and control pollution found in first-generation pollution prevention agreements. In that respect, it implements the duty concerning the protection of marine biological diversity under the CBD at the regional level.³³ During the first ministerial meeting of the OSPAR Commission in 1998, its parties agreed to expand their cooperation to cover, in addition, human activities that might adversely affect the marine environment of the North-East Atlantic.³⁴ Specifically, under article 2 of Annex V of the OSPAR Convention, States must “*take the necessary measures to protect and conserve the ecosystems and the biological diversity of the maritime area, and restore, where practicable, marine areas which have been adversely affected*”. Annex V makes it clear that, for its implementation, the definitions of biological diversity, ecosystems, and habitats are the ones contained in the CBD,³⁵ bolstering the relationship with

28 AEPS, Section 5.

29 *Ibid*, paras 3.4 and 4.4.

30 *Ibid*, para 8.

31 However, see also the general duty to protect the marine environment under article 192 of UNCLOS.

32 J Harrison (2019) ‘The Protection of Species, Ecosystems and Biodiversity under UNCLOS in light of the South China Sea Arbitration: An Emergent Duty of Marine Ecosystem Restoration?’, *University of Edinburgh Research Paper Series No 2019/20*, 15.

33 The *South China Sea Award* drew upon the definition of the CBD in order to inform the meaning of article 194(5) of UNCLOS to reach the conclusion that the Convention also demands measures to preserve ecosystems, para 945, see also chapter 3, sub-section 2.3.1.

34 B Mendes, ‘Pollution of the Marine Environment: Recent Developments in the North Sea Region’ in J-P Beurrier, A Kiss and S Mahmoudi (eds) *New Technologies and Law of the Marine Environment* (Kluwer Law International, 2000) 133.

35 OSPAR, Annex V, article 1.

the relevant global obligations.³⁶ The overlapping content of the CBD and OSPAR indicates that the former has increased relevance as a source of inspiration for interpreting the latter.

The general prevention obligation under the 1992 Helsinki Convention also appears broader than the duty to prevent pollution because it is linked with the ambiguously phrased objectives of ecological restoration and preservation of the ecological balance.³⁷ Specifically, the Helsinki Convention mentions the ecological restoration of the Baltic Sea and the preservation of its ecological balance as fundamental goals under its article 3(1). These goals are to serve as benchmarks to evaluate the reasonableness of the environmental protection measures adopted by its parties.³⁸ In addition, the Helsinki Convention seems to create a separate obligation to take positive steps to restore damaged marine ecosystems or species.³⁹ The general duty under its article 3 is supplemented by article 15 on nature conservation and biodiversity, which calls upon State parties to individually or jointly take all necessary measures to conserve natural habitats and biological diversity. Echoing the objectives of the CBD, the Helsinki Convention stresses that such actions do not solely aim to preserve marine biodiversity but must also ensure the sustainable use of natural resources within the Baltic Sea area. However, given the vague phrasing of the provision, its legal relevance lies rather in the establishment of a legal basis for further regional cooperation in the protection of marine biodiversity in the Baltic Sea.⁴⁰

The 1995 Barcelona Convention similarly contains a separate provision on the protection of biological diversity.⁴¹ In addition, its parties have adopted a Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean,⁴² which primarily aims to preserve natural resources common to the Mediterranean region, conserve the diversity of its genetic heritage and protect specific natural sites, by creating a network of Specially Protected Areas (SPAs). To that end, its parties have developed a Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region, which is supplemented by various guidelines related to particular species.⁴³ Although the action plans and guidelines are not binding, the MoP to the Barcelona Convention has requested its parties to report on measures taken to comply with their content.⁴⁴

36 The preamble to the Annex refers explicitly to UNCLOS, and “other global and regional agreements for the protection of biodiversity and marine ecosystems”.

37 The 1972 Helsinki Convention simply aimed to “prevent and abate pollution, see 1972 Helsinki Convention, article 3.

38 See discussion about the test of reasonableness, chapter 2, sub-section 2.2.2.

39 However, that does not mean that these terms might not affect the interpretation of other provisions under the Helsinki Convention.

40 J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 58.

41 Article 10 of the 1995 Barcelona Convention states that “*The Contracting Parties shall, individually or jointly, take all appropriate measures to protect and preserve biological diversity, rare and fragile ecosystems, as well as species of wild fauna and flora which are rare, depleted, threatened or endangered and their habitats, in the area to which this Convention applies*”.

42 Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean, adopted 10 June 1995, replacing the Protocol on Specially Protected Mediterranean Areas, adopted 23 March 1986.

43 Harrison (2017) *supra* n. 40, 62.

44 *Ibid.*

The duty of marine biodiversity conservation is significantly relevant to marine renewable energy production which, unlike traditional fossil fuel exploitation, does not always emit substances or energy, but may create other types of disturbances for marine ecosystems. For instance, the OSPAR Strategy on the Protection and Conservation of Ecosystems and Biological Diversity of the Maritime Area contains a suggested list of activities, which the OSPAR Commission needs to assess for their likely potential adverse effect on marine ecosystems and species.⁴⁵ Besides the duty to prevent activities that might cause significant harm to the marine environment, its parties have a positive obligation to take measures to protect and conserve marine ecosystems and marine biological diversity. While the duty to restore degraded marine ecosystems seems to be at least implicit in specific provisions of UNCLOS,⁴⁶ the OSPAR Convention creates an unequivocal obligation to restore marine areas which have been adversely affected.⁴⁷

Echoing the heavily conditioned obligation under article 8(f) of the CBD, which requires States to rehabilitate and restore degraded ecosystems and promote the recovery of threatened species “*as far as possible and appropriate*”, the OSPAR Convention only requires the restoration of marine areas “*when practicable*”. The use of such language weakens the normative value of the above obligations.⁴⁸ As a due diligence obligation, the duty to restore marine areas allows discretion in its implementation, as it enables States to consider other factors, such as the interest of developing economic activities in the marine environment. Rather than imposing a far-reaching obligation of result, it creates a duty of deploying best efforts to restore marine ecosystems to the extent that is feasible and cost-efficient. The CBD short-term action plan on restoration has confirmed that States are not under an obligation to restore all degraded ecosystems due to the costs involved, but they must prioritise certain marine areas.⁴⁹ Therefore, despite its importance, the positive obligation to restore damaged marine ecosystems under OSPAR is qualified by a sovereignty-based balance between the economic interests of States and marine environmental protection. States retain significant discretion in choosing which areas to restore as well as the measures to comply with their duty.

Nevertheless, despite the flexibility allowed as to which measures need to be adopted and which areas must be restored, the elaboration of further standards, assessments, and recommendations by the OSPAR Commission adds more normative content to the relevant obligation. In other words, the relevant decisions and recommendations by the OSPAR treaty bodies further define the content of due diligence. Therefore, its parties do not retain unfettered discretion in the

45 This list, *inter alia*, includes the exploration for oil, gas, and solid minerals, the placement of structures for the exploitation of oil and gas, the construction and deployment of installations, structures, and the placement of cables and pipelines, see OSPAR Strategy on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area, para 2.2.c. and 2.2.d.

46 See for instance, article 61(3) of UNCLOS requiring states to adopt “*measures designed to maintain or restore populations of harvested species at levels which can produce maximum sustainable yield*”, see also its articles 61(4), 119(1), and 194(5).

47 The COP to the CBD has defined restoration of ecosystems as “*the process of managing or assisting the recovery of an ecosystem that has been degraded, damaged or destroyed by a means of sustaining ecosystem resilience and conserving biodiversity*”, see CBD COP Decision XIII/5 (2016), Ecosystem restoration, short-term plan, Annex, para 4.

48 Birnie, Boyle and Redgwell (2009) *supra* n. 2, 617.

49 CBD COP Decision XIII/5 (2016) *supra* n. 47, Annex, para 13.

implementation of the duty to restore the marine ecosystems.⁵⁰ Relevantly, upon its entry into force, Annex V expanded the OSPAR Commission's powers, so it can adopt programmes and measures to protect marine biodiversity by regulating non-pollution human activities, which have adverse impacts on the marine environment. For example, the OSPAR recommendation on the identification of marine protected areas guides the designation of specific marine areas, where recovery and restoration measures are needed.⁵¹ Similarly, the Helsinki Commission (HELCOM) has issued recommendations to promote the preservation of marine biodiversity. For instance, the HELCOM has supported the development of a network of MPAs⁵² and has further recognised that MPAs should “provide specific protection to those species, habitats, biotopes and biotope complexes included in the HELCOM Red Lists.”⁵³ Likewise, the content of the obligation to restore damaged marine ecosystems under the Protocol concerning specially protected areas and biological diversity in the Mediterranean is defined further by the subsequently adopted action plans and guidelines.⁵⁴

Therefore, these regional instruments cover the environmental externalities produced by various offshore energy production activities, when they result in pollution or other disturbances to the marine environment. The regulation of both offshore hydrocarbon production and marine renewable energy production has to consider and address the potential impacts of such activities on marine biodiversity and ecosystems.

1.3. The incorporation of the ecosystem approach into environmental protection

Another closely related novelty under regional sea agreements is the incorporation of the ecosystem approach. The ecosystem approach has emerged since the late 1990s as a significant development in (marine) environmental law.⁵⁵ Unsurprisingly, the approach is not mentioned in UNCLOS, nor was it a matter of concern during its negotiations. According to the CoP to the CBD, the ecosystem approach to environmental protection is defined as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.”⁵⁶ Its application in the marine environment encompasses all human activities, including offshore energy production, which unavoidably have an impact on biological and physical elements of marine ecosystems.

According to its preamble, the OSPAR Convention aims to “prevent and eliminate marine pollution and to achieve sustainable development in the region, that

50 Harrison (2019) *supra* n. 32, 12.

51 OSPAR Recommendation 2003/3, para 2.1(a). One of the aims of the OSPAR Network of MPAs is to protect, conserve and restore species, habitats and ecological processes, which have been adversely affected by human species. For the developments in recommendations on OSPAR MPAs see L Rodriguez Lucas, ‘OSPAR’s Regulatory Regime for Establishing Marine Protected Areas in Areas Beyond National Jurisdiction of the OSPAR Maritime Area’, in J Juste Ruiz, V Bou Franch (eds) *Derecho Del Mar Y Sostenibilidad Ambiental en el Mediterraneo* (Tirant, 2014) 445-446.

52 HELCOM Recommendation 15/5 System of coastal and marine Baltic sea protected areas (BSPA) (1994), para b.

53 HELCOM Recommendation 35/1 System of coastal and marine Baltic Sea protected areas (2014), para c.

54 SPA Protocol to the Barcelona Convention, article 4(2).

55 B H Sherman, A M Duda (1999) ‘An Ecosystem Approach to Global Assessment and Management of Coastal Waters’, *Marine Ecology Progress Series*, 271.

56 Decision V/6 of the Conference of the Parties to the Convention on Biological Diversity, May 2000.

is, the management of human activities in such a manner that the marine ecosystem will continue to sustain the legitimate uses of the sea and will continue to meet the needs of present and future generations". Even though the ecosystem approach is not mentioned explicitly in the OSPAR Convention, the OSPAR Commission has undertaken to apply it and further develop implementation measures.⁵⁷ Similarly, in the preamble to the Helsinki Convention, its parties declare "their firm determination to assure the ecological restoration of the Baltic Sea, ensuring the possibility of self-regeneration of the marine environment and preservation of its ecological balance". In addition, under article 15 of the Helsinki Convention, States "shall individually and jointly take all measures with respect to the Baltic Sea and its coastal ecosystems influenced by the Baltic Sea to conserve natural habitats and biological diversity and to protect ecological processes. Such measures shall also be taken in order to ensure the sustainable use of natural resources within the Baltic Sea Area". The provision is remarkable in terms of the emphasis put on the conservation of marine ecosystems, especially compared with the relevant provisions of the OSPAR Convention and UNCLOS. Contrary to the provisions of the OSPAR Convention, which apply to the maritime area of the region, article 15 of the Helsinki Convention requires measures to cover the whole coastal ecosystem influenced by the Baltic sea. In that respect, it reflects the demand for the integrated management and sustainable development of coastal and marine areas under Agenda 21.⁵⁸

Relevantly, the HELCOM and OSPAR Commission issued a joint statement on their shared vision on the ecosystem approach during their first joint ministerial meeting in 2003.⁵⁹ Their statement stipulates that ensuring the integrity of ecosystems means maintaining or, as appropriate, restoring "their characteristic structure and functioning, productivity and biological diversity".⁶⁰ In their view, the ecosystem approach requires the comprehensive, integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics.⁶¹ Since then, State parties to both Conventions have adopted a series of ecological and management objectives and, on that basis, have developed a tailor-made regional implementation plan of the ecosystem approach.⁶² In the Mediterranean, States agreed upon the implementation of the ecosystem approach in 2008. Under the 2015 Mediterranean Action Plan, the implementation of the ecosystem approach in the Mediterranean is subject to eleven objectives.⁶³ Those objectives offer a more concrete normative content to the application of the ecosystem approach to offshore energy production activities. The Arctic Council has also taken the necessary steps to

57 See definition of the ecosystem approach in the Statement on the Ecosystem Approach to the Management of Human Activities (Joint Meeting of the Helsinki and OSPAR Commissions 2003), Annex 5, para 5.

58 U Beyerlin (1995) 'New Developments in the Protection of the Marine Environment: Potential Effects of the Rio Process', *ZaöRV*, 562, referring to Agenda 21, Chapter 17.1.

59 'Towards an Ecosystem Approach to the Management of Human Activities', First Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, 25-26 June 2003.

60 *Ibid*, para 4.

61 *Ibid*, 1.

62 Backer et al (2010) 'HELCOM Baltic Sea Action Plan – A Regional Programme of Measures for the Marine Environment Based on the Ecosystem Approach', *Marine Pollution Bulletin*, 642.

63 Implementation of the Ecosystem Approach in the Mediterranean, UNEP Mediterranean Action Plan 2015.

implement the ecosystem approach.⁶⁴ Most recently, in May 2019, the Arctic Council Ecosystem Approach Expert Group adopted guidelines for the implementation of the ecosystem approach to the management of Arctic marine ecosystems.⁶⁵

These commitments need to be read in conjunction with the duties of marine biodiversity protection, preservation and restoration discussed in the previous section. The regulation of offshore energy production activities needs to follow the ecosystem approach in the areas covered by the above regional sea agreements. Still, the normative content of the ecosystem approach is vague, and the concept can be interpreted differently depending on the language used in the agreements.⁶⁶ The ecosystem approach is frequently mentioned in the literature in connection with the precautionary principle: that is because their underlying aims display a remarkable degree of overlap.⁶⁷ Arguably, the precautionary principle is an integral part of the ecosystem approach.⁶⁸ The ecosystem approach should be considered in the application of the precautionary principle, in the sense that precautionary measures should not focus on specific segregated maritime zones but, instead, protect ecosystems from the potentially harmful effects of human activities. Regardless of whether it is a part of the ecosystem approach or not, the significance of the mandatory prescription of the precautionary principle in the second-generation regional agreements cannot be overstated.⁶⁹

1.4. The integration of the precautionary principle

The compulsory prescription of the precautionary principle under the OSPAR, Helsinki, and Barcelona Conventions is a significant achievement for environmental law in the aftermath of the Rio Conference. These agreements do not just contain a vague mention of the precautionary principle: on the contrary, they impose some concrete obligations on their parties concerning its implementation.⁷⁰ The duty of prevention already requires measures to prevent the introduction of substances or energy that result or *are likely to* result in hazards.⁷¹ The distinctive characteristic of the precautionary principle is how and when those measures must be adopted.⁷² The common denominator of the relevant provisions in all three agreements is the focus on potential risks rather than on the scientifically proven effects of marine

64 See I Ulrikke Jakobsen (2014) 'Extractive Industries in Arctic: The International Legal Framework for the Protection of the Environment', *Nordic Environmental Law Journal*, 51-52.

65 Arctic Council Joint PAME, CAFF, AMAP, SDWG Ecosystem Approach Expert Group (2019), Guidelines for Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems.

66 Soria-Rodriguez (2016) *supra* n. 21, 327.

67 A Trouwborst (2009) 'The Precautionary Principle and the Ecosystem Approach in International Law: Differences, Similarities and Linkages', *Review of European, Comparative and International Law*, 33.

68 In that respect, the joint statement of the Helsinki and OSPAR Commissions mentions that "the application of the precautionary principle is equally a central part of the ecosystem approach", see Joint Statement, *supra* n. 57, para 5, see also PAME, EA Guidelines: Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems, Introduction, 2.

69 The precautionary principle was introduced into international policy by the 1987 London International North Sea Conference, see Declaration of the 1987 London International North Sea Conference, para XVI.

70 U Beyerlin (1995) *supra* n. 58, 562.

71 See discussion above under section 1.1.

72 E Hey (2002) 'The International Regime for the Protection of the North Sea: From Functional Approaches to a More Integrated Approach', *International Journal of Marine and Coastal Law*, 337.

activities. However, the different formulation of the precautionary principle under the examined instruments can be significant for their implementation.

According to the OSPAR Convention,⁷³ parties have to apply the precautionary principle, under which preventive measures must be adopted if there are reasonable grounds for concern that substances or energy introduced into the marine environment may cause “*hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea*”.⁷⁴ That precautionary element is already found in the definition of pollution, as discussed previously.⁷⁵ However, the added value of the precautionary principle is that States bear the duty to adopt measures “*even when there is no conclusive evidence of a causal relationship between the inputs and the effects*”.⁷⁶ In contrast with the precautionary approach as described in Rio Principle 15,⁷⁷ which merely states that scientific uncertainty should not delay the taking of preventive measures, the OSPAR Convention imposes a positive duty to adopt precautionary measures when there is a reasonable apprehension of a potential hazard.⁷⁸

Also, unlike Rio Principle 15, the OSPAR Convention does not require the potential adverse impact to qualify as serious or irreversible before action is taken. A requirement to assess the level of seriousness of the potential effects would negate the relevance of adopting precautionary measures when there is still scientific uncertainty. This prescription of the precautionary principle rejects the “assimilative capacity approach”, according to which science has to determine the assimilative capacity of the environment accurately before taking any preventive action.⁷⁹ Instead, it demands the adoption and implementation of measures as soon as the harmful effects of certain substances, energy, or other human activities seem plausible.⁸⁰ In addition, the duty to take precautionary measures is triggered by the possibility of “hazard” and not potential “damage”. Its nuanced wording is to be read as lowering the threshold for its application.⁸¹ Another improvement, in comparison with Rio Principle 15, is that the OSPAR Convention does not demand the precautionary measures to be chosen based on their cost-effectiveness. Consequently, the formulation of the precautionary principle under the OSPAR Convention is more advanced, in terms of normative

73 The precautionary principle could already be found in the Recommendations of the previous Paris Commission, see Recommendation 89/1 on the Principle of Precautionary Action, 22 June 1989.

74 OSPAR, article 2(2)(a).

75 It is, however, argued that the different wording might also have legal relevance, as article 2(2)(a) “...when there are reasonable grounds for concern ... may...” is slightly different from the definition of pollution which mentions “... which results, or is likely to result”, see Hey, IJlstra and Nollkaemper (1993) *supra* n. 20, 12.

76 *Ibid.*

77 Rio Declaration, Principle 15 reads as follows: “*In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation*”.

78 L de La Fayette (1999) ‘The OSPAR Convention Comes into Force: Continuity and Progress’, *International Journal of Marine and Coastal Law*, 254-255.

79 E Hey (1992) ‘The Precautionary Concept in Environmental Policy and Law: Institutionalising Caution’ *Georgetown International Environmental Law Review*, 305.

80 E Hey (1991) ‘The Precautionary Approach – Implications for the Revision of the Oslo and 1974 Paris Conventions’, *Marine Policy*, 245.

81 L de La Fayette (1999) *supra* n., 78, 255.

specificity and stringency, than that of the weak precautionary approach enshrined in pre-existing environmental instruments.⁸²

While the application of the precautionary principle appeared to be confined initially to the prevention of pollution,⁸³ the adoption of Annex V to the OSPAR Convention makes it clear that it also applies to measures against other adverse effects of human activities.⁸⁴ Arguably, the last phrase of article 2(2)(a) of the OSPAR Convention shifts the burden of proof from the parties advocating precautionary measures to those advocating that more scientific information is required before adopting such measures.⁸⁵ However, it seems that the practical significance of the precautionary principle under the OSPAR Convention is somewhat limited due to the use of subjective elements in its definition.⁸⁶ For instance, what is considered reasonable and what is an issue for concern might differ significantly among the parties of the OSPAR Convention. Arguably, the formulation of the principle under the OSPAR Convention could prompt potential polluters to contend that the lack of available evidence means that there is no reasonable ground for concern.⁸⁷

Likewise, the Helsinki Convention adopts an action-guiding prescription of the precautionary principle, which demands the adoption of measures “*when there is reason to assume*” that substances or energy introduced into the marine environment may create hazards “*even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects*”.⁸⁸ However, it seems that the formulation of the Helsinki Convention is more progressive from an environmental point of view compared with the OSPAR Convention. First, while the precautionary principle under the Helsinki Convention is triggered when “there is reason to assume” that inputs may create hazards, the OSPAR Convention requires that there are “reasonable grounds for concern” that such hazards might be caused. Arguably, the formulation under the OSPAR Convention incorporates a subjective element, allowing more discretion for States to argue whether the principle is triggered in each case.⁸⁹ In addition, the reference to lack of scientific evidence concerning the “alleged effects” under the Helsinki Convention indicates a broader application of the principle compared with the equivalent obligation under OSPAR.⁹⁰

Nonetheless, a shortcoming of the precautionary principle under the Helsinki Convention is that it is limited to situations where substances or energy are introduced. The narrow application of the principle only in cases of pollution is not on a par with the ambitious objectives of the Convention, namely the promotion of ecological restoration and ecological balance.⁹¹ The need to apply the precautionary

82 D Freestone, and E Hey (eds) *The Precautionary Principle and International Law – the Challenge of Implementation* (Kluwer Law International, 1995).

83 Hey, Ijlstra and Nollkaemper (1993) *supra* n. 20, 13, Hilf (1995) *supra* n. 20, 587.

84 W H v Heinegg, ‘The Development of Environmental Standards for the North-East Atlantic Including the North Sea’ in P Ehlers, E Mann-Borgese and R Wolfrum (eds) *Marine Issues: From a Scientific, Political and Legal Perspective* (Kluwer Law International, 2002) 141-142.

85 Hey, Ijlstra and Nollkaemper (1993) *supra* n. 20, 12.

86 *Ibid.*

87 *Ibid.*

88 Helsinki Convention, article 3(2).

89 J Ebbesson (2000) ‘A Critical Assessment of the 1992 Baltic Sea Convention’, *German Yearbook of International Law*, 44.

90 *Ibid.*, 45.

91 Helsinki Convention, article 3(1).

principle in cases other than those of potentially polluting substances and energy is evident when one considers that the adverse impacts of marine renewable energy production might be associated with other types of disturbances to marine ecosystems. A strict reading of the precautionary principle under the Helsinki Convention would exclude the impacts of offshore renewables unless their operation results in the introduction of substances or energy to the marine environment.⁹² Therefore, in their case, there would be no obligation to take precautionary measures under the Helsinki Convention, considering the lack of scientific certainty regarding their environmental effects.

The Barcelona Convention contains a much weaker formulation of the precautionary principle. Article 4(3)(a) of the 1995 Barcelona Convention follows the language of Principle 15 of the Rio Declaration, which does not impose any positive obligation on States to take preventive measures in the absence of full scientific certainty. The negative duty “not to postpone” taking measures is heavily conditioned upon the capabilities of the parties to take cost-effective measures to prevent environmental degradation. In that respect, the normative value of the duty to take precautionary measures is limited, because it needs to be balanced with the seemingly predominant economic interest of parties to the Barcelona Convention. This moderate obligation comes as no surprise considering that the 22 States surrounding the Mediterranean are at widely different stages of economic development. Their heterogeneity offers an example of how competing national interests and urgent economic considerations can impede attempts at regional environmental cooperation.⁹³ Despite the reluctance of the Mediterranean States to agree upon a more robust prescription of the precautionary principle, the 1994 Mediterranean Offshore Protocol contains a rather stringent expression of the principle concerning the authorisation of offshore oil and gas activities. In particular, according to article 4(2) of the Protocol, States must refuse any authorisation of offshore oil and gas activities when there are “*indications that the proposed activities are likely to cause significant adverse effects on the environment*”. Nevertheless, even under this provision, a high threshold is required for triggering the duty to refuse authorisation, since the activities must be likely to cause “significant adverse effects on the environment” and not simply likely to cause a “hazard”⁹⁴

Although the precautionary principle is particularly important in the fragile Arctic marine ecosystem,⁹⁵ there is no relevant binding instrument requiring its application by the Arctic States except for the OSPAR Convention, which is only partially applicable to a small part of the Arctic Ocean and binds only two of the Arctic coastal States. Even though parties to the AEPS recognised that the precautionary approach is central to the protection of biodiversity and prevention

92 Ebbesson (2000) *supra* n. 89, 46.

93 T Scovazzi, ‘The Mediterranean Sea’ in J DiMento, A J Hickman (eds) *Environmental Governance of the Great Seas: Law and Effect* (Edward Elgar, 2012), 90, M Gavouneli, ‘New Forms of Cooperation in the Mediterranean System of Environmental Protection’ in M Nordquist, J N Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Kluwer Law International, 2003) 223.

94 Compare with the relevant provisions in OSPAR and Helsinki Conventions.

95 It is argued that in adherence to a strict conception of the precautionary principle offshore oil and gas activities in the Arctic States must apply stricter environmental standards or impose a moratorium on such activities as a whole.

of pollution in the Arctic,⁹⁶ initially the Arctic States refused to adopt region-specific environmental rules and standards.⁹⁷ The general direction of the AEPS did not indicate any preference for taking anticipatory environmental measures.⁹⁸ Instead, States in the Arctic took a somewhat cautious preventive approach, under which they first promoted the assessment of the ecological status of the Arctic Ocean before considering the elaboration of any region-specific environmental standards based on the gathered scientific knowledge.⁹⁹

The cautious approach of the Arctic States is reflected in instruments adopted later under the auspices of the Arctic Council. For instance, the 2009 Arctic Offshore Oil and Gas Guidelines provide that offshore oil and gas activities in the Arctic “*should be based*”, *inter alia*, on the normatively weak precautionary approach as reflected in Rio Principle 15.¹⁰⁰ The recommendation to apply a precautionary approach to the regulation of offshore oil and gas activities appears to be even weaker in terms of bindingness since the guidelines condition it upon each State’s capabilities, without providing any interpretative guidance on that caveat. An even more moderate wording is used in the Arctic Environmental Impact Assessment Guidelines, which merely “*encourage*” the Arctic States to adopt the precautionary approach as reflected in Rio Principle 15 when conducting EIAs in the Arctic.¹⁰¹ Therefore, while the inclusion of the precautionary approach in Arctic-specific guidelines appears to be a positive development, its weak formulation is unsatisfactory considering the unique environmental challenges within the Arctic marine region.¹⁰² Seemingly, the adoption of a strict formulation of the precautionary approach does not depend merely on the severity of anticipated environmental challenges but rather on a series of relevant, *inter alia*, political and economic factors.¹⁰³

From the above analysis, it follows that it is the Helsinki Convention, which sets out one of the most developed and progressively formulated versions of the precautionary principle.¹⁰⁴ Both the OSPAR and Helsinki Conventions include an action-guiding version of the precautionary principle. They extend its scope of application beyond pollution prevention measures, providing for a low triggering

96 The Cooperative Strategy for the Conservation of Biological Diversity in the Arctic Region (1997) refers to the precautionary approach as one of the basic principles underlying it (“*The strategy is based on the following principles: actions to prevent and/or avoid long- and short-term adverse impacts of activities on biological diversity should not be postponed because the causal link between activities and impacts has not been fully proven*”).

97 See Report of the Third Ministerial Conference on the Protection of the Arctic Marine Environment, 1996, para 2(3).

98 The Ministerial Conference concluded that “*should implementation of various proposed actions not occur, or should they prove inadequate to address emerging problems, then reconsideration of further legally binding instruments should be pursued*”, *ibid*.

99 Vidas (2000) *supra* n. 3, 91.

100 Section 1.3., which also refers to the polluter pays principle according to principle 16 of the Rio Declaration.

101 E Kirk, and R Miller (2018) ‘Offshore Oil & Gas Installations in the Arctic: Responding to Uncertainty through Science and Law’, *Arctic Yearbook*, 261.

102 E A Barry-Pheby (2012) ‘The Growth of Environmental Justice and Environmental Protection in International Law: In the Context of Regulation of the Arctic’s Offshore Oil Industry’, *Sustainable Development Law and Policy*, 49.

103 Vidas (2000) *supra* n. 3, 92.

104 S Marr, *The Precautionary Principle in the Law of the Sea: Modern Decision Making in International Law* (Martinus Nijhoff, 2003) 66.

threshold, prescribing the use of BAT and BEP as safeguards for shaping the broad discretion of States to adopt protective measures even when there is no conclusive scientific evidence regarding the impacts of offshore activities on the marine environment. However, as shown by the examples of the Mediterranean and the Arctic, the lowest common denominator appears to be best reflected by the normatively weak Rio Principle 15. In practical terms, that weak version of the precautionary principle states the obvious by simply allowing States to apply protective measures to offshore energy activities in the absence of full scientific certainty. Nevertheless, coastal States have the sovereign right to impose anticipatory environmental standards to offshore energy activities within their jurisdiction.¹⁰⁵ For instance, Norway has established a “zero discharge” policy and, in particular, stricter requirements in the operation of offshore oil and gas activities taking place in the Barents Sea, compared with other parts of the Norwegian continental shelf.¹⁰⁶ In that particular area, zero discharge is operationalised as physical zero discharge, meaning no discharges at all of the produced water, drill cutting and muds, with very few exceptions.¹⁰⁷

Although the precautionary principle and the duty to conduct EIAs are undoubtedly distinct, they both remain integral and complementary elements of the due diligence obligation of States to prevent harm to the marine environment. While the precautionary principle requires States to take preventive measures in the absence of scientific certainty, the EIA purports to reduce such uncertainty by examining the potential effects of a proposed project on the marine environment. Nonetheless, in many cases, uncertainty is inevitable, as in the case of the deployment of marine renewable energy devices. Given the important role of EIAs to fill in those remaining knowledge gaps, the specific requirements to carry out such assessments is examined in the next section.

2. Adding normative content to the duty to conduct EIAs at the regional level

The Nordic Environmental Protection Convention (NEPC), which was the first regional agreement to set international standards for the conduct of EIAs,¹⁰⁸ has substantively contributed to offering a model for other regional environmental agreements.¹⁰⁹ As discussed below, the more specific provisions under the regional sea agreements can add normative content to the duty to conduct EIAs, as prescribed under article 206 of UNCLOS. However, the normative content of the duty to carry out EIAs before offshore energy production activities varies significantly among the examined regional sea agreements. Following the comparative analysis of their

105 International rules and standards aim to provide only the minimum standard of environmental regulation, see article 208(1) and (3) of UNCLOS.

106 M Knol (2011) ‘The Uncertainties of Precaution: Zero Discharges in the Barents Sea’, *Marine Policy*, 399.

107 *Ibid*, 402, quoting the Norwegian integrated management plan for the Barents Sea: “In the case of activities in the Barents Sea, there are special requirements relating to drill cuttings, drillings mud and produced water ... **These requirements are based on the precautionary principle.** In practice this means that, during normal operations, no discharges of any substances with negative impact on the marine environment are permitted from petroleum installations”. (emphasis added).

108 Nordic Environmental Protection Convention 1974, 13 ILM 511.

109 R L Johnstone, *Offshore Oil and Gas Development in the Arctic under International Law: Risk and Responsibility* (Brill/Nijhoff, 2014) 136, T Koivurova, ‘Transboundary Environmental Impact Assessment: The Nordic Environmental Protection Convention’ in K Bastmeijer, and T Koivurova (eds) *Theory and Practice of Transboundary Environmental Impact Assessment* (Martinus Nijhoff, 2008) 88.

relevant provisions, this section sheds light on the provisions of the – initially adopted as regional – UN/ECE Espoo Convention on Environmental Impact Assessment in a Transboundary Context, which largely applies to the selected regions, to assess its potential in complementing the requirements for EIAs at the regional level.

2.1. The lack of a separate binding requirement to carry out EIAs under the OSPAR Convention

Strikingly, in contrast with the other examined regional agreements, the OSPAR Convention does not explicitly require the conduct of EIAs before activities which are likely to affect the marine environment adversely. Seemingly, the OSPAR regime relies on the relevant obligations of its parties under EU law and their national legislation, which require the conduct of EIAs before potentially harmful offshore activities, to avoid unnecessary duplication of efforts.¹¹⁰ However, with regard to monitoring the effects of offshore operations, the OSPAR Convention directly obliges States to undertake, and publish at regular intervals joint assessments of the quality status of the marine environment and its development, for the maritime areas or regions or sub-regions thereof as provided in Annex IV.¹¹¹ Annex IV stresses that permanent monitoring may be undertaken either to ensure compliance with the obligations under the OSPAR agreement or for research purposes. To that end, the OSPAR Commission is entrusted with defining and implementing programmes, drawing up codes of practice, and approving the presentation and interpretation of their results.¹¹²

Monitoring consists of an essential element in the OSPAR strategy for preventing and eliminating pollution from offshore oil and gas activities.¹¹³ In this regard, parties to the OSPAR Convention have adopted guidelines for monitoring the environmental impact of offshore oil and gas activities.¹¹⁴ These guidelines aim to assist with designing and conducting monitoring programmes, taking into account the variety of circumstances in different marine oil and gas production areas. The guidelines do not create a separate obligation for monitoring. Instead, they purport to harmonise the process of monitoring the impacts of offshore oil and gas discharges, the reporting procedures and the assessment of data among its parties.

Arguably, a duty to assess the impact of offshore activities which might harm the marine environment is inherent in the obligation to protect marine ecosystems and biodiversity against the adverse effects of human activities and the duty to apply a precautionary principle.¹¹⁵ Besides the indisputable customary nature of the duty to conduct an EIA, both as an independent obligation and as an element of the prevention obligation, the requirement to carry out EIAs also forms an indispensable component of the obligation to apply best environmental practices

110 OSPAR Recommendation 2010/5 on assessments of environmental impact in relation to threatened and/or declining species and habitats, preamble to which explicitly refers to the EU Directives on EIA, SEA and the corresponding legislation of other non-EU contracting Parties, see also OSPAR Guidance on Environmental Considerations for Offshore Wind Farm Development 2008-3, 3-4.

111 OSPAR Agreement, article 6.

112 OSPAR, Annex IV, article 3.

113 OSPAR Strategy on Environmental Goals and Management Mechanisms for Offshore Activities, 1999.

114 OSPAR Guidelines for Monitoring the Environmental Impact of Offshore Oil and Gas Activities, Agreement 2017-2, amending the previous Agreement 2004-11.

115 Scott (2007) *supra* n. 15, 183.

in the OSPAR area.¹¹⁶ Relevantly, under Annex V of the OSPAR Convention, the OSPAR Commission is delegated with the power to develop means for instituting protective, conservation, restorative or precautionary measures related to specific areas or sites or linked to particular species or habitats.¹¹⁷ In the implementation of Annex V and Appendix 3, its parties developed the 2003 OSPAR Conservation Strategy, which requires EIAs for activities such as offshore resources extraction and wind farm construction.¹¹⁸

Also, in the implementation of its powers under Annex V, the OSPAR Commission has issued the recommendation 2010/5 on EIAs concerning threatened or declining species and habitats. Specifically, the recommendation calls upon its parties to ensure that they take into account the OSPAR list of threatened species and habitats when assessing the environmental impacts of activities that might affect the marine environment of the OSPAR area.¹¹⁹ The Guidance on Environmental Considerations for Offshore Windfarm Development has marked another significant development in EIAs related to offshore energy activities in the OSPAR region.¹²⁰ Although it lacks bindingness, it complements the relevant obligations of the OSPAR parties under the EU Directives,¹²¹ the Espoo Convention¹²² and their national legislation, offering valuable guidance on the minimum content of EIAs for all stages of the life-cycle of offshore wind farms, from location to decommissioning.

In addition, article 9 of the OSPAR Convention on access to environmental information appears to be of relative significance in the absence of a separate requirement for EIAs before offshore energy activities. In particular, it demands that States must ensure that their competent authorities make available to any natural or legal person, “*in response to any reasonable request*”, and without the need to illustrate a specific interest, information regarding activities affecting or likely to affect the marine environment.¹²³

116 On the duty to apply BEP, see below, sub-section 3.1.

117 OSPAR, Annex V, article 3(1)(b)(ii).

118 OSPAR Strategy on the protection and conservation of ecosystems and biological diversity of the maritime area, referred to in Annual OSPAR Commission Report for 2002-2003, Appendix 2.

119 OSPAR Recommendation 2010/5, *supra* n. 110, 2.1. While the recommendation is not legally binding, parties are expected to report to the OSPAR Commission on the measures they have adopted to comply.

120 OSPAR Guidance on Environmental Considerations for Offshore Wind Farm Development, reference number 2008-3.

121 The EIA Directive, as amended by directives 97/11/EC and 2003/35/EC, requires an EIA to be carried out prior to projects listed under Annexes I and II, amongst which are, “*installations for the harnessing of wind power for energy production (wind farms)*”.

122 Similarly, wind farms are also included in the amended Annex to the Espoo Convention, see *infra* n. 186 with accompanying text.

123 The content of the provision is largely taken from European Community Directive 90/313 on the Freedom of Access to Information on the Environment. Following the example of the directive, it provides for the refusal of access to information in accordance with national law on the grounds of confidentiality and public security. Hey, Ijlistra and Nollkaemper (1993) *supra* n. 20, 47.

2.2. The normatively enhanced requirements for EIAs under the Helsinki and Barcelona Conventions

Article 7 of the Helsinki Convention is devoted to the obligation to conduct EIAs.¹²⁴ When an EIA is required by international law or supra-national regulations applicable to activities occurring in the Baltic Sea area, States must notify the HELCOM Commission and other State parties potentially affected by a transboundary impact in the Baltic Sea. In the case where two or more contracting parties “*share transboundary waters within the catchment area of the Baltic Sea, these Parties shall cooperate to ensure that potential impacts on the marine environment of the Baltic Sea Area are fully investigated*” when other international rules require an EIA. The provision reiterates that the State of origin must consult with any party, which is likely to be affected by such transboundary impact, insofar as such a duty is prescribed by international law or supra-national regulations applicable to that State.¹²⁵ In that respect, Article 7 does not create an independent duty to conduct an EIA before activities that might have a significant adverse effect on the Baltic Sea. The existence of other relevant international duties of the State of origin dictates whether such an environmental assessment is required in each case.¹²⁶ Besides the customary duty to conduct EIAs, all the Helsinki parties, except for Russia,¹²⁷ are also parties to the 1991 Espoo Convention, which creates a duty to conduct transboundary EIAs and consult with the potentially affected States, as further examined in section 2.4.

Also, parties to the Helsinki Convention bear the duty to ensure that information relating to permits for offshore activities and the conditions required thereunder is available to the public.¹²⁸ Nonetheless, the duty of access to environmental information is much weaker than the corresponding obligations under the Espoo and Aarhus Conventions, which simultaneously apply in the Baltic Sea region.¹²⁹ For instance, the relevant provision of the Helsinki Convention does not foresee the

124 Article 7 provides that “1. Whenever an environmental impact assessment of a proposed activity that is likely to cause a significant adverse impact on the marine environment of the Baltic Sea Area is required by international law or supra-national regulations applicable to the Contracting Party of origin, that Contracting Party shall notify the Commission and any Contracting Party which may be affected by a transboundary impact on the Baltic Sea Area. 2. The Contracting Party of origin shall enter into consultations with any Contracting Party which is likely to be affected by such transboundary impact, whenever consultations are required by international law or supra-national regulations applicable to the Contracting Party of origin. 3. Where two or more Contracting Parties share transboundary waters within the catchment area of the Baltic Sea, these Parties shall cooperate to ensure that potential impacts on the marine environment of the Baltic Sea Area are fully investigated within the environmental impact assessment referred to in paragraph 1 of this Article. The Contracting Parties concerned shall jointly take appropriate measures in order to prevent and eliminate pollution including cumulative deleterious effects”.

125 The phrase “supra-national regulations” most likely refers to the European Community directive on EIAs, see Directive EEC/85/337 on the Assessment of the Effects of Certain Public and Private Projects on the Environment, 27 June 1985, as amended by Council Directive 97/11/EC, 3 March 1997.

126 For instance, the 1974 Nordic Environment Protection Convention, mentioned above, provides for a duty to notify and consult the potentially affected States under its articles 5 and 11. Four Baltic Sea States are parties and thus bound by these obligations, namely, Denmark, Norway, Sweden and Finland.

127 Russia has signed, but have not yet ratified the Espoo Convention, see *infra* sub-section 2.4.

128 Helsinki Convention, article 17.

129 For a discussion on the interaction between these partly overlapping regional agreements and the regional sea agreements, see below, section 2.4.

inclusion of the public in any procedural step of the EIA, nor does it offer the public any right to make comments to the competent regulatory authorities. Therefore, the Helsinki Convention did not create an independent general obligation to conduct EIAs, separate from the ones already imposed upon its parties by other rules of international law. The legal relevance of article 7 is somewhat limited to providing the Helsinki Commission with information about EIA procedures taking place within the Baltic Sea Area.¹³⁰

However, contrary to the general provision under article 7 applying to all potential sources of pollution, Annex VI, which applies specifically to pollution from offshore activities, makes the conduct of an EIA a mandatory condition before any offshore hydrocarbon activity is permitted to commence.¹³¹ Given the restricted definition of offshore activities under Annex VI, installations used for the generation of marine renewable energy do not fall within its scope. Therefore, in the case of marine renewables, an EIA is only mandatory under the Helsinki Convention as long as other international obligations of the State of origin provide for such a duty. Annex VI requires that the EIA is to involve an evaluation of the environmental sensitivity of the area around the proposed offshore oil and gas project.¹³² In that respect, it enumerates a list of non-mandatory factors that “*should be assessed*”.

Moreover, the agreement dictates that monitoring the effects of offshore oil and gas exploitation must be carried out not only before the activity starts but at regular annual intervals during it-and even after- the operation has ended.¹³³ Going beyond UNCLOS, which merely requires States to keep the activities under surveillance to determine whether they are likely to cause marine pollution,¹³⁴ the Helsinki Convention creates a more specific and normatively dense obligation of conducting scientific studies annually by laying down the minimum content of such environmental assessments.¹³⁵ HELCOM recommendation 18/2 on Offshore Activities provides that, in the case of offshore oil and gas exploitation activities, States must assess the environmental status of the area where the project is proposed to be located before any activity starts. While the requirements set out under Annex VI set a minimum standard, the recommendation highlights that, when the nature of the area so requires, States must apply more stringent requirements.¹³⁶ In that respect, it echoes the adaptability of the due diligence standard, which calls for an enhanced standard of care in the case of riskier activities.

In the case of exploitation activities, the State must notify the HELCOM about the outcome of the environmental assessment before the commencement of operations.¹³⁷ The obligation to communicate the results to the HELCOM implements the duty under articles 206 and 205 of UNCLOS to publish the EIA report through

130 Ebbesson (2000) *supra* n. 89, 52.

131 Helsinki Convention, Annex VI, Regulation 3.1

132 Helsinki Convention, Annex VI, Regulation 3.2.

133 Helsinki Convention, Annex VI, Regulation 3.4.

134 See UNCLOS, article 204(2).

135 According to Annex VI, Regulation 3.4 the follow up assessments need to at least evaluate “*the composition of the sediment measures as: grain size distribution, dry matter, ignition loss, total hydrocarbon content, and Ba, Cr, Cu, Hg and Cd content*” and “*the abundance and diversity of benthic fauna and the content of selected aliphatic and aromatic hydrocarbons*”.

136 HELCOM Recommendation 18/2, adopted 12 March 1997, Attachment, a.

137 *Ibid.*

the competent international organisation. Although the HELCOM does not have any competence to interfere in the decision-making process, the duty to communicate the results of the EIA, regardless of the potential impact of the offshore oil and gas exploitation project, increases the transparency of the permitting procedure. However, the obligation to communicate the results of the EIA seems to apply only to the time before the project commences, since Annex VI does not create any ongoing reporting obligations concerning the results of the monitoring process during the life-cycle of the project.

Within the Mediterranean, all activities that are likely to affect the marine environment adversely and require prior authorisation by the competent national authorities, are subject to EIAs under article 4(3)(c) of the Barcelona Convention. Unlike the Espoo Convention, the Barcelona Convention does not provide any list of activities that could presumably trigger the duty to conduct an EIA, but generally applies to any proposed activity “*that is likely to cause a significant adverse impact on the marine environment*”. However, the Barcelona Convention guides States in assessing when an activity is likely to cause a significant impact.¹³⁸ In that respect, it grants the Mediterranean States more discretion to decide on a case-by-case basis. Another significant difference between the Barcelona Convention and the Espoo Convention is that the relevant obligation under the Barcelona Convention does not require the potential impact to be transboundary. Instead, an EIA is mandatory under the Barcelona Convention even when the potential environmental effects might be contained within the jurisdiction of the authorising State, as in the case of UNCLOS. In a case where the proposed activities are liable to have significant adverse impacts on the marine environment within the jurisdiction of third States or areas beyond national jurisdiction,¹³⁹ the parties are required to cooperate, based on notification, exchange of information and consultations.¹⁴⁰ Even though it offers a basis for cooperation with the potentially affected States in the Mediterranean, the provision falls short of providing any substantive content to the general obligations of notification and consultation under customary international law. Its shortcomings are apparent when compared with the detailed provisions under the Espoo agreement.

The Mediterranean Offshore Protocol contains specific provisions and a special Annex on EIAs and monitoring concerning offshore oil and gas activities. Notably, article 19 of the Mediterranean Offshore Protocol provides that the operator of the installations is to be required to monitor, by a qualified expert in the matter, the effects on the environment considering the nature, scope, duration and technical methods employed, as well as the characteristics of the area. Consequently, the operator must report on the assessment periodically or upon request by the competent authority, following the procedure established under the licensing of the installations. However, the provision does not rely merely on the data provided by the operator. It creates an added obligation upon domestic authorities to develop a monitoring system to assess the impact of activities on the marine environment regularly. That way, the

138 The Espoo Convention, however, takes into account the size, location and effects of the proposed activity to define the significance of the potential impact, see Espoo Appendix III.

139 The coverage of areas beyond national jurisdiction is important in the context of the Mediterranean, since many coastal States cannot establish EEZ and thus a large part of the Mediterranean qualifies as high seas.

140 Barcelona Convention, article 4(3)(d).

local authorities have to ensure that the operator of the installations complies with the conditions of the authorisation. Nonetheless, the normative value of article 19 is relatively modest because it does not specify what type and frequency of monitoring are required.

Article 21 of the Offshore Protocol further stipulates that States must take special measures concerning Mediterranean Specially Protected Areas to prevent, abate, combat and control pollution arising from offshore oil and gas activities therein. When granting licences for the operation of offshore oil and gas activities in such areas, States must require the preparation and evaluation of EIAs. The permit must also be conditional on special provisions concerning monitoring.¹⁴¹ Annex IV of the Protocol offers a non-exclusive list describing the minimum content of an EIA related to offshore oil and gas activities.¹⁴² Under Annex IV, parties must promulgate domestic standards on the content of the EIAs. However, these standards must consider the international rules, standards and recommended practices and procedures.¹⁴³ Unlike the rule of reference under article 208(3) of UNCLOS, the wording of Annex IV does not require national standards to be on a par with international standards but imposes a normatively weaker obligation to take international standards into account.¹⁴⁴ These international rules and standards, which are to serve as a standard against which to evaluate EIAs, are expected to be adopted under article 23 of the Protocol.¹⁴⁵

Annex IV does not include any individual duty to communicate the results of the EIAs to treaty bodies of the Barcelona Convention, nor to circulate them among the parties through any other means.¹⁴⁶ The Mediterranean Offshore Protocol does not provide for any separate public participation process, nor does it include any provisions regarding access to information. As a result, it does not enable the involvement of relevant stakeholders in decision-making procedures. In light of the developments in environmental law, the revised 1995 Barcelona Convention included an article on public information and participation, which goes beyond the information granting processes envisaged in the OSPAR and Helsinki Conventions.¹⁴⁷ That general provision generally applies to all offshore energy production activities falling under the scope of the Barcelona Convention. It requires parties to ensure that the public is allowed to participate in decision-making processes relevant to the field of application of the Convention and its Protocols, as appropriate. The provision is vague and does not offer much guidance on how participation needs to take place,

141 These obligations are to be interpreted in the context of the obligations imposed according to article 6 of the SPA/BD Protocol, which provides detailed guidance on measures that must be taken to protect such marine areas.

142 Annex IV Environmental Impact Assessment, para 1.

143 Offshore Protocol, Annex IV, para 2.

144 Similarly, article 207(1) of UNCLOS requires States to take into account international rules and standards when developing domestic rules on land-based pollution.

145 To that end, the Secretariat of REMPEC has conducted a study on international best practices, which are to be adopted by the State Parties to the Offshore Protocol, Study on International Best Practices, REMPEC/WG.35/INF.3, 22 May 2014. On the relevant developments, see below, subsection 4.3.

146 However, parties must notify the Organisation as soon as possible of any authorisations granted or renewed according to article 6(4) of the Protocol. Additionally, the duty to publish a report is an absolute one under articles 205 and 206 of UNCLOS.

147 Barcelona Convention, article 15.

giving States broad discretion. However, normative guidance can be provided by interpreting these provisions in light of the relevant rules of the Espoo and Aarhus Conventions, which are further analysed in section 2.4.¹⁴⁸

2.3. The Arctic Council's EIA Guidelines and the Arctic Offshore Oil and Gas Guidelines

In 1991, the AEPS had already stressed the importance of EIAs before the commencement of activities which might have a significant impact on Arctic ecosystems.¹⁴⁹ In the Arctic context, States have elaborated two sets of non-binding guidelines which are relevant to offshore energy production: the Arctic Council's EIA Guidelines and the Arctic Offshore Oil and Gas Guidelines. The Arctic EIA Guidelines emphasise the specific environmental needs of the fragile Arctic environment and define some commonalities concerning the conduct of EIAs among the eight Arctic States.¹⁵⁰ Their main objective is to raise issues that are unique to the Arctic circumstances and indicate region-specific thresholds and significance criteria as triggers for carrying out an EIA.¹⁵¹ The Guidelines underline that, in the Arctic region, EIAs should attach consideration to sensitive areas since almost every activity might be close to one or several ecologically sensitive areas.¹⁵² Relevantly, they suggest that a lower threshold of risk might be sufficient to trigger the requirement to conduct an EIA for activities listed under Annex I to the Espoo Convention when they take place in the fragile Arctic environment.¹⁵³ In that sense, the Guidelines aim to complement existing international obligations,¹⁵⁴ such as the ones stemming from the Espoo Convention,¹⁵⁵ by adapting them to the regional specificities of the Arctic.

As far as offshore energy production activities are concerned, the Guidelines recommend conducting EIAs before any activities associated with the exploitation of both renewable and non-renewable natural resources, as well as the construction of infrastructure that may cause significant environmental impacts.¹⁵⁶ Concerning mitigation measures, the Guidelines suggest that EIAs regarding offshore oil and

148 Such systemic interpretation could only be feasible for States which are in parallel contracting Parties to the later agreements, since their provisions have not been recognized as customary international law. Regarding the Espoo Convention, see ICJ, *Pulp Mills case*, *infra* n. 172.

149 AEPS, Section 2.2, according to which “*management, planning and development activities which may significantly affect the Arctic ecosystems shall be based on informed assessments of their possible impacts on the Arctic environment, including cumulative impacts...e) take into account the results of scientific investigations and the traditional knowledge of indigenous peoples*”. The phrasing of the AEPS is quite ambitious requiring not only consideration of cumulative environmental impacts but also of the health, social, economic and cultural needs and values of indigenous peoples.

150 R Warner (2013) ‘Environmental Assessments in the Marine Areas of the Polar Regions’ in E Molenaar, A Oude Elferink, and D Rothwell (eds) *The Law of the Sea and Polar Regions: Interactions between Global and Regional Regimes* (Martinus Nijhoff, 2013).

151 Arctic EIA Guidelines, Chapter 2, see also G Sander (2016) ‘International Legal Obligations for Environmental Assessment in the Arctic Ocean’, *International Journal of Marine and Coastal Law*, 101, Koivurova (2008) *supra* n. 109, 157.

152 Arctic EIA Guidelines, Chapter 2.5.

153 *Ibid*, Chapter 11.8.

154 The EIA Guidelines focus mostly on domestic EIA procedures, devoting only a short chapter on the transboundary EIA process, which relies mostly on the Espoo Convention, see also Johnstone (2014) *supra* n. 109, 150.

155 Koivurova (2007) *supra* n. 151, 163.

156 Arctic EIA Guidelines, Chapter 5.

gas activities need to include plans for response to potential oil spills. They also stress the importance of continuous monitoring of such projects in the context of the vulnerable Arctic environment. Remarkably, the EIA Guidelines, unlike the instruments mentioned above, refer to the potential for SEAs in the Arctic region and stress the need to consider the cumulative impacts of more activities even when individual projects are evaluated in the context of an EIA.¹⁵⁷ Specifically, they require that States consider at the project level the effects of the proposed activities in light of “*past, existing and proposed activities*”.¹⁵⁸

An important new feature of the EIA guidelines is that they do not only refer to the potential adverse environmental impacts of proposed activities,¹⁵⁹ but they also mention the risk of social effects on individuals or communities.¹⁶⁰ Also, the Guidelines contain specific provisions on public participation in the EIA process, which are similar to the ones found under the Espoo Convention.¹⁶¹ In that respect, the EIA Guidelines recommend Arctic States to ensure that the public is duly informed when a project is proposed, has a chance to comment on each phase of the EIA process, to review the final documentation and to submit comments on that to the regulatory authority.¹⁶² The Guidelines urge States to include communities in the area of anticipated impacts regardless of their location relative to the border; usually, that would mean indigenous communities in the Arctic region.¹⁶³

Even though the Arctic ministerial meeting agreed upon the application of the EIA Guidelines in 1997,¹⁶⁴ they remain voluntary and do not purport to create any binding obligations upon the Arctic States. The lack of reference to how the results of EIAs should be considered in the decision-making process also illustrates their limited influence on the conduct of economic activities in the Arctic region. According to their introduction, the Guidelines do not replace existing procedures adopted by international, national or domestic legislation. They aim to offer recommendations and examples of best practice to enhance the harmonisation of EIA procedures across the Arctic region.¹⁶⁵ Recent studies of State practice have reaffirmed the limited influence of the EIA Guidelines on the conduct of EIAs in the Arctic. Notably, these studies have illustrated that the EIA Guidelines are not well-known, nor have they been implemented in practice.¹⁶⁶

157 *Ibid*, Chapter 5.2.

158 *Ibid*, Chapter 5.1.

159 In the Cooperative Strategy for the Conservation of Biological Diversity in the Arctic region, the CAFF Working Groups stressed the need for EIA Guidelines to incorporate and adequately address biological diversity conservation and the sustainable use of biological resources, *supra* n. 96, para 2.4 on Environmental Impact Assessment and Objective 4.

160 Arctic EIA Guidelines, Chapter 5.1.

161 See relevant analysis, *infra* sub-section 2.4. The EIA Guidelines explicitly refer to the Espoo Convention with regard to transboundary EIAs in Chapter 11.

162 Arctic EIA Guidelines, Chapter 9.1 and 9.2.

163 *Ibid*, Chapter 11.10.

164 In the 1997 Alta Declaration, the ministers of the eight Arctic States, in a rather strong wording, mention that “*we receive with appreciation the Guidelines for Environmental Impact Assessment in the Arctic and the Arctic Offshore Oil and Gas Guidelines developed under the AEPS, and agree that these guidelines be applied*”.

165 See Arctic EIA Guidelines, Introduction.

166 T Koivurova (2007) *supra* n. 151, 165.

Given the impending growth of the offshore energy industry in the Arctic and the correlated, potentially grave environmental impacts, chapter 3 of the Offshore Oil and Gas Guidelines is also devoted to the EIAs required before such projects in the Arctic Ocean. Largely, the Offshore Oil and Gas Guidelines implement the EIA Guidelines in the offshore oil and gas context. While they recognise that the Arctic States may use different approaches to undertake EIAs, they also recommend the use of SEAs on a regional basis to determine the potential effects of oil and gas activities and identify the sensitive areas in the Arctic region.¹⁶⁷ Chapter 4 relates to the duty of ongoing monitoring of the environmental impacts of offshore oil and gas production. The Offshore Oil and Gas Guidelines go a step further than the EIA Guidelines by including a list of the potential effects which should be considered in EIAs.¹⁶⁸ Concerning public participation, the Offshore Oil and Gas Guidelines encourage the Arctic States to consult and cooperate with the indigenous peoples to understand and integrate their needs and concerns with any project affecting their lands or territories and other resources, particularly in connection with the development of resources, such as oil and gas.¹⁶⁹ Therefore, the Arctic States appear to support the conduct of EIAs before offshore oil and gas activities as a procedural element of the duty to prevent, reduce and control pollution in the Arctic.

2.4. The Espoo Convention and its “gap-filling” application to offshore energy production activities in the examined regions

The UN/ECE 1991 Espoo Convention¹⁷⁰ remains the most essential – at least as drafted – regional agreement¹⁷¹ relating to the obligation to conduct transboundary EIAs in all the examined marine regions.¹⁷² It creates a dynamic treaty regime, accompanied by treaty bodies mandated to adapt its provisions to changing environmental needs.¹⁷³ In the Arctic region, five of the Arctic States are parties to the Espoo Convention and therefore fully bound by its rules in their relations. The United States, Russia and Iceland have not ratified the Espoo Convention, but they have signed the agreement and thus, according to article 18 of the VCLT, they are under an obligation not to act in a way that would defeat its object and purpose. All three non-parties have a registered point of contact to participate in the EIA procedures conducted in the

167 Arctic Offshore Oil and Gas Guidelines, Chapter 3, 17.

168 *Ibid*, as amended in 2009, Chapter 3.

169 *Ibid*, Chapter 3.6.

170 The Convention on Environmental Impact Assessment in a Transboundary Context, 25 February 1991, 30 ILM 800, entered into force 10 September 1997. At present there are 45 parties to the Agreement.

171 The Convention contains a provision which enables participation by all UN Members. Therefore, the Espoo Convention has the potential to become a globally applicable environmental instrument. Nonetheless, so far it only has 45 parties, mostly in Europe and Northern America. On that account, for the purpose of the thesis, it is treated as a regionally applicable environmental agreement.

172 The ICJ rejected Argentina’s argument that the Espoo Convention has become binding upon all States as customary international law, ICJ, *Pulp Mills* case, para 205.

173 The treaty bodies under the Espoo Convention can interact with the relevant treaty bodies under the regional sea agreements, for instance, through exchange of information on compliance measures. See, for instance, Decision 17/2 of the Meeting of Parties to the Barcelona Convention, which grants the Compliance Committee the authority to exchange information on compliance measures with equivalent treaty bodies under other relevant environmental agreements. That could create an institutional link between the Barcelona and the Espoo Conventions, Decision IG 17/2, UNEP(DEPI)/MED IG. 17/10 Annex V, para 37.

region by other States.¹⁷⁴ For instance, Finland has complied with its duties as if Russia were a party to the convention.¹⁷⁵ The agreement has been endorsed by the Arctic States in the 1993 Nuuk Declaration¹⁷⁶ and served as the basis for drafting the EIA Guidelines mentioned above.¹⁷⁷ In that respect, scholars have claimed that the Espoo Convention provides the generally applicable standard for EIAs in the Arctic.¹⁷⁸

Similarly, the Espoo Convention binds all parties to the OSPAR Convention as well as the Helsinki Convention, except for Russia. Notably, concerning the transboundary Nordstream pipeline in the Baltic Sea, Russia has accepted to apply the standards for EIA prescribed under the Espoo Convention insofar as permitted under its domestic law, even though these standards do not legally bind it.¹⁷⁹ In the context of the Mediterranean, the Espoo Convention only applies to 12 out of 22 parties to the Barcelona Convention. Nonetheless, the Espoo Convention remains significant in complementing the relevant provisions of the Barcelona Convention and its Offshore Protocol, so long as it applies to offshore energy production activities.¹⁸⁰ As already mentioned, many of the rules under the regional sea agreements on the conducting of EIAs are vaguely phrased, allowing broad discretion in their implementation by States. On that account, their interpretation in light of the more detailed standards of the Espoo Convention could offer valuable guidance for their application.¹⁸¹

Arguably, the Espoo Convention provides the most advanced regional agreement for transboundary EIAs relating to offshore energy production activities.¹⁸² Parties to the Espoo Convention must conduct EIAs before activities which are likely to cause significant adverse transboundary impacts.¹⁸³ The agreement contains a non-exclusive list of such activities. The listed activities should be considered as likely to cause a significant transboundary impact, which is necessary to trigger the obligation to carry out an EIA.¹⁸⁴ Among these activities, the Espoo Convention explicitly refers to offshore hydrocarbon production.¹⁸⁵ In 2017, the second amendment of the

174 R L Johnstone (2013) 'Evaluating Espoo: What Protection does the Espoo Convention Offer the Arctic Marine Environment?', *The Yearbook of Polar Law*, 342.

175 Koivurova (2008) *supra* n. 109, 168.

176 1993 Nuuk Declaration, para 8.

177 Arctic EIA Guidelines, Chapter 11 explicitly refers to the Espoo Convention as laying out a comprehensive framework for dealing with transboundary EIAs, which can be then supplemented by regional agreements, adapted to the specificities of each region.

178 W Schrage, 'The Convention on Environmental Impact Assessment in a Transboundary Context', in Bastmeijer and Koivurova (2008) *supra* n. 109, 44.

179 T Koivurova, and I Polonen (2010) 'Transboundary Environmental Assessment in the Case of the Baltic Sea Gas Pipeline', *International Journal of Marine and Coastal Law*, 160.

180 M Gavouneli, 'Offshore Energy: Troubled Waters in the Eastern Mediterranean Sea' in H Scheiber, J Kraska, and M Kwon (eds) *Science, Technology, and New Challenges to Ocean Law* (Brill, 2015) 275.

181 For instance, Appendix IV to the Offshore Protocol can be read in conjunction with Appendix II to the Espoo Convention concerning the contents of an EIA, see M Prieur (2015) 'Les Etudes d'Impact Dans La Convention de Barcelone et Ses Protocoles et Les Liens Avec La Convention d'Espoo', presentation available online at: https://www.unece.org/fileadmin/DAM/env/eia/meetings/2015/April_Marocoo_Espoo_Conv__SEA_in_Mediterranean_reg/b_Prieur_26_slides_Espoo-Fr.pdf.

182 On the relationship with the EU directives on EIAs and SEAs, see discussion in chapter 7, sub-section 2.1.1.

183 Espoo, article 2(2).

184 Espoo, article 2(2) and (3), see also Johnstone (2013) *supra* n. 174, 343-344.

185 Espoo, Appendix I, para 15.

agreement entered into force, updating the initial list.¹⁸⁶ Under the second amendment of the agreement, the presumption of the need for prior conduct of an EIA regarding offshore hydrocarbon extraction is restricted only to commercial extraction of oil and gas over a certain level.¹⁸⁷ As far as marine renewable energy production is concerned, the amended list for the first time encompasses “*major installations for the harnessing of wind power for energy production (wind farms)*”.¹⁸⁸ Other forms of marine renewable energy production, which are not listed under Appendix I, can still trigger the duty to conduct an EIA under the Espoo Convention, as long as they are likely to cause significant harm.¹⁸⁹ However, the presumption that activities not listed in Appendix I are not expected to create substantial transboundary impact can only be rebutted under exceptional circumstances enumerated in Appendix III to the Espoo Convention.¹⁹⁰ Therefore, the conducting of an EIA with regard to non-listed activities lies at the discretion of the parties.

The Espoo Convention appears to set a higher threshold to trigger the requirement to conduct an EIA compared with article 206 of UNCLOS,¹⁹¹ which does not require the potential environmental impact of the proposed activity to be transboundary.¹⁹² However, the seemingly higher threshold under the Espoo Convention is modified in the marine context. Given the natural interconnectedness of maritime zones, any offshore energy production activity has the potential to cause transboundary impacts. Even if it is accepted that the requirement for transboundary impact narrows down its scope of application, the Espoo Convention establishes stricter and more normatively specific EIA standards in comparison with the vaguely phrased article 206 of UNCLOS and with the content of the relevant customary obligation as interpreted by international courts and tribunals.¹⁹³ For instance, the Espoo Convention amplifies international standards concerning the content of an EIA.¹⁹⁴ Specifically, Appendix II to the Espoo Convention contains a detailed list of the minimum content of an EIA report,¹⁹⁵ requiring, *inter alia*, (i) a description of the project and its purpose, (ii) consideration of alternatives to the

186 Second Amendment to the Convention on Environmental Impact Assessment in a Transboundary Context, 4 June 2004, entered into force 23 October 2017. The second amendment is applicable to 34 State Parties.

187 *Ibid.*, Appendix I, para 15 “*Extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 metric tons/day in the case of petroleum and 500 000 cubic metres/day in the case of gas*”.

188 *Ibid.*, Appendix I, para 22.

189 Espoo, article 2(5).

190 T Koivurova, ‘Transboundary Environmental Impact Assessment in International Law’ in S Marden, and T Koivurova (eds) *Transboundary Environmental Impact Assessment in the European Union* (Earthscan, 2011) 19.

191 Johnstone argues that State practice indicates that the Espoo provisions on transboundary notification are implicated if there is a “possibility, no matter how uncertain” of a significant environmental impact, *supra* n. 109, 346.

192 The more abstract article 206 of UNCLOS requires an environmental assessment if there are reasonable grounds to believe that the activity “*may cause substantial pollution or significant and harmful changes to the marine environment*”.

193 For instance, the ICJ held that an EIA is only required when the significant harm is likely to occur, see ICJ, *Pulp Mills* case, para 204, compare with article 2(2) of the Espoo Convention.

194 See *South China Sea Award*, para 990, requiring “comprehensiveness of an EIA”.

195 The minimum content of the environmental impact report is very similar to the 1987 UNEP “Goals and Principles of EIA”, UNEP Council Decision 14/25, Environmental Impact Assessment, 17 June 1987. See also Sander (2016) *supra* n. 151, 92-93, 99.

project, (iii) a description of the likely affected environment, (iv) an estimate of the degree of environmental impact, (v) proposed mitigation measures, (vi) details of gaps in knowledge, (vii) details of monitoring and management, (viii) post-project analysis and (ix) a non-technical summary.¹⁹⁶ That minimum content can be used as interpretative guidance for the implementation of the obligation to conduct EIAs, at least for the parties to UNCLOS and the regional sea agreements that are bound by the Espoo Convention.¹⁹⁷

The Espoo Convention further contains detailed provisions to operationalise the procedural obligations of notification and consultation with the potentially affected States.¹⁹⁸ Under its article 3, State parties must notify affected parties only about projects listed under Appendix I, which are likely to cause a significant transboundary impact. However, that restriction means that notification is only mandatory concerning offshore oil and gas projects and wind farms, and excludes other forms of marine renewable energy production from its scope. That is an apparent weakness of the Espoo Convention, which could only be overcome by a subsequent amendment of Appendix I to guarantee that all forms of marine renewable energy projects are subject to the elaborately formulated duty of notification under it.

Interestingly, substantiating the customary law inter-State obligations to notify and consult with the potentially affected States, the Espoo Convention creates another procedural obligation in the process of an EIA, namely to involve the public in the potentially affected State(s) both in the preparatory phase and the review of the final report. It provides for the participation of the public, which should be informed of and allowed to comment on or make objections to the documentation before the finalisation of the EIA report.¹⁹⁹ The third Meeting of the Parties to the Espoo Convention has adopted guidelines to assist States in organising public participation.²⁰⁰ The Aarhus Convention further acknowledges the necessity for broader participation and transparency during the EIA process. The Aarhus Convention is intrinsically connected to the Espoo Convention since arguably, it has been created to enhance the latter agreement's effectiveness.²⁰¹ It provides more detailed rules on public participation, which need to be complied with during an EIA process. Therefore, States that are parties to both agreements need to apply the more elaborate provisions of the Aarhus Convention regarding public participation during the procedure of a transboundary EIA.²⁰² According to the Aarhus Convention,²⁰³ all members of the public, including interest groups and irrespective of whether

196 Espoo, Appendix II.

197 That does not exclude the relevance of the minimum content as best practice to be followed by States not parties to the Espoo Convention. See, for instance, the above mentioned study of REMPEC on best practice to inform the implementation of rules under the Mediterranean Offshore Protocol, referring explicitly to the Espoo Convention as best practice in the conduct of transboundary EIAs even though its parties are not all bound by it, *supra* n. 145, 13.

198 Espoo, articles 3 and 5.

199 Espoo, articles 2(6), 3(8) and 4(2).

200 Report of the Third Meeting of the Parties to the Convention on Environmental Impact Assessment in a Transboundary Context, 13 September 2004.

201 A Langshaw (2012) 'Giving Substance to Form: Moving Towards an Integrated Governance Model of Transboundary Environmental Impact Assessment', *Nordic Journal of International Law*, 33.

202 Schrage (2008) *supra* n. 178, 43.

203 Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) 1999, 38 ILM 517.

they can justify any personal interest, have a right to environmental information.²⁰⁴ Under the agreement, the public concerned, including relevant NGOs, enjoy rights of participation in the decision-making.²⁰⁵ Public participation expands beyond State decisions on specific activities to also cover “plans, programmes and policies relating to the environment” as well as “the preparation of executive regulations or generally applicable legally binding normative instruments”.²⁰⁶

Unlike UNCLOS, which only implicitly addresses how States have to treat the conclusions of EIAs in their decision making,²⁰⁷ the Espoo Convention requires that its parties must ensure that in their final decision on the proposed activity, “*due account is taken of the outcome of the environmental impact assessment, including the environmental impact assessment documentation, as well as the comments thereon... and the outcome of the consultations*”.²⁰⁸ The duty to take the EIA outcome into “due account”²⁰⁹ is already one step further in terms of stringency, than the relevant obligations under the examined regional instruments, which do not mention any consequences of the EIA report. Still, the ultimate decision about licensing projects that are likely to cause significant adverse transboundary impacts rests with the party of origin. Nonetheless, a State that anticipates substantial transboundary environmental effects will be in breach of the obligation to prevent pollution to the marine environment if it goes ahead with the decision to allow such a project.

As has already been stressed, the obligation to assess the environmental impacts of activities is ongoing, and States need to monitor the effects of a project throughout its life cycle. In particular, with regard to long-term offshore energy production activities, States need to keep following their impact on the marine environment until they are decommissioned. In that respect, even though there is no requirement for joint environmental impact assessment reviews by the party of origin and the potentially affected State, the Espoo Convention provides that parties have to determine whether a post-project analysis is necessary. In that case, monitoring is recommended to identify any potential transboundary impacts, which could necessitate new consultations between the States.²¹⁰ However, the Espoo Convention does not seem to create a binding obligation for post-project monitoring. The parties can determine whether, and if so to what extent, a post-project analysis is necessary.²¹¹ The lack of a clear duty to keep monitoring the impacts of ongoing activities is a significant weakness of the Espoo Convention when it comes to offshore energy projects. However, that weakness can be overcome by applying the relevant customary rule, which requires the continuous monitoring of ongoing projects on the environment, as highlighted by the ICJ.²¹²

204 Aarhus Convention, article 2(4) and (5).

205 Aarhus Convention, articles 4 and 6.

206 Aarhus Convention, articles 7 and 8.

207 UNCLOS, article 206.

208 Espoo, article 6(1).

209 Compare with article 7 of the ILC Draft Articles on Transboundary Harm 2000, which state that decisions must be “based on” an EIA. However, like the Arctic Guidelines, they are not binding nor has such a requirement become customary international law.

210 Espoo, article 7.

211 Espoo, article 7(1).

212 *Pulp Mills*, para 197, see also Separate Opinion of Vice-President Weeramantry in the Gabčíkovo-Nagymaros Project, 111.

The 2003 Kiev Protocol²¹³ to Espoo is also noteworthy, as it introduced the duty to carry out Strategic Environmental Assessments (SEAs), which is not provided for under the examined regional sea agreements.²¹⁴ However, its normative value in filling in normative gaps is not on a par with the Espoo Convention, because it does not bind the majority of States parties to these regional sea agreements. Therefore, it can only supplement the existing obligations of States which have adhered to the Kiev Protocol. A SEA does not focus on a single proposed project but is rather conducted on a regional or local level, taking into consideration the potential cumulative impact of many planned projects. According to the Protocol, SEA is “*the evaluation of the likely environmental effects, including health effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying out of public participation and consultations and the taking into account of the environmental report and the results of public participation and consultations in a plan or programme*.”²¹⁵ Parties must conduct SEAs for plans and programmes that are likely to have significant environmental and health effects and must ensure that environmental concerns are considered and integrated into the preparation of proposals for policies or legislation, which are likely to have a significant impact on the environment.²¹⁶ The Protocol has a rather broad scope of application, covering *inter alia* plans and programmes relating to the energy industry.²¹⁷ Like the Espoo Convention, its Annexes cite all types of offshore energy production activities including offshore hydrocarbon production, installations for hydroelectric energy production, installations for the harnessing of wind power, as well as industrial installations for the production of electricity.²¹⁸ An essential difference is that the Kiev Protocol applies not only to those projects with potentially transboundary impacts, but also to those with merely internal effects.²¹⁹

3. The substantive environmental rules on offshore energy production: defining the content of the duty to protect the marine environment at the regional level

The selected regional sea instruments also contain substantive environmental rules with implication for offshore energy production activities. Concerning offshore oil and gas exploitation, a series of binding rules and a significant number of non-binding decisions and recommendations have been formulated, regarding both the prevention of operational pollution and the response to accidental pollution. However, so far, there appears to be increased emphasis on the development of regional rules for the preparedness and response to accidental oil pollution rather than the prevention of operational discharges. For instance, even in the context of

213 Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, Kiev, 21 May 2003, entered into force 11 July 2010. At present there are 33 parties to the Kiev Protocol.

214 Espoo contains a rather weak commitment to conduct an environmental assessment prior to policies, plans and programmes under article 2(7).

215 Kiev Protocol, Article 2(6).

216 Plans and programmes are understood as those that are “*required by legislative, regulatory or administrative provisions; and subject to preparation and/or adoption by an authority or prepared by an authority, through a formal procedure, by a parliament or a government*”, Kiev Protocol, article 2(5).

217 Kiev Protocol, article 4(2).

218 Kiev Protocol, Annex I para 15 and Annex II paras 14 and 15.

219 Kiev Protocol, article 4(1).

the Arctic Council, there is a binding convention on response to accidental pollution while the rules relating to the prevention of operational pollution are included in non-binding guidelines. The EU Offshore Safety Directive offers another example of that focus on response to accidental pollution.²²⁰

The distinctive treatment of operational and accidental pollution from that of offshore energy production activities also appears to be reflected in article 194(3) of UNCLOS, which creates the duty to adopt measures designed to minimise to the fullest possible extent “*pollution from installations and devices used in exploration or exploitation of natural resources of the seabed and subsoil*” as well as “*pollution from other installations and devices operating in the marine environment*”, and then goes on to refer in particular to “*measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construct, equipment, operation and manning of such installations or devices*”.²²¹ Those observations raise the question of why regional rules are more focused on the control and minimisation of accidental pollution than on adopting a more preventive approach to the regulation of discharges from offshore oil and gas activities. Perhaps the increased costs and other vital State interests related to prevention measures are crucial factors influencing the development of preventive obligations.²²² For instance, the USA’s restrictive approach towards new binding environmental commitments in the Arctic context has been attributed, *inter alia*, to its interest in safeguarding its military security in the region.²²³

The following section comparatively assesses the regional rules which create specific obligations applicable to offshore energy production activities. As in the case of the global framework, the majority of specific regional environmental rules and standards apply only to offshore hydrocarbon activities. By contrast, regional nature conservation agreements and general environmental provisions are usually applicable to all forms of offshore energy production. Concerning the specific duties for offshore oil and gas production activities, the analysis is divided into two parts. To start with, it investigates the regionally developed rules on the prevention of operational pollution, before examining the regional treaty-based developments on prevention, preparedness and response to accidental pollution. Then, the chapter looks into the scarcity of rules which also apply to marine renewables.

3.1. The normative contours of regional treaty rules on the prevention of operational pollution from offshore oil and gas activities

Normative developments on the prevention of operational pollution from offshore oil and gas activities have been neither linear nor uniform across the examined regions. Although regional approaches vary from more goal-oriented regulation in the case of the OSPAR Convention to more prescriptive models of management under the Helsinki and Barcelona Conventions, their shared objective is to set minimum environmental standards for offshore oil and gas activities in their respective regions. Notwithstanding the diverse context in which these regional rules have been formulated, there appears to be strong convergence concerning norms

220 See chapter 7, sub-section 2.3.2.

221 UNCLOS, article 194(3)(c) and (d).

222 Vidas (2000) *supra* n. 3, 93.

223 *Ibid.*, 92.

regulating operational discharges from offshore oil and gas installations and the application of BAT and BEP across the regions. As far as the Arctic is concerned, this section discusses the relevant contribution of the 2009 Arctic Offshore Oil and Gas Guidelines, because there are yet no Arctic-specific binding rules on the prevention of operational pollution from offshore oil and gas activities.

3.1.1. *The goal-oriented approach of regulation in the North-East Atlantic*

Before the OSPAR Convention, operational pollution from offshore installations in the North-East Atlantic was subject to the provisions of the 1974 Paris Convention and the relevant recommendations produced by the Paris Commission.²²⁴ Moving away from the previous black/grey list approach enshrined in the Paris Convention, the OSPAR Convention explicitly requires parties to take all possible steps to prevent and eliminate “*pollution from offshore sources*”²²⁵ according to its provisions and, specifically, those under its Annex III.²²⁶ In other words, all substances caused by the operation of offshore installations fall within the scope of the general obligation to prevent pollution in contrast with the 1974 Paris Convention, which only required States to prohibit the discharge of blacklisted substances and merely limit the release of greylisted substances, subject to prior permission.²²⁷

The black/grey-listing approach has been replaced by the duty of State parties to apply, either individually, or jointly, BAT and BEP, including, where appropriate, clean technology.²²⁸ Indeed, according to the OSPAR Convention, States must adopt programmes and measures considering the latest technological developments and practices “*designed to prevent and eliminate pollution fully*”.²²⁹ The OSPAR Convention defines BAT as “*the latest development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of particular measures for limiting discharges, emissions and waste*”.²³⁰ It also defines BEP as “*the application of the most appropriate combination of environmental control measures and strategies*”.²³¹ According to Appendix I of the OSPAR Convention, the content of BAT and BEP concerning offshore activities “*will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding*”.²³² In that sense, Appendix I prevents parties from relying upon criteria and concepts that do not reflect contemporary technological developments.²³³ The use of dynamic environmental standards, which evolve as technology and science become more effective in preventing pollution, lies at the heart of the due diligence

224 For the historical development of specific rules on offshore oil and gas activities, see chapter 5, subsection 2.3.

225 By “*offshore sources*” the OSPAR Convention means offshore installations and offshore pipelines from which substances or energy reach the maritime area, according to article 1(k).

226 OSPAR, article 5.

227 The previous approach has been considerably criticised as the obligation to limit instead of eliminating pollution by grey list substances was inconsistent with the duty to prevent pollution, see Hey, Ijlststra and Nollkaemper (1993) *supra* n. 20, 19.

228 OSPAR, Annex III, article 2(1).

229 OSPAR, article 2(3)(a).

230 OSPAR, Appendix I, para 2.

231 *Ibid*, para 6.

232 OSPAR, Appendix I, paras 3 and 8.

233 Heinegg (2002) *supra* n. 84, 139.

standard.²³⁴ The requirement to apply BAT and BEP can limit the discretion of States concerning the implementation of their duty to restrict various discharges from the operation of offshore oil and gas installations. In that sense, BAT and BEP could be an indispensable tool to specify the required standard of diligence.

Nonetheless, the duty to apply BAT and BEP raises issues which require further consideration.²³⁵ The vague definition of BET and BAT under the OSPAR Convention appears to allow considerable leeway to its parties to identify their content in the context of offshore activities, and, consequently, limit their legal implications.²³⁶ Although the OSPAR Convention sets out criteria for the identification of BAT and BEP, its provisions do not lead to an objective determination because the criteria are not prioritised.²³⁷ For instance, the effectiveness of technologies needs to be balanced with their costs, making economic feasibility an essential factor in determining which technology will qualify as being available. BAT and BEP do not necessarily refer to the best techniques and practices since the use of clean technology only becomes mandatory where appropriate. That probably explains why the OSPAR Convention acknowledges that the application of BAT and BEP may not always lead to environmentally acceptable results.

The application of BAT and BEP may also not lead to environmentally acceptable results because of the diverse environmental circumstances of different sub-regions. For instance, what is suitable for one OSPAR sub-region might not be equally effective in the more fragile OSPAR I (Arctic) sub-region. The OSPAR Convention justifies the differentiation of BAT and BEP across various areas on the grounds of “*differences between ecological and economic conditions in the various regions and sub-regions*” under its scope.²³⁸ In that case, considering the obligation of States to exercise due diligence, additional measures must be applied for riskier activities. Thus, the Convention foresees that further steps, including perhaps clean technology, should come into play when BAT and BEP lead to environmentally unacceptable results.²³⁹ States parties are left with a broad discretion to judge when the application of BAT and BEP leads to environmentally unacceptable results because the Convention does not provide any criteria for such assessment.²⁴⁰ It is equally arguable that the parties did not want to impose a strict obligation to use clean technology, because that would create extra costs for the industry in keeping abreast of new technology.²⁴¹

The provisions of Annex III focus, for the most part, on the regulation of dumping from and of offshore installations. In line with the specific rules on dumping under Annex II and echoing the general prohibition under the IMO London Dumping regime,²⁴² Annex III includes a blanket prohibition on the dumping of wastes or any other matter from offshore installations.²⁴³ The prohibition

234 Harrison (2017) *supra* n. 40, 218.

235 Y Tanaka (2006) ‘Regulation of Land-Based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Frameworks’, *ZaöRV*, 564.

236 de La Fayette (1999) *supra* n. 78, 256, Hilf (1995) *supra* n. 20, 590.

237 Hilf (1995) *supra* n. 20, 589, Hey, Ijlstra and Nollkaemper (1993) *supra* n. 20, 16.

238 OSPAR, article 24.

239 de La Fayette (1999) *supra* n. 78, 255-256, Heinegg (2002) *supra* n. 84, 139.

240 Hey, Ijlstra and Nollkaemper (1993) *supra* n. 20, 17-18.

241 *Ibid*, 256.

242 See chapter 3, sub-section 1.3.1.

243 OSPAR, Annex III, article 3.

appears to be absolute, subject only to the exceptions provided for under Annex II of the OSPAR Convention.²⁴⁴ However, the ban on dumping does not encompass discharges or emissions produced during the operation of offshore installations, and, therefore, does not apply to operational discharges. In 2007, the OSPAR parties decided to amend Annex III to clarify that carbon dioxide capture and storage is not prohibited as dumping provided that they are authorised, their disposal is into a sub-soil geological formation, and they will not lead to significant adverse consequences for the marine environment, human health or other legitimate uses of the maritime area.²⁴⁵

Similarly, discharge or emission from offshore sources of substances which may reach and adversely affect the marine environment must be subjected to authorisation or regulation by the competent domestic authorities.²⁴⁶ The provision is consistent with the duty and sovereign right of coastal States to adopt laws and regulations for the prevention of pollution from seabed related activities under article 208 of UNCLOS. However, the regulatory discretion of the parties is limited by their duty to implement the relevant applicable decisions, recommendations and all other agreements adopted under the OSPAR Convention. These set the required minimum standard of domestic regulation.

Besides their duty to implement all relevant applicable decisions in their domestic law, national authorities must also create a system of supervision and control to evaluate the compliance of the operators of offshore installations with the conditions set by the authorisations of their activities.²⁴⁷ Therefore, States must ensure that the operators of offshore oil and gas activities within their jurisdiction comply with the relevant decisions, recommendations and all other agreements adopted under the Convention. In that respect, national authorities act as decentralised guardians of the implementation of standards created by the institutional arrangements, in parallel with the system of compliance led by the OSPAR Commission.²⁴⁸ However, the duty of States to implement these decisions in their domestic law needs to be read in conjunction with the consideration that States do not have to accept them under article 13 of the Convention, but instead they have the right to opt-out.²⁴⁹ Therefore, the provision is hardly revolutionary, because States are only required to implement those decisions and recommendations, whose adoption they have not explicitly opposed.²⁵⁰

Notably, Annex III to OSPAR has a narrow scope of application. Article 4 of the Annex does not seem to apply generally to environmental disturbances from offshore sources but instead seeks to restrain the discharge of “*substances*”. A strict textual interpretation would indicate that the provision does not apply to other kinds of disturbances or the introduction of energy, such as acoustic pollution, potentially produced by offshore energy production activities.²⁵¹ In contrast to the Helsinki Convention and the Mediterranean Offshore Protocol, Annex III does not contain

244 OSPAR, Annex II, article 3(2) and (3).

245 OSPAR, Annex III, article 3(3).

246 OSPAR, Annex III, article 4(1).

247 OSPAR, Annex III, article 4(2).

248 See *infra* sub-section 5.1.

249 Hilf (1995) *supra* n. 20, 600.

250 Hey, Ijlstara and Nollkaemper (1993) *supra* n. 20, 31-32.

251 OSPAR, Annex III, article 4(1).

any specific technical rules regulating operational discharges. Indeed, the OSPAR Convention seems to adopt a rather goal-oriented approach in the regulation of operational pollution,²⁵² according to which the regulatory framework sets the overarching objectives for the prevention of pollution and allows a considerable degree of discretion to the industry on how to achieve it. That is consistent with the preferred regulatory approach in the North Sea, where coastal States mostly avoid prescribing specific technical standards.²⁵³ The absence of prescriptive regulation is also justified on the premise that the domestic regulatory regimes of the leading North Sea offshore energy producing States are robust and therefore should not be interfered with.²⁵⁴

For the reasons mentioned above, the OSPAR Convention did not break any new ground when it comes to the prevention of operational pollution from offshore installations. Instead, it appears that most of the commitments undertaken by States in Annex III are already part of their domestic regulations.²⁵⁵ Annex III imposes the responsibility on the OSPAR Commission to further substantiate the regulation of operational discharges.²⁵⁶ The institutional framework of the OSPAR Convention was expected to play a crucial role in progressively elaborating and formulating standards and regulations related to operational pollution from offshore oil and gas activities.²⁵⁷ Even though the agreement does not set any timeline for the development of such standards, the OSPAR Commission has had a proactive role in further updating and adapting the rules on the prevention of offshore pollution to the particularities of the North-East Atlantic region.²⁵⁸

3.1.2. *The model of prescriptive regulation under the Helsinki Convention*

The Helsinki Convention follows a more prescriptive approach to the control of operational pollution from offshore oil and gas activities. Reflecting the duty under article 208 of UNCLOS, it requires each party to take all measures to prevent pollution from the exploration or exploitation of the seabed and its subsoil or from any associated activities. The necessary measures are substantiated further under Annex VI, which contains a series of provisions on operational discharges from offshore installations during the exploitation of oil and gas. As in the case of the OSPAR Convention, the Helsinki Convention defines offshore activity restrictively to denote only the exploration and exploitation of oil and gas by fixed or floating offshore installations. Therefore, marine renewable energy production activities do not fall under the scope of application of Annex VI.

252 G Gordon, 'Offshore Safety: The European Commission's Legislative Initiatives', in M Roggenkamp, and H Bjornebye (eds) *European Energy Law Report* (Intersentia, 2014) 142.

253 G Gordon (2013) 'Oil, water and law don't mix: environmental liability for offshore oil and gas operations in the UK', *Environmental Law and Management*, 123-124.

254 G Gordon (2014) *supra* n. 252, 147 where Gordon refers to the EU Commission Working Paper 'Results of the public consultation on improving offshore safety, health and environment, SEC/2011/1292 final, 6.

255 Hey, Ijlstra and Nollkaemper (1993) *supra* n. 20, 32.

256 OSPAR, Annex III, article 10.

257 Already the Action Plan of the Oslo and Paris Commission dealt with pollution from offshore sources, and in a way was considered as implementing the relevant duty of the OSPAR Commission under article 10, see Hey, Ijlstra and Nollkaemper (1993) *supra* n. 20, 32.

258 *Infra* sub-section 4.1.

States parties undertake to apply BAT and BEP to implement their duty to prevent and eliminate pollution from offshore activities.²⁵⁹ The Helsinki Convention defines BAT and BEP in almost identical terms to the OSPAR Convention.²⁶⁰ The relevant Helsinki provision reflects the same rationale, namely that the content of BAT and BEP are subject to change in light of technological and scientific advances.²⁶¹ BAT and BEP offer a dynamic standard for assessing the appropriate measures to be taken by States. At the same time, they are a tool to be used to balance between competing interests, since States need to consider a series of non-exclusively listed factors.²⁶² Arguably, the starting point for defining BAT should be the best available technology wherever it exists, regardless of geographical limits.²⁶³ As in the case of the OSPAR Convention, one of the factors to be considered is the economic viability of technological developments. However, neither of the Conventions provides any guidance on how to conclude that specific technology is deemed economically feasible, thus allowing States broad discretion to decide. The generality of the set criteria could be overcome by future specification through recommendations adopted by the Helsinki Convention.²⁶⁴ On the downside, the flexibility of the set criteria could, as in the case of the OSPAR Convention, lead to unacceptably low environmental standards. Nonetheless, considering the object and purpose of the provision, which is to apply BAT and BEP to prevent and eliminate pollution, States cannot rely on technological developments that, while less costly, would lead to the adoption of measures which are not reasonably suitable to prevent pollution in the Baltic Sea area. Therefore, their use sets at least a minimum standard of care.

Importantly, the Helsinki Convention stresses that BAT and BEP must be regularly redefined, as States must take additional measures when their application does not lead to environmentally acceptable results.²⁶⁵ The implementation of BAT and BEP by States does not necessarily mean that States have diligently complied with their duty to prevent pollution. Instead, their adoption can presumably ensure the attainment of environmentally acceptable results in the absence of which more stringent measures are to be applied.²⁶⁶ However, like OSPAR, the Helsinki Convention does not offer any quality standards by which to assess what is meant by environmentally acceptable results. Some interpretative guidance can be found, however, in the general objectives of the Convention, which ambitiously aims to achieve ecological restoration and preserve ecological balance.²⁶⁷ Given the particular sensitivity of some maritime subregions in the Baltic Sea, perhaps the only feasible additional measure to prevent pollution is the prohibition of offshore activities, insofar as they could cause unacceptable harm to the marine ecosystems. Such an argument gains support from the fact that the precautionary principle is enumerated

259 Helsinki Convention, Annex VI, Regulation 2.

260 Helsinki Convention, Annex II, Regulation 3.

261 Helsinki Convention, Annex II, Regulation 4.

262 Helsinki Convention, Annex II, Regulation 3.2.

263 Ebbesson (2000) *supra* n. 89, 47.

264 M Fitzmaurice (1998) 'The Helsinki Conventions 1974 and 1992', *International Journal of Marine and Coastal Law*, 388.

265 Helsinki Convention, article 3.

266 D Dziedzic (2002) 'Marine Environmental Protection under Regional Conventions: Limits to the Contribution of Procedural Norms', *Ocean Development and International Law*, 279.

267 Ebbesson (2000) *supra* n. 89, 49.

explicitly among the factors in determining the content of BAT. Following the precautionary principle, any offshore oil and gas projects likely to cause results which are not deemed to be environmentally acceptable should not be permitted, even when the proposed activities would apply BAT.

Unlike the OSPAR Convention, Annex VI of the Helsinki Convention adopts a prescriptive model in regulating operational discharges, providing for specific technical standards. It requires prior authorisation by the national authority with regard to the use of any types of drilling muds, which are in no case allowed to be discharged into the sea and must be treated or disposed of in an environmentally acceptable way onshore.²⁶⁸ The domestic authority must regularly review these permits.²⁶⁹ Particular attention is paid to specifically sensitive parts of the Baltic Sea, such as confined or shallow areas and areas with rare, valuable or particularly fragile ecosystems.²⁷⁰ In those areas, the regulations of Annex VI prohibit any types of discharges, even when they are water-based, thus imposing a zero-discharge rule. This broad prohibition of discharge in particularly sensitive sea areas is perceived as a robust application of the precautionary principle. With regard to the discharge of production water, the Annex sets a limit, which is only allowed to be exceeded if compliance with it is not feasible even with the application of BEP and BAT.²⁷¹ However, the permitted discharges must not, under any circumstances, lead to unacceptable environmental effects. For that reason, the discharge limits prescribed by the Annex must be revised regularly, taking into account the development of technology to reduce them progressively.²⁷²

The disposal of garbage and sewage under the Helsinki Convention is primarily regulated by reference to Annex V of MARPOL 73/78, while dumping is regulated by reference to the 1972 London Dumping Convention. Although some of the Helsinki Convention's provisions incorporate global agreements by reference, in some instances the provisions of Annex IV of the Helsinki Convention, which is primarily applicable to pollution from ships and covers partly offshore oil and gas platforms,²⁷³ go further in terms of stringency than the 1972 London Dumping Convention.²⁷⁴ Dumping and the discharge of sewage from offshore platforms are therefore strictly prohibited, subject to limited exceptions.²⁷⁵ On the whole, the Helsinki Convention

268 Helsinki Convention, Annex VI, Regulations 4 and 5.

269 *Ibid*, Regulation 5(e).

270 *Ibid*, Regulation 4.4.

271 *Ibid*, Regulation 5(b) and (c).

272 *Ibid*, Regulation 5(e).

273 *Ibid*, Regulation 5.1.

274 M Fitzmaurice 'Enhanced Marine Environmental Protection: A Case Study of the Baltic Sea' in J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a living treaty* (BIICL, 2016), 300, T Treves 'Regional Approaches to the Protection of the Marine Environment' in M Nordquist, J Norton Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Martinus Nijhoff, 2003) 141.

275 Helsinki Convention, Annex V, Regulation 4 and Annex IV, Regulation 5(c)(1)(a). With regard to sewage, it is argued that discharge is not prohibited if a sewage treatment plant, approved by a competent authority, is on board and additionally, the effluents do not produce visible floating solids, nor cause discolouration of the surrounding water, see S Vinogradov, and J P Wagner 'International Legal Regime for the Protection of the Marine Environment Against Operational Pollution from Offshore Petroleum Activities' in Z Gao, *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998) 123.

mainly implements the global rules established under the IMO Conventions²⁷⁶ but adds normative content in terms of specificity and stringency to adapt them to the regional needs of the Baltic Sea.

3.1.3. *The enhanced prescriptive model of regulation under the Mediterranean Offshore Protocol*

The Mediterranean Offshore Protocol, like the Annexes under the OSPAR and Helsinki Conventions, restates the due diligence obligation of States to take all appropriate measures to prevent, abate, combat and control pollution from offshore oil and gas activities. To that end, the Protocol adds that parties must, *inter alia*, ensure that the best available, environmentally effective and economically appropriate techniques are used.²⁷⁷ The obligation of the parties to exercise due diligence seems to be tailored to the capabilities of each State in ensuring that the private operators apply BAT.²⁷⁸ In comparison to the OSPAR and Helsinki Conventions, BAT are required explicitly to be economically appropriate in the context of the Mediterranean. Therefore, the applicable standard for less developed States around the Mediterranean Sea is heavily conditioned by economic factors, making the content of BAT and BEP more fluid. Similar language is used in the case of other UNEP regional sea agreements applicable to the Wider Caribbean and West Africa.²⁷⁹ It follows that the Mediterranean States might not be reasonably expected to apply the same technology as in the much more developed North Sea.²⁸⁰ The degree of variation between the standards applicable under the OSPAR and the Barcelona Conventions is a reflection of their significant divergences in terms of both the economic and environmental conditions, the North Sea States being much more developed compared with the economically disparate and environmentally disaggregated group of States surrounding the Mediterranean.²⁸¹ However, even this more moderate requirement to apply BAT and BEP under the Mediterranean Offshore Protocol sets a dynamic standard of environmental protection.

The parties are further obliged to ensure that all necessary measures are taken so that activities do not cause pollution.²⁸² The Mediterranean Offshore Protocol emphasises that States are to act as guardians of the compliance by operators engaging in offshore oil and gas activities within their jurisdiction. They need to ensure that the industry applies best environmental techniques and its activities do not cause pollution.²⁸³ The Protocol makes it clear that States are responsible not

276 For instance, although Annex IV of the MARPOL 73/78 had not yet come into force, the Helsinki Convention made it applicable to its parties under its Annex IV dealing with the discharge of sewage. These provisions are *mutatis mutandis* applicable to offshore installations.

277 Mediterranean Offshore Protocol, article 3(1).

278 E Raftopoulos (2010) Sustainable Governance of Offshore Oil and Gas Development in the Mediterranean: Revitalising the Dormant Mediterranean Offshore Protocol, *MEPIELAN eBulletin*, available online at: <http://www.mepielan-ebulletin.gr/default.aspx?pid=18&CategoryId=4&ArticleId=29&Article=Sustainable-Governance>.

279 Abidjan Convention, article 5, Cartagena Convention, article 4(1).

280 Dzidzornu (2002) *supra* n. 266, 279.

281 *Ibid*, 280.

282 Mediterranean Offshore Protocol, article 3(2).

283 It has been also argued that article 3(2) of the Offshore Protocol creates an obligation upon States to ensure that other Contracting Parties are taking all necessary measures to prevent marine pollution from offshore activities, see M L Rodriguez Lucas (1998) 'La Protection de la Mer Méditerranée

only for the conduct of operators who are authorised to carry out activities (holders of authorizations, sub-contractors) but also for those that *de facto* control the activities. During the negotiations for the Mediterranean Offshore Protocol, States had proposed the inclusion of a specific form of control over the exploitation of offshore oil and gas through a system of licences, authorisations or permits.²⁸⁴ To that end, all offshore oil and gas projects are subject to a sophisticated system of prior written authorisation by the competent domestic authority.²⁸⁵ Before granting the authorisation, the regulatory authority must be satisfied that the installation meets the international standards and that the operator has the technical competence and financial capacity to conduct the activities.

However, meeting the international standards and applying BAT and BEP does not necessarily exclude the potential of such activities to cause significant harm to the marine environment. Environmental considerations regarding the potential adverse impacts of offshore activities are crucial in deciding upon their authorisation.²⁸⁶ On that account, a licence must not be granted if there are indications that the proposed activities might cause a significant adverse environmental impact that cannot be avoided by compliance with conditions concerning the measures, techniques or methods designed to reduce to the minimum the risks of pollution from these activities.²⁸⁷ The provision reflects a robust application of the precautionary principle²⁸⁸ because it obliges States to refuse the granting of an authorisation even when there are “*indications*” that the proposed activity is “*likely to cause significant adverse effects on the environment*”²⁸⁹

Like the rule of reference under article 208(3) of UNCLOS, the Mediterranean Offshore Protocol refers to international standards and practice in order to set a minimum environmental standard for the operation of offshore oil and gas activities. Even though the provision makes the authorisations for offshore oil and gas activities conditional upon meeting the international standards and practices, it does not offer any guidance on how to identify them. However, unlike UNCLOS, the Mediterranean Offshore Protocol is supported by institutional arrangements, which can substantiate the required standards, as discussed in section 4.3. Regrettably, the provision fails to subject the authorisations to a mandatory prior environmental impact assessment procedure.²⁹⁰ Specifically, operators applying for authorisation are required to submit, *inter alia*,²⁹¹ “*a survey concerning the effects of the proposed activities on the*

Contre la Pollution Résultant de l'Exploration et de l'Exploitation du Plateau Continental, du Fond de la Mer et de son Sous-Sol, Le Cinquième Protocole a la Convention de Barcelone, RHDI, 467.

284 These proposals were raised during the consultative meeting in Athens in 1986, see UNEP/WG.155.1, 25 September 1986, referred to in Rodriguez Lucas (1998) *supra* n. 283, 468.

285 Mediterranean Offshore Protocol, articles 4-7.

286 Vinogradov and Wagner (1998) *supra* n. 275, 131.

287 Mediterranean Offshore Protocol, article 4 (2).

288 It is noteworthy that, unlike the previously mentioned Annexes to the OSPAR and Helsinki Conventions, the Offshore Protocol does not mention the precautionary principle.

289 T Scovazzi (1995) ‘The Fifth Protocol to the Barcelona Convention on the Protection of the Mediterranean’, *International Journal of Marine and Coastal Law*, 545.

290 Compare with Helsinki Convention, Annex VI, Regulation 3 which requires the conduct of an EIA before an offshore activity is permitted to start.

291 According to article 5 of the Protocol, operators shall further submit “(b) the precise definition of the geographical areas of the proposed activities, (c) the safety measures, operator’s contingency plan,

environment”,²⁹² which falls short of creating a duty to carry out a full-fledged EIA. The Mediterranean Offshore Protocol leaves discretion to the competent authority which “*may, in light of the nature, scope, duration and technical methods employed in the activities and of the characteristics of the area, require that an environmental impact assessment be prepared*”. It is, however, arguable that the provision must be read in light of the normative developments under the 1995 Barcelona Convention, which requires the conduct of an EIA for any activity which is likely to cause significant adverse environmental impacts.²⁹³

The authorisation system reflects the inherent flexibility of the due diligence standard and, precisely, the fact that riskier activities call for a higher standard of protection. Therefore, the domestic authorisation may impose additional conditions regarding the measures, techniques or methods designed to reduce the minimum risks of pollution on a case-by-case basis.²⁹⁴ For the same reason, when the activities take place within specially protected areas, the Mediterranean Offshore Protocol obliges parties to impose special restrictions or conditions for the issuance of authorisations, and among them are compulsory EIAs, intensified monitoring and reporting duties on the operators and even the total prohibition of discharges.²⁹⁵

Concerning the regulation of operational discharges, the Mediterranean Offshore Protocol requires parties to impose upon operators a duty to employ the best available, environmentally effective and economically appropriate techniques and observe internationally accepted standards regarding wastes, as well as the use, storage and discharge of harmful noxious substances and materials.²⁹⁶ This general obligation is substantiated further through a series of specific technical requirements concerning various operational discharges. As far as harmful or noxious substances are concerned, the Protocol applies a three-list, differentiating control system approach²⁹⁷ by dividing them into three categories: substances whose disposal is prohibited (Annex I); those whose disposal requires a special prior permit (Annex II); and all other potentially polluting substances whose disposal is subject to a prior general permit from the competent domestic authority (Annex III).²⁹⁸ That management system largely reflects the obsolete black/grey-list approach used by the first-generation marine environmental agreements.²⁹⁹

The Mediterranean Offshore Protocol also contains specific provisions on the disposal of oil, oily mixtures, drilling fluids and cuttings, as well as sewage and garbage from offshore installations. For the former category, the Protocol calls for its parties to develop common standards.³⁰⁰ The content of these technical standards

monitoring procedures, as well as plans for the removal of installations, (d) precautions for specially protected areas and the insurance or other financial security to cover possible liability”.

292 Mediterranean Offshore Protocol, article 5(a).

293 *Supra* sub-section 2.2.

294 Mediterranean Offshore Protocol, article 6(1) and (2).

295 *Ibid*, article 21.

296 Mediterranean Offshore Protocol, article 8.

297 Raftopoulos (2010) *supra* n. 278.

298 Mediterranean Offshore Protocol, article 9(4)-(6).

299 As stressed, this approach was abandoned following developments in marine environmental law after the Rio Conference in 1992. The differentiating black/grey-list approach was replaced by a unified management approach, which reflects the precautionary principle.

300 Annex V specifies maximum permissible levels and identifies criteria for the disposal of oil, oily mixtures, drilling fluids and cuttings from offshore installations.

needs to be revised in light of new scientific developments and taking into account international “*good oilfield practice*”.³⁰¹ So far as sewage and garbage from installations are concerned, the Mediterranean Offshore Protocol introduces a general prohibition on their disposal,³⁰² subject to exclusive exceptions which need to be reexamined by its parties from time to time.³⁰³

Unlike the OSPAR and Helsinki Conventions, at the time of its adoption, the Mediterranean Offshore Protocol did not establish any separate treaty bodies with the power to further elaborate and substantiate its rules with specific technical standards. In that respect, article 23 of the Mediterranean Offshore Protocol restates the duty of its parties to cooperate for the establishment of international rules and standards.³⁰⁴ States must cooperate, either directly or through competent international organisations, to formulate and elaborate international rules, standards and recommended practices and procedures, as well as to adopt guidelines following international practices and procedures.³⁰⁵ States are obliged to endeavour to harmonise their laws with those international rules and standards, as soon as possible.³⁰⁶ Despite the initial lack of treaty bodies, the adoption of the Mediterranean Offshore Action Plan has brought about institutional and “secondary” normative developments, as discussed in section 4.3.

3.1.4. *The adaptation of best practices under the Arctic Offshore Oil and Gas Guidelines*

As mentioned above, even though the OSPAR Convention applies to a fragment of the Arctic Ocean,³⁰⁷ it has not yet created any rules and standards addressing the specificities of the north polar region. The Arctic Offshore Oil and Gas Guidelines, however, engage with the issue of combatting operational pollution from offshore oil and gas activities in the context of the specific Arctic environmental conditions, such as harsh weather, low temperatures and the presence of ice. Therefore, they do not merely recommend the “transplant” of best practices from other regions but suggest measures to adapt them to the particular Arctic needs. Although these Guidelines are not binding, several of the best practices they contain concerning drilling activities are implemented by the Arctic States, such as the US and Greenland.³⁰⁸ Similarly,

301 Mediterranean Offshore Protocol, article 10.

302 Pursuant to article 13 of the Protocol, parties must ensure that operators dispose satisfactorily of all wastes and materials in designated onshore reception facilities.

303 Mediterranean Offshore Protocol, articles 11 and 12.

304 States have a global duty to cooperate towards the adoption of such rules and standards under articles 197 and 208(5) of UNCLOS.

305 Mediterranean Offshore Protocol, article 23.

306 That duty to “endeavour” to harmonise their domestic regulation is, however, more moderately phrased than the corresponding duty under article 208(4) of UNCLOS.

307 Only two Arctic States are Parties to the OSPAR Convention, and it only covers 8% of the Arctic Ocean, OSPAR Commission (2000) Quality Status Report, *Geography, Hydrography and Climate*.

308 B Baker, ‘The Arctic Offshore Hydrocarbon Hiatus of 2015: An Opportunity to Revisit Regulation Around the Pole’ in C Pelauideix, and E M Basse (eds) *Governance of Arctic Offshore Oil and Gas* (Routledge, 2018) 150-151, H M Osofsky, J Shadian and S L Fechtelkter (2016) ‘Preventing and Responding to Arctic Offshore Drilling Disasters: The Role of Hybrid Cooperation’ in J Peel, and D Fisher (eds) *The Role of International Environmental Law in Disaster Risk Reduction* (Brill Nijhoff, 2016) 403-404, D Shapovalova-Krout (2019) ‘International Governance of Oil Spills from Upstream Petroleum Activities in the Arctic: Response over Prevention?’, *International Journal of Marine and Coastal Law*, 23.

Canada, Russia and Norway have undertaken the adaptation of their regulatory framework to Arctic conditions, following the Guidelines to a certain extent.³⁰⁹

With regard to the disposal of sewage and garbage from offshore installations, the Arctic Offshore Oil and Gas Guidelines refer to the relevant provisions of MARPOL, echoing the regulatory approach of the Helsinki Convention.³¹⁰ Similarly, many of the recommendations about drilling wastes reflect the regulations established under Annex III of the Helsinki Convention, which also pays special attention to environmentally sensitive areas. For instance, in considering the ecologically sensitive character of the Arctic Ocean, the Guidelines recommend the Arctic States to apply a “zero discharge” policy gradually. To that end, the Guidelines support the regular revision of discharge limits by the domestic regulators to minimise progressively and eventually eliminate harmful discharges. They further call for the adoption of specific discharge limits by regulators on a site-specific basis.³¹¹ An important innovation, compared with all three instruments examined above, is that the Guidelines refer to best practices concerning air emissions that are either produced directly from the extraction activities or from flaring of gas.³¹²

The Arctic Offshore Oil and Gas Guidelines emphasise the requirement to apply BAT and BEP to prevent operational pollution from offshore oil and gas activities.³¹³ To assist regulators in identifying the content of BAT and BEP, reference documents have been developed offering information on what may be technically and economically available. These reference documents can function as directions aiming to improve the industry’s environmental performance and, consequently, lead to environmental improvements. Interestingly, with regard to BAT and BEP, the Guidelines contain an Annex, which duplicates the criteria for their determination under the OSPAR Convention.³¹⁴ Even though those criteria are not binding upon all Arctic States, their reference in the Arctic Offshore Oil and Gas Guidelines offers a valuable example of how regional rules can be operationalised in other marine regions.³¹⁵ Noticeably, the Offshore Oil and Gas Guidelines lack the level of detailed regulation of the decisions and recommendations by the OSPAR Commission. Another essential drawback is that the Arctic Council does not monitor the implementation of the Guidelines. Mainly for these reasons, these Guidelines have been criticised as falling short of harmonising the applicable standards in the Arctic region.³¹⁶

3.2. The normative contours of regional treaty rules on the prevention, preparedness and response to accidental pollution from offshore oil and gas activities

Both UNCLOS and the OPRC recognise the cardinal importance of regional arrangements for the response to acute pollution and call upon States and competent international organisations to cooperate at the regional level.³¹⁷ The development of

309 *Ibid*, 24.

310 See *supra* sub-section 3.1.2.

311 Offshore Oil and Gas Guidelines, chapter 6.1.

312 *Ibid*, Operational Discharges, chapter 6.3.

313 *Ibid*, chapter 6.1

314 *Ibid*, Annex B, Definition of Practices and Techniques.

315 See also, chapter 8, section 1.

316 E Barry-Pheby (2014) ‘International Law and Governance of the Arctic’s Offshore Oil Industry: Inert or Alerted?’, *Oil, Gas & Energy Law Intelligence*, 7.

317 See UNCLOS articles 198, 199, OPRC preamble, articles 5,6 8, 10.

more elaborate treaty rules on prevention, preparedness and response to accidental pollution from offshore oil and gas exploitation is correlated with the fact that environmental cooperation has often been prompted by some form of crisis or disaster.³¹⁸ For instance, one of the first regional marine environmental protection agreements, the Bonn Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil was negotiated as a response to the Torrey Canyon incident. A few years later, the Stella Maris incident, which resulted in the dumping of 650 tonnes of toxic waste in the North Sea, was influential in the negotiation of the 1972 Oslo Convention for the Prevention of Marine Pollution by Dumping. Similarly, as further illustrated below, the Deepwater Horizon incident in the Gulf of Mexico has acted as a catalyst for normative developments regarding the prevention of and response to accidental pollution from offshore oil and gas installations in many regions, including the North-East Atlantic, the Mediterranean Sea and the Arctic Ocean.

3.2.1. *The normative gap under the OSPAR Convention and the relevance of the Bonn Agreement in the North-East Atlantic*

As already discussed, the OSPAR Convention and its Annex III on the prevention of pollution from offshore sources barely include any specific rules on the prevention of accidental oil pollution. Article 9 of Annex III would seem to be the single exception. However, the provision appears to impose a weak obligation for maritime inspection vessels and aircraft to report any incidents to the domestic authorities (“shall issue instructions ... to report”) when there is a suspicion that a contravention of provisions of Annex III has occurred or is about to happen. The article does not create an unconditional duty to inform any other potentially affected States or the OSPAR Commission³¹⁹ but only requires OSPAR State parties to inform other parties if they consider that such notification is “*appropriate*”.

Although the OSPAR Convention does not contain detailed technical norms and standards on the prevention, preparedness and response to accidental offshore oil pollution, the OSPAR Commission’s decisions, recommendations and environmental strategies could fill in the normative gap. While most normative developments produced by the treaty bodies of the OSPAR Convention have focused on the operational pollution, the oil spill in the Gulf of Mexico in 2010 attracted the OSPAR Commission’s attention to the need to prevent and control accidental pollution from offshore oil and gas installations. In response to the Deepwater Horizon blowout, OSPAR parties adopted the recommendation 2010/18 on the Prevention of Significant Acute Oil Pollution from Offshore Drilling Activities at the Bergen Ministerial Conference in September 2010.³²⁰ The recommendation initiated a process to assess the appropriateness of existing international and domestic measures and, if necessary, guide further OSPAR-specific action. In that respect, parties to the OSPAR Convention undertook, as a precaution, to review existing regulatory frameworks, “*including the permitting of drilling activities in extreme conditions, taking*

318 C Whomersley (2016) ‘Regional Cooperation in the North Sea under Part IX of the Law of the Sea Convention’, *The International Journal of Marine and Coastal Law*, 350 with reference to the House of Lords Report of Session 2014-15, 10 March 2015, Conclusions, para 18.

319 See UNCLOS, article 198.

320 OSPAR Recommendation 2010/18, On the Prevention of Significant Acute Oil Pollution from Offshore Drilling Activities, Bergen 2010.

extra care to implement all relevant learning from the Deepwater Horizon accident, and continuing to evaluate activities on a case by case basis.³²¹ The parties committed to report on their actions, via the Offshore Industry Committee (OIC), to follow up on the implementation of the recommendation.³²² An Intersessional Correspondence Group was convened to assess the results of investigations of drilling in extreme conditions and their relevance to potential environmental impacts (ICG-Drilllex).³²³ Following the assessment of the international and domestic measures,³²⁴ the OIC declared that no additional OSPAR specific actions were necessary. However, the OIC highlighted that States must reassess these conclusions after considering the – at that time – expected EU secondary legislation on offshore oil and gas safety.³²⁵ Since then, the OIC has consistently included a follow-up on domestic measures implementing the EU Safety Directive 2013/30 as an item on its annual meeting agenda.³²⁶ As a result, OSPAR parties continue to update the OIC on their national measures to implement the Offshore Safety Directive.

The OSPAR parties have also undertaken to cooperate under the Bonn agreement and the initiatives launched by the North Sea Offshore Authorities Forum (NSOAF) and the International Regulators Forum (IRF)³²⁷ to prevent accidental offshore oil pollution.³²⁸ The 1969 Bonn agreement was the first multilateral instrument to establish an emergency framework for oil pollution emergencies in the North-East Atlantic region. It was replaced by the 1983 Bonn Agreement,³²⁹ as amended in 1989 and 2001, to apply to other harmful substances. Its provisions primarily purported to address accidental oil pollution resulting from navigation but were amended to cover accidental pollution from offshore installations. The agreement contains measures to promote both preparatory and post-accident cooperation among its parties.³³⁰ Besides enhancing cooperation in response to accidental pollution, it seeks to contribute to the prevention of such accidents by coordinating surveillance activities conducted in the North Sea.³³¹ The agreement divides the North Sea area into zones, where each party or parties are jointly responsible for assessing any accident and immediately informing all the other parties.³³² It establishes a mechanism whereby its parties can call upon each other for assistance in dealing with emergencies. In such cases, States

321 Bergen Ministerial Statement, 20-24 September 2010, para 18.

322 Recommendation 2010/18, 3.1.c.

323 Offshore Industry Committee, Summary Record, 2012, para 4.5.

324 Norway's view, as the convenor of the ICG-Drilllex, was that there was no necessity for further OSPAR measures to prevent offshore oil accidents when drilling in extreme conditions, *ibid*, para 4.7

325 *Ibid*, para 4.8.

326 Offshore Industry Committee, Summary Record, 2012 up to 2019.

327 S Vinogradov (2013) 'The Impact of the Deepwater Horizon: The Evolving International Legal Regime for Offshore Accidental Pollution Prevention, Preparedness and Response', *Ocean Development & International Law*, 349.

328 See also the Dublin Declaration of the Parties to the Bonn Agreement in 2010, which recognised the importance of cooperating with the OSPAR Commission to create synergies towards protecting the marine environment from pollution related to offshore oil and gas exploitation. Declaration of the First Ministerial Meeting of the Bonn Agreement, 24 November 2010, para 11.

329 Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances, 1983.

330 Bonn Agreement, articles 3, 5, 6A, 7. See also Vinogradov (2013) *supra* n. 327, 344.

331 Bonn Agreement, article 1(2).

332 Bonn Agreement, article 6 and Annex.

must “use their best endeavours to bring such assistance as is within their power taking into account ... the technological means available to them”.³³³

Unlike the other examined regional agreements, the Bonn Convention does not create an institutional arrangement for promoting and coordinating cooperation among its parties.³³⁴ Nonetheless, its MoP has created a special working group that serves as a focal point for cooperation.³³⁵ The working group on Operational, Technical and Scientific Questions concerning counter-pollution activities is, *inter alia*, responsible for organising all types of exercises and aerial surveillance activities.³³⁶ Furthermore, the Ministerial Meetings of the Bonn Agreement have adopted and updated their action plan since 2010 to guide its implementation.³³⁷ The Action Plans stress the importance of strengthening cooperation and exchange of information with other regional organisations, including the European Maritime Safety Agency, the Arctic Council (through its EPPR Working Group), the HELCOM, the OSPAR Commission and the REMPEC.³³⁸

3.2.2. The regional adaptation of global rules under the Helsinki Convention

The Helsinki Convention requires each contracting party to take all necessary steps to prevent accidental pollution from offshore oil and gas activities and ensure adequate preparedness for immediate response actions against pollution incidents caused by such activities.³³⁹ In that respect, each party has to implement the procedures and measures contained in Annex VI, as far as they are applicable. Also, parties must cooperate and jointly take all appropriate steps to respond to pollution incidents, as laid out in Annex VII. Compared with the OSPAR agreement, article 13 of the Helsinki Convention imposes a strongly worded obligation of notification (“*shall notify without delay*”) on its parties, whose interests are or might be affected in case of an oil pollution emergency in the Baltic Sea.³⁴⁰ In the event of a significant pollution incident, the concerned States must also inform the HELCOM, as soon as possible.³⁴¹ This obligation is supplemented by a modest requirement of consultation to prevent, reduce, and control pollution “*whenever deemed necessary by the contracting parties*”.³⁴²

333 Bonn Agreement, article 7.

334 It is however argued that the Bonn Agreement Secretariat in London has played a proactive role in promoting cooperation among its Parties, Whomersley (2016) *supra* n. 318, 351.

335 Vinogradov (2013) *supra* n. 327, 344.

336 A Carpenter, ‘Monitoring Oil Pollution from Oil and Gas Installations in the North Sea’ in A Carpenter (ed) *Oil Pollution in the North Sea* (Springer, 2016) 216-224.

337 During the First Ministerial Meeting of the Bonn Agreement parties, an Action Plan was adopted for the implementation of its provisions for the period 2010-2013, which was subsequently followed by the Action Plan 2013-2016. An updated Bonn agreement action plan has currently been drafted for the period 2019-2025.

338 Bonn Agreement Action Plan 2013-2016, para B.4.1-B.4.2.

339 1992 Helsinki Convention, article 12. As in the 1972 Helsinki Convention, the 1992 Helsinki Convention obliges States to individually or jointly take all appropriate measures to maintain adequate ability to respond to pollution incidents.

340 Helsinki Convention, article 13(1).

341 *Ibid*, Annex VII, Regulation 1.2.b.

342 *Ibid*, article 13(2).

Under Annex VI on Prevention of Pollution from Offshore Activities, each offshore unit must have an approved pollution emergency plan,³⁴³ whose minimum content is prescribed under Annex VI, and its operator has to report any discharge of oil or other harmful substances to the competent national authority.³⁴⁴ Annex VII contains more elaborate provisions on pollution emergency incidents. Following the example of the OPRC, it creates an obligation to adopt national contingency plans and, as appropriate, establish bilateral or multilateral contingency plans to respond to pollution accidents.³⁴⁵ In practice, the Helsinki Convention operates within a dense network of both bilateral³⁴⁶ and multilateral agreements on response to accidental pollution.³⁴⁷ Also, the HELCOM's BRISK and BRISK-RU projects have identified and recommended sub-regionally differentiated response measures to increase preparedness in the Baltic Sea for oil pollution emergencies.³⁴⁸

Furthermore, adopting the strategy of the Bonn agreement, Annex VI of the Helsinki Convention also calls upon its parties to divide the Helsinki area into response regions, in which each party is to be responsible for conducting surveillance activities and taking action to respond whenever a significant pollution incident has occurred or might occur.³⁴⁹ States must carry out airborne surveillance to detect and monitor oil and other substances released into the Baltic Sea and prevent violations of the existing regulation on prevention of marine oil pollution.³⁵⁰ Subject to their capabilities, the States must cooperate in responding to pollution incidents when their severity justifies collective action. Relevantly, the Baltic States are obliged to regularly conduct operational exercises to improve their capacity to respond to accidental pollution.³⁵¹

343 *Ibid*, Annex VI, Regulation 7 on contingency planning.

344 *Ibid*, Annex VI, Regulation 6 on reporting procedure.

345 *Ibid*, Annex VII, Regulation 2.

346 Agreement between the Government of the Republic of Estonia and the Government of the Republic of Finland on cooperation in combating pollution in the marine environment, 8 December 1993, Agreement Between the Government of The Republic Of Latvia And The Government Of The Republic Of Lithuania On The Mutual Support In The Event Of Natural Disasters And Other Large-Scale Accidents, 31 May 2001. For a complete list of the bilateral and multilateral agreements on oil pollution response in the Baltic, see HELCOM Manual on Co-Operation in Response to Marine Pollution within the framework of the Convention on the Protection of the Marine Environment for the Baltic Sea, Chapter 2, 5-8.

347 Agreement between Denmark, Finland, Iceland, Norway and Sweden concerning Cooperation in Taking Measures against Pollution of the Sea by Oil or other Harmful Substances (Copenhagen Agreement), 1993.

348 Risks of Chemical and Oil Pollution in the Baltic Sea, Results and Recommendations from HELCOM's BRISK and BRISK-RU projects, available online at: http://www.helcom.fi/Lists/Publications/BRISK-BRISK-RU_SummaryPublication_spill_of_oil.pdf.

349 Helsinki Convention, Annex VII, Regulation 4.

350 Helsinki Convention, Annex VII, Regulation 3.

351 Helsinki Convention, Annex VII, Regulation 10.3. The annual Balex Delta exercises have been testing the response capacity of States to major accidents and ensuring that each party is able to lead a major response operation, Information on response exercises available on HELCOM website : <http://www.helcom.fi/action-areas/response-to-spills/helcom-balex-delta-and-other-exercises/>, see also Vinogradov (2013) *supra* n. 327, 345.

3.2.3. *The sophisticated system for response to accidental pollution under the Mediterranean Offshore Protocol*

The Mediterranean Offshore Protocol also addresses accidental pollution from offshore oil and gas installations. In the case of an emergency associated with offshore oil and gas platforms, the Mediterranean Offshore Protocol explicitly refers to the Protocol concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Case of Emergency (hereinafter Emergency Protocol),³⁵² which applies *mutatis mutandis*.³⁵³ The Emergency Protocol contains a broad definition of “*pollution incident*” which encompasses accidents related to offshore installations.³⁵⁴ It establishes a sophisticated mechanism of cooperation, creating duties of information exchange and reporting in the case of emergencies, as well as requiring the adoption and coordination of domestic and regional contingency plans.³⁵⁵ The elaborate web of obligations is coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC). The REMPEC plays a fundamental role in collecting and disseminating information, coordinating national response activities and initiating cleanup operations.³⁵⁶

Besides the duties stemming from the Emergency Protocol, the operators must devise a contingency plan to combat accidental pollution, which has to be coordinated with the contingency plan established by the parties to the Emergency Protocol.³⁵⁷ Annex VII to the Mediterranean Offshore Protocol details the content of the operator’s contingency plan and how the domestic authority is to ensure coordination in addressing contingencies.³⁵⁸ Also, Annex VII imposes additional obligations on operators to cooperate with other operators or entities to ensure that assistance is available in situations where the magnitude or nature of an emergency creates a risk for which assistance might be necessary.³⁵⁹ All the response and preparedness processes under the Mediterranean Offshore Protocol are also directly connected to the institutional arrangements of REMPEC.³⁶⁰

Furthermore, reflecting the relevant obligation under UNCLOS,³⁶¹ the Mediterranean Offshore Protocol requires states to ensure that measures are taken with regard “*to the design, construction, placement, equipment, marking, operation and maintenance of installations*”.³⁶² In particular, the authorising state must “*ensure that at all times the operator has on the installations equipment and devices, maintained in good working order, for protecting human life, preventing and combatting accidental pollution and facilitating prompt response to an emergency, in accordance with the best*

352 The Emergency Protocol entered into force on 17 March 2004 and has 17 contracting Parties, including the European Union.

353 Mediterranean Offshore Protocol, article 16(1).

354 Emergency Protocol, article 1(d).

355 *Ibid*, articles 4, 5, 10, 11.

356 Emergency Protocol, articles 4, 7, 8, 10, 11, 12.

357 *Ibid*.

358 T Scovazzi, ‘Oil Pollution Prevention and Response: The Mediterranean and other Regional Arrangements’ in G Handl, and K Svendsen (eds) *Managing the Risk of Offshore Oil and Gas Accidents: The International Legal Dimension* (Edward Elgar, 2019) 204.

359 Mediterranean Offshore Protocol, Annex VII, para A(2).

360 *Ibid*, articles 16-18.

361 UNCLOS, article 194(3)(c).

362 Offshore Protocol, article 15(1).

available environmentally effective and economically appropriate techniques and the provisions of the operator's contingency plan".³⁶³ The domestic authority must require for that reason "a certificate of safety and fitness" issued by a recognised body.³⁶⁴

3.2.4. *The added value of the Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic (MOSPA)*

Given that all eight Arctic States are parties to the OPRC, the Arctic Council's Ministerial Meeting in 2011 decided to establish a Task Force to develop an Arctic-specific instrument on marine oil pollution, preparedness and response, in implementation of the obligation under article 10 of the OPRC.³⁶⁵ The resulting MOSPA³⁶⁶ marks a significant development in the region, being the second binding agreement negotiated under the auspices of the Arctic Council.³⁶⁷ As discussed below, the MOSPA can be described as a regional implementation agreement of the OPRC as it largely overlaps with the latter's provisions. It offers a way to operationalise the general obligations under the OPRC in the special Arctic conditions.³⁶⁸ That aim of the agreement is illustrated vividly in its preamble, according to which the MOSPA purports to coordinate preexisting binding obligations of the Arctic States and adapt them to the harsh and remote Arctic conditions.³⁶⁹

The primary objective of the MOSPA is to "strengthen cooperation, coordination and mutual assistance among the Parties on oil pollution prevention and response in the Arctic in order to protect the marine environment from pollution by oil".³⁷⁰ Like the OPRC, the MOSPA covers oil pollution preparedness and response to emergencies associated with both vessels and offshore installations.³⁷¹ In almost identical terms, article 4 of the MOSPA places an obligation on the Arctic States to maintain effective domestic systems for oil pollution response.³⁷² It emphasises the specificities of the Arctic environment in the preparedness phase, ensures that all Arctic States, including the non-affected States, are also notified of oil accidents "when the severity of such oil pollution incident so justifies",³⁷³ and creates an obligation to monitor

363 *Ibid*, article 15(2).

364 The Protocol rejected the suggestion that such certificates should be required to conform with codes of conduct approved by the UN bodies, since it was a task that could be performed by other existing organizations, such as the IMO or the American Petroleum Institute (API), see UNEP/WG.155/1 26 September 1986, referred to by Rodriguez Lucas (1998) *supra* n. 283, 470.

365 The Council furthermore called upon the EPPR Working Group to develop recommendations and best practices in the prevention of marine oil pollution, see 2011 Nuuk Declaration on the occasion of the Seventh Ministerial Meeting of the Arctic Council, 12 May 2011, Greenland, see also MOSPA, preamble, which explicitly refers to the related rules under UNCLOS and the OPRC, indicating the will of the parties to implement their rights and duties under those global agreements.

366 Done at Kiruna on 15 May 2013 and signed by all eight arctic States on the same date.

367 The first and, as of today, only other binding agreement created under the auspices of the Arctic Council is the Agreement on Cooperation on Aeronautical and Maritime Research and Rescue in the Arctic, done at Nuuk, 12 May 2011.

368 M Sydnes, A K Sydnes, 'Oil Spill Response in the Arctic: the Norwegian-Russian Experience', in Handl and Svendsen (2019) *supra* n. 358, 146.

369 MOSPA, preamble.

370 MOSPA, article 1.

371 MOSPA, article 2.

372 See relevant article 6 of the OPRC.

373 MOSPA, article 6.

ongoing spills.³⁷⁴ The added legal value of MOSPA compared with the OPRC appears to be the requirement to organise joint exercises and training.³⁷⁵

Overall, the MOSPA establishes a regional mechanism for furthering cooperation on the response to accidental offshore oil pollution in the Arctic.³⁷⁶ It stipulates that parties must conduct regular meetings and review issues on its implementation, as well as develop and modify appendices to it, as appropriate.³⁷⁷ Importantly, the MOSPA institutionalises a joint review evaluating the compliance efforts of the Arctic States. However, the way that the Arctic States enforce the MOSPA and the stance of the Arctic Council in the anticipated follow-up procedures will be of paramount significance in harmonising the relevant State practice in the region.³⁷⁸ For instance, the new US regulations on Arctic offshore drilling have incorporated the relevant MOSPA provisions.³⁷⁹ Despite its shortcomings,³⁸⁰ the MOSPA is an essential step in terms of cooperation for the protection of the marine environment with regard to offshore oil and gas activities. The understanding that the Arctic Council can serve as a forum for the negotiation of binding agreements between the Arctic States could lead to better regulation of the offshore energy activities in this ecologically vulnerable region.

Nonetheless, while the treaties analysed here contain a broad range of obligations and principles for the protection of the marine environment against the adverse effects of offshore oil and gas activities for the time being, they do not specifically address the potential environmental externalities of marine renewable energy production activities. In that respect, the chapter now turns to assess to what extent States have developed regional environmental rules and standards, which not only address offshore oil and gas activities but also have implications for marine renewable energy production.

3.3. The dearth of regional normative developments with implications for all forms of offshore energy production

In a similar fashion to the global legal framework, there are no specific regional rules on the environmental regulation of marine renewables yet. Instead, the potential risks from marine renewable energy generation are regulated – often incidentally – by

374 MOSPA, article 7. States are required to “endeavour to undertake appropriate monitoring arrangements” which may also cover adjacent areas beyond their own jurisdiction, to the extent feasible. In contrast, the OPRC does not create such obligation of monitoring ongoing spills. Instead it requires states to assess the oil incident (article 5) and imposes a duty to develop and share best available techniques in surveying oil spills (article 8).

375 K Cedervall Lauta (2014) ‘A Drop in the Ocean: Marine Oil Pollution Preparedness and Response in the Arctic’, *Arctic Review on Law and Politics*, 244.

376 MOSPA, articles 8, 12 and 13.

377 MOSPA, article 20.

378 Barry-Pheby (2014) *supra* n. 316, 4.

379 Oil and Gas and Sulfur Operations on the Outer Continental Shelf – Requirements for Exploratory Drilling on the Arctic Outer Continental Shelf, available online at: <https://www.federalregister.gov/documents/2016/07/15/2016-15699/oil-and-gas-and-sulfur-operations-on-the-outer-continental-shelf-requirements-for-exploratory>.

380 The agreement was heavily criticised by Greenpeace and other environmentalists and indigenous groups for merely repeating the obligations which are already found in the OPRC and for failing to take the opportunity to deal with other issues regarding offshore oil and gas pollution prevention, see Barry-Pheby (2012) *supra* n. 102, 49.

general environmental rules and regional agreements relating to nature conservation. Interestingly, the institutional machinery of the regional sea agreements has produced a variety of non-binding instruments, which could offer valuable interpretative guidance for the adaptation of general environmental obligations to the specificities of offshore energy production activities. In addition, treaty bodies under regional nature conservation-related agreements, such as the regional sub-agreements to the CMS, have created a series of guidelines and recommendations which aim to prevent and minimise the adverse impacts of offshore marine renewables on specific protected species. While each of these agreements solely addresses the potentially harmful environmental effects of marine renewables inasmuch as they pertain to the region and the species which they protect, the output of their treaty bodies can contribute towards the establishment of best practices to be applied beyond their geographical limits.

3.3.1. Normative developments under the regional sea agreements with implications for marine renewables

As illustrated in section 1, regional sea agreements offer generic protection against the potential environmental impacts of marine renewable energy production. In particular, their general marine environmental protection obligations apply as long as offshore renewable energy activities cause, or might cause, pollution or involve activities which are regulated directly under the agreements. The definition of pollution under the examined agreements is broad enough to cover the main environmental stressors caused by marine renewable energy installations.³⁸¹ The general obligations to apply the precautionary principle, the ecosystem approach, and BAT and BEP under the examined regional sea agreements also have implications for marine renewables. Similarly, the relevant obligations to carry out EIAs apply to this type of energy production, subject to the somewhat diverse requirements of each agreement. Despite the lack of specific commitments and Annexes related to marine renewable energy, there have been some noteworthy normative developments under the provisions on biodiversity protection in the context of these regional agreements.

According to article 7 of the OSPAR Convention, its parties must prescribe measures to protect the environment against pollution from sources other than the ones addressed explicitly under its provisions, insofar as such pollution is not already the subject of effective measures prescribed by other international agreements.³⁸² This provision, read in conjunction with the obligations under Annex V to take actions against other forms of adverse impacts from human activities, could be regarded as requiring States to regulate other sources of marine disturbances associated with marine renewables. However, its parties have not yet developed any additional treaty rules applying to the environmental externalities caused or likely to be caused by marine renewable energy generation.

The proliferation of offshore wind farms has acted as a catalyst for scientific assessments and secondary normative developments by several regional arrangements. Given the expanded deployment of offshore wind farms in the North Sea, the OSPAR Commission has been proactive in promoting the assessment of impacts

381 See above, section 1.1.

382 See also chapter 5, sub-section 2.2.

of offshore wind farms (and other marine renewable energy structures), as well as offering recommendations and guidance on the regulation of such installations.³⁸³ For instance, the OSPAR Commission has issued guidelines on the construction and the operation of offshore wind farms.³⁸⁴ Additional reports have focused on the assessment of the problems and benefits associated with the deployment of offshore wind farms in the OSPAR region and have attempted to compile best practices concerning their impact assessment.³⁸⁵ The updated Guidance on environmental considerations for the development of offshore wind farms also recommends best practices to minimise and manage the potential impacts of wind farms through a domestic licensing process.³⁸⁶ For instance, States are advised to ensure that the operation of offshore wind farms does not conflict with seabird feeding areas or fish spawning areas.

In the case of the Baltic Sea, the Helsinki parties have to prevent and eliminate pollution caused by harmful substances from all sources.³⁸⁷ The Helsinki Convention defines harmful substances as “*any substance, which, if introduced into the sea, is liable to cause pollution*”.³⁸⁸ While the provision can be interpreted as requiring States to prevent pollution from substances released from marine renewable energy installations, its legal relevance is somewhat limited concerning any other environmental externalities, which cannot qualify as substances. Its parties also have to take all appropriate measures concerning the Baltic Sea and the coastal ecosystems influenced by the Baltic Sea to conserve natural habitats and biological diversity and to protect ecological processes.³⁸⁹ This provision offers the legal basis for the adoption of normatively specific instruments setting appropriate guidelines and criteria relating to the effects of marine renewables on marine biodiversity and natural habitats.

The 2007 Baltic Sea Action Plan highlighted the increasing number of offshore wind farms putting pressure on the Baltic Sea ecosystems. At the ministerial level, parties agreed to take all necessary measures to prevent, reduce, or offset as fully as possible any environmentally significant adverse impacts on the environment.³⁹⁰ The adverse effects of human activities, including renewable energy production facilities, were again stressed by the 2013 HELCOM Copenhagen Ministerial Declaration,

383 OSPAR Commission, *Assessment of the Environmental Impact of Offshore Wind-Farms*, 2008, *Assessment of the Environmental Impact of Underwater Noise*, 2009, *Review of the Current State of Knowledge on the Environmental Impacts of the Location, Operation and Removal/Disposal of Offshore Wind-Farms*, 2006, *Review of the Environmental Impact of Non-Wind Renewable Energy Systems in the Marine Environment*, 2006, *Assessment of the Environmental Impact of the Construction or Placement of Structures (other than Oil and Gas and Wind-farms)*, 2008, *Guidelines to Reduce the Impact of Offshore Installations Lighting on Birds in the OSPAR Maritime Area*, 2015.

384 *Guidance on a Common Approach for Dealing with Applications for the Construction and Operation of Offshore Windfarms*, Report of the Meeting of the OSPAR Commission, Bremen, June 2005, Annex 7.

385 OSPAR *Guidance on a Common Approach for Dealing with Applications for the Construction and Operation of Offshore Wind Farms* (2004), *Guidance on Assessments of the Environmental Impacts of, and Best Environmental Practice For, Offshore Wind-Farms in Relation to Location* (2005).

386 *Guidance on environmental considerations for the development of offshore wind farms*, *supra* n. 110.

387 Helsinki Convention, article 5.

388 *Ibid*, article 2(7).

389 *Ibid*, article 15.

390 HELCOM Baltic Sea Action Plan, 15 November 2007, 27.

which adopted a relevant recommendation.³⁹¹ Specifically, in implementation of the duty under article 15 of the Helsinki Convention, HELCOM developed the 2013 guidance on safeguarding essential bird habitats and migration routes in the Baltic Sea from adverse effects of wind and wave energy production at sea.³⁹² The recommendation stresses the importance of EIAs and SEAs to assess the impacts of offshore energy installations on major migratory routes of birds, as well as the indispensable continuous monitoring of the effects of the activities during their operation. Special attention is paid to areas of essential importance for birds and their routes of migration, where States should avoid the authorisation of any offshore renewable energy installations.³⁹³ States are encouraged to use best and nature-friendly wind energy technology to minimise the negative impacts on birds, which reflects their general duty to protect the Baltic Sea applying BAT. Therefore, although the recommendations are not legally binding, the measures suggested consist of best practices in the implementation of the relevant obligations under the Helsinki Convention. Inevitably, the success of the recommendation depends on the level of compliance by States.³⁹⁴

The Barcelona Convention and its Protocol on Integrated Coastal Zone Management (ICZM)³⁹⁵ also contain duties which apply to the production of marine renewable energy. Besides the general obligation to apply the precautionary principle in preventing marine environmental degradation, and the requirement to conduct EIAs for any activities likely to cause significant adverse impacts on the marine environment, which are subject to authorisation, the relevant duty to take all appropriate measures to protect and preserve marine biodiversity³⁹⁶ also concerns the regulation of marine renewable energy development in the Mediterranean. The Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean additionally requires its parties to protect, preserve and manage in an environmentally sound way areas of natural or cultural value through the establishment of SPAs, as well as to protect and preserve threatened or endangered species of flora and fauna.³⁹⁷ To that end, States must take specific protection measures, such as the regulation and, when appropriate, the prohibition of any activity that

391 'Taking Further Action to Implement the Baltic Sea Action Plan – Reaching Good Environmental Status for a healthy Baltic Sea', HELCOM Copenhagen Ministerial Declaration, 3 October 2013, 4-5.

392 HELCOM Recommendation 34E/1, part of the 2013 HELCOM Ministerial Declaration. The HELCOM recommended States to apply the precautionary principle in adopting measures to avoid the adverse impact of renewable energy facilities on birds in the Baltic Sea Area, such as disturbances during and after the construction, barrier effects and hampering of migration, habitat modification or loss, and collisions with turbines, through the application of an ecosystem-based approach.

393 See also HELCOM Recommendation 18/2 on offshore activities, which recommended that all exploration and exploitation activities for offshore oil and gas should be excluded from Baltic Sea Protected Areas.

394 To that end, the recommendation 34E/1, *supra* n. 392, calls upon Parties to report an action taken in accordance with it to the Commission upon request. Even though there has not been any follow up regarding compliance, the HELCOM has also supported its recommendation by gathering scientific information relating to its implementation. For instance, the HELCOM organised a workshop in Helsinki in 2018, which produced maps showing migration routes of waterbirds and seabirds, see Report of the Joint OSPAR/HELCOM/ICES Working Group on Marine Birds, 1-5 October 2018, 73.

395 Protocol on Integrated Coastal Zone Management (ICZM) in the Mediterranean, adopted 21 January 2008, entry into force 24 March 2011.

396 Barcelona Convention, article 10.

397 SPA-BD Protocol, article 3(1).

can harm or disturb species or endanger the state of ecosystem conservation or impair the characteristics of the SPAs.³⁹⁸ Relevantly, States must regulate or prohibit any activities which involve the modification of the soil or the exploitation of the seabed and subsoil to safeguard ecological and biological processes.³⁹⁹ Those duties are at least incidentally relevant to the regulation not only of marine renewables, but also traditional forms of hydrocarbon extraction, which can affect marine biological diversity within or outside SPAs.

Furthermore, the ICZM Protocol requires its parties to subject proposed infrastructure and energy facilities to authorisations to ensure that negative impacts are minimised or, where appropriate, compensated for by non-financial measures.⁴⁰⁰ Preliminary assessments are compulsory for energy infrastructure, even when the threshold of risk for conducting an EIA is not met.⁴⁰¹ The relevance of such preliminary evaluations for marine renewable energy infrastructure cannot be overstated, given the lack of baseline scientific data regarding their adverse impacts. With regard to EIAs, the Protocol obliges States to consider the specific sensitivity of the environment, the cumulative effects of projects on the carrying capacity of coastal zones, and the inter-relationships between the marine and terrestrial parts of the coastal zone.⁴⁰² Importantly, it calls upon States to formulate, as appropriate, strategic environmental assessment of plans and programmes which affect the coastal area.⁴⁰³ Even though the Protocol's coverage is limited to the coastal zones of its parties,⁴⁰⁴ it is of relevance for marine renewables, which have not yet been established in more remote maritime zones in the Mediterranean.⁴⁰⁵

As yet, the Arctic Council has not developed any guidelines or recommendations associated with the regulation of marine renewables. However, the PAME Working Group has created the Resource Exploration and Development Expert Group (REDEG), which is tasked with gathering information on the effects of offshore renewable energy, underwater noise, and offshore oil and gas activities in the Arctic.⁴⁰⁶

3.3.2. Normative developments under regional nature conservation agreements (CMS regional agreements) and offshore energy production activities

Regional conventions on nature conservation provide another source of rules with implications for the production of all forms of offshore energy. These agreements address the impacts of offshore energy production insofar as they pertain to the species they protect. Their general duties are adapted to the specificities of offshore energy activities mostly through the adoption of resolutions and the conducting of scientific studies. The latter not only increase scientific awareness regarding the potential impacts of ocean energy production on certain protected species but also offer recommendations on best practices and measures to minimise the loss of

398 *Ibid*, article 6(h).

399 *Ibid*, article 6(e).

400 ICZM Protocol, article 9(2)(f).

401 *Ibid*, article 6(i).

402 *Ibid*, article 19(1) and (3).

403 *Ibid*, article 19(2).

404 *Ibid*, article 3.

405 T Soukissian, et al (2017) 'Marine Renewable Energy in the Mediterranean Sea: Status and Perspectives', *Energies*, 23-26.

406 PAME Working Plan 2017-2019, 9-10.

biodiversity. In that sense, resolutions and scientific reports provide interpretative guidance on the implementation of the duty to conserve and protect species under their respective agreements. Although the recommended actions are not binding, they are legally relevant for shaping the level of diligence required by their parties. In any case, the adoption of the recommended measures or equivalent can be used as evidence that States have exercised due diligence in implementing their relevant obligations under both regional and global agreements.

Both the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) and the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) require their parties to apply conservation and management measures based on the precautionary principle.⁴⁰⁷ Their parties must carry out EIAs to provide a scientific basis for regulating or prohibiting human activities, such as offshore energy production facilities, which might affect cetaceans or their habitats.⁴⁰⁸ Their MoPs have issued various resolutions dealing with anthropogenic underwater noise to guide the implementation of the respective agreements.⁴⁰⁹ For instance, the MoP to the ACCOBAMS has adopted guidelines to address the impact of offshore construction works on cetaceans.⁴¹⁰ Specifically, concerning marine renewable energy installations, the guidelines urge States to design and operate them in a way to minimise noise.⁴¹¹ In 2016, Resolution 8.6 on Ocean Energy, adopted by the MoP to the ASCOBANS, addressed the increasing risks posed to cetaceans by the production of marine renewable energy. It called upon its parties to coordinate and support their research regarding potential collisions and other disturbances created by more recent technologies used for harvesting tidal and wave energy and underscored the importance of conducting EIAs and SEAs before the full-scale deployment of such recent technologies as well as the continuous monitoring of their effects during their operation.

The regional agreement on the Conservation of Bats⁴¹² in Europe obliges States to take additional action, as necessary, to safeguard populations of bats, which are subject to threat, and report such domestic measures.⁴¹³ Even though the provision offers a broad discretion to States to choose the appropriate measures, the increased scientific awareness regarding the impact of certain activities on bats triggers their due diligence obligation to take additional conservation measures. Indeed, one of the main objectives of the agreement is to promote scientific awareness about the conservation of bats, encourage further research, and recommend action to safeguard

407 ACCOBAMS, article 2, ASCOBANS, article 2.

408 ACCOBAMS, Annex 2, Conservation Plan.

409 ASCOBANS, Resolution 6.2 on Adverse Effects of Underwater Noise on Marine Mammals during Offshore Construction Activities for Renewable Energy Projects, September 2009, ASCOBANS, Resolution 5.4 on Adverse Effects of Sound, Vessels and Other Forms of Disturbance on Small Cetaceans, 2006, ACCOBAMS Resolution 5.4. on Addressing the Impact of Anthropogenic Noise, November 2013.

410 ACCOBAMS Resolution 4.17 Guidelines to Address the Impact of Anthropogenic Noise on Cetaceans in the ACCOBAMS Area, November 2010.

411 *Ibid*, para 7.

412 Agreement on the Conservation of Populations of European Bats, 4 December 1991. EuroBATS is a daughter agreement of the CMS and its primary objective is to provide coordination and direction for the conservation, protection and research of European bat populations.

413 EuroBATS, article 3(6).

threatened populations. In that context, the expanding use of wind turbines has been a great concern since it has become clear that wind turbines can lead to significant bat mortality. In 2010, the MoP adopted a Resolution emphasising that several bat species forage offshore and, therefore, may be affected by the full-scale deployment of offshore wind farms.⁴¹⁴

Following assessments of the impact of wind turbines on bat populations,⁴¹⁵ the MoP has adopted a Resolution on Wind Turbines and Bat Populations,⁴¹⁶ which, *inter alia*, recommends its parties to fully consider the impact of both offshore and onshore wind farms on resident and migratory bat species and, consequently, to consider excluding wind farms from areas with a particular focus on bat protection. The resolution highlights the importance of continuous monitoring of the effects of wind farms on bats and calls upon States to adopt best environmental practices to avoid or reduce bat mortality, such as blade feathering, higher turbine cut-in wind speeds, and shutting down turbines temporarily. Recalling the relevant obligations of States under the EU EIA Directives and the Aarhus Convention,⁴¹⁷ the resolution encourages the promotion of cooperation and the facilitation of public access to information regarding mitigation measures. Since the development of offshore wind farms is a threat to bat species, the Advisory Committee maintains a working group to update the guidelines on the implementation of the agreement and to constantly improve the methods of EIAs and mitigation measures.⁴¹⁸

Similar measures are recommended under the resolution on Renewable Energy and Migratory Waterbirds issued by the MoP to the Agreement on the Conservation of African-Eurasian Migratory Waterbirds.⁴¹⁹ Besides underscoring the importance of EIAs and SEAs, it suggests specific methods to minimise bird mortalities at marine wind farms, such as short-term shutdowns and reducing lighting. Furthermore, the resolution strongly encourages the parties to dismantle wind turbines as an *ultimum refugium*, in a case where high waterbird mortality could risk the population status of a species and other mitigation measures prove unsuccessful.⁴²⁰

These agreements provide fine examples of how the institutional arrangements, including scientific committees, special treaty bodies, or MoPs, can play a catalytic role in enriching the normative content of the duty to conserve species under regional agreements and adapt them to the technological and scientific developments in the offshore energy sector. Even though their output does not usually create any binding commitments, they offer valuable guidelines on the interpretation of the

414 EuroBATS, MoP Resolution 6.11, September 2010, see also S McDonald, D VanderZwaag (2015), 'Renewable Ocean Energy and the International Law and Policy Seascape: Global Currents, Regional Surges, *Ocean Yearbook*, 322.

415 EuroBATS MoP Resolution 4.7, Sofia, 22-24 September 2003.

416 EuroBATS MoP Resolution 8.4, Monte Carlo, 8-10 October 2018.

417 Regarding the Aarhus Convention, see above, section 2.4. On the EIA Directives, see chapter 7, subsection 2.1.1.

418 EuroBATS, Guide to the Implementation of the Agreement on the Conservation of Populations of European Bats, Bonn, 2019, available online at: https://www.eurobats.org/sites/default/files/documents/publications/other_available_publications/ImplementationGuideFINAL%2029_5_19_hyperlinks.pdf.

419 Resolution 5.16 on Renewable Energy and Migratory Waterbirds, May 2012.

420 See also, Guidelines on How to Avoid, Minimize or Mitigate Impact of Infrastructural Developments and Related Disturbance Affecting Waterbirds, *Technical Series No 26, AEWA Conservation Guidelines No 11*, 2008.

treaty-based obligations of States. *Inter alia*, they guide States' compliance with their duties to conduct EIAs and SEAs, to continuously monitor the effects of offshore energy devices on marine ecosystems and protected species, to regulate emissions and other disturbances that can adversely affect the marine environment and even to prohibit such activities in areas which are particularly crucial for the conservation of the ecological balance. In other words, although coastal States still retain a broad discretion in regulating offshore energy projects, the exercise of their discretion is subject to mostly procedural duties. Having revealed the important gap-filling role of "secondary" regional norms concerning the standard of care required mostly in the regulation of marine renewable energy, the analysis in section 4 moves to the significance of such normative developments in specifying the content of the prevention obligation with regard to offshore hydrocarbon activities.

4. The normative value of "secondary" regional rules and standards: updating the content of the duty to protect the marine environment regarding offshore oil and gas production

Despite the significance of regional treaty-based rules in adapting the duty to protect and preserve the marine environment to meet the specific needs of each examined region, there are still considerable regulatory gaps concerning some aspects of offshore oil and gas activities. However, unlike UNCLOS, regional sea agreements are substantiated through the secondary rules and standards adopted by their treaty bodies. In that respect, the institutional framework of regional sea agreements has significantly contributed to promoting regional cooperation by addressing region-specific needs, offering a more suitable basis for ecosystem-based management, and enabling the negotiation and adoption of stricter environmental standards whose implementation is supervised by compliance mechanisms.⁴²¹ Scientific committees have also played a key role by increasing awareness of the environmental status of marine regions and evaluating the impact of offshore energy activities. Their input has been influential in devising region-specific standards to address local challenges. On that account, this part focuses on secondary normative developments by treaty bodies and technical or scientific working groups, which have played an essential role in the protection of the marine regions from the negative impacts of offshore oil and gas production activities.

4.1. The rich normative developments in the North-East Atlantic

Under the OSPAR Convention, the OSPAR Commission has the power to adopt binding decisions and non-binding recommendations⁴²² by unanimity and, when unanimity is not attainable, by a three-quarters majority vote.⁴²³ In the latter case, a decision adopted by a qualified majority is only binding upon those parties that adhere to it or do not opt out of it within 200 days.⁴²⁴ In other words, the OSPAR Convention creates a presumption of consent to decisions taken by the majority if a State does not object to the adoption of a decision within the given period. It

421 Birnie, Boyle and Redgwell (2009) *supra* n. 2, 392-393.

422 OSPAR, article 13(5) states explicitly that recommendations have no binding force, therefore, making it clear that decisions are binding upon State parties.

423 OSPAR, article 13(1).

424 *Ibid*, article 13 (2).

establishes an interesting legal mechanism, which creatively interprets the silence or inaction of States towards a particular decision. However, even though the possibility of adopting binding decisions by a qualified majority vote is considered progressive compared with the rigid decision-making procedures in the other examined regions, it still falls short of having far-reaching effects, since the majority cannot bind a State which explicitly expresses its wish to object to a specific decision.

Another critical feature for consideration is that scientific knowledge underpins secondary normative developments under the OSPAR Convention.⁴²⁵ The decisions and resolutions adopted by the OSPAR Commission are influenced by the increasing scientific awareness regarding the impacts of offshore oil and gas activities on the marine environment. In that respect, the OSPAR Convention determines that monitoring is required both for the concentration of substances in the marine environment and for the other effects on marine biological diversity. Relevantly, it dictates that priorities for adopting measures and programmes by the Commission have to be based on the results of such monitoring.⁴²⁶ For instance, the Quality Status Reports by the OSPAR Commission offer valuable scientific input for decision-making, because they assess the environmental status of the region in light of the impacts of offshore activities, compared with reporting only the concentration of pollutants.⁴²⁷ Their significance in setting the scientific background for improving standard-setting under the OSPAR Convention is comparable to the commendable work of the Intergovernmental Panel on Climate Change (IPCC) in the climate change regime. The institutional framework of the OSPAR Commission enables an ongoing fruitful discussion about scientific evidence and regulatory tools to address the environmental impacts of oil and gas activities. At the same time, the scientific findings specify the required standard of diligence by building a common understanding among the parties to the OSPAR Convention on what is necessary to prevent and reduce the adverse impacts of offshore oil and gas production.⁴²⁸

As discussed, Annex III of the OSPAR Convention does not contain any technical standards or discharge limits relating to the operation of offshore oil and gas installations. However, the OSPAR Commission's decisions and recommendations contain specific environmental standards.⁴²⁹ Carrying out its mandate,⁴³⁰ the OSPAR Commission has adopted a remarkable series of decisions, recommendations, and agreements to provide normative content to the obligations regarding offshore activities under Annex III and to guide States in their implementation.⁴³¹ Concerning

425 See the relevant duty to conduct scientific research and use it as the basis for the formulation of international rules and standards at both the global and regional level under articles 200 and 201 UNCLOS, discussed in chapter 2, sub-section 2.2.3.

426 OSPAR, article 6 and Annex IV.

427 Hey (2002) *supra* n. 72, 346.

428 H Mayrand (2015) 'Arctic Community of Practice and Offshore Oil and Gas Activities: Determining the Legal and Political Dimensions of the Obligation to Prevent, Reduce and Control Pollution', *McGill International Journal of Sustainable Development Law and Policy*, 288.

429 Heinegg (2002) *supra* n. 84, 144.

430 OSPAR, Annex III, article 10.

431 Following the Sintra Meeting in 1998, the Working Group on Sea-Based Activities addressed the need for specific rules on the prevention of pollution from offshore oil and gas activities, which were not spelled out in Annex III. Those discussions culminated in the adoption of the Strategy on Environmental Goals and Management Mechanisms for Offshore Activities. Pursuant to para 3.1. of that Strategy the commission must develop programmes and measures needed to prevent, control

the prevention of operational pollution, the OSPAR Commission has addressed in detail the disposal of produced water⁴³² as well as discharges of oil-based muds and synthetic fluids.⁴³³ As far as produced water is concerned, the initial 2000 recommendation identified that all contracting parties had to ensure that the quantity of oil in produced water should be reduced by a minimum of 15% by 2006 compared with the equivalent discharge in the year 2000. In 2006, the Recommendation was updated to include specific performance standards, which set maximum discharge limits. Those targets were subsequently reinforced in 2011, taking into account the Quality Status Report of 2010 on the impact of discharges of produced water on the maritime area. Likewise, the OSPAR Commission has developed an elaborate framework for the regulation of chemicals used in offshore oil and gas activities.⁴³⁴ Less hazardous substances must replace all chemicals normally used during the operation of offshore installations.⁴³⁵

The guiding principles and strategic directions laid down in the Offshore Oil and Gas Industry Strategy guide the adoption of decisions, recommendations, and other agreements related to offshore oil and gas activities.⁴³⁶ The Offshore Oil and Gas Industry Strategy, adopted by the Ministerial Meeting of the OSPAR Commission, has set targets for the period until 2020, according to which the Commission must continue its efforts to progressively reduce discharges of harmful substances by revising existing and developing new measures to take climate change into account.⁴³⁷ The Offshore Strategy requires the OSPAR Commission to collect annual data on the use and discharge of offshore chemicals, emissions to air, spills, and releases of oil and other hazardous substances, to evaluate the need for revision of regulatory measures.⁴³⁸ Also, the Offshore Strategy requires environmental assessment and monitoring of

and eliminate pollution under Annex III and under Annex V of the OSPAR Convention, see OSPAR Strategy on Environmental Goals and Management Mechanisms for Offshore Activities, Reference Number 1999-12. In particular, during the OSPAR Commission Meeting in 2000, the Commission adopted decisions 2000/2 and 2000/3 on the use and reduction of discharge of offshore chemicals.

432 OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations, as amended by Recommendation 2006/4 and Recommendation 2011/8.

433 OSPAR Decision 2000/3 on the Use of Organic-Phase Drilling Fluids (OPF) and the Discharge of OPF, which prohibited the discharge of oil-based muds and subjected the discharge of synthetic fluids to prior permits under exceptional circumstances, Recommendation 2006/5 on a Management Regime for Offshore Cutting Piles, which recommended a two-stage management regime: an initial screening of all cutting piles followed by an assessment of the use of BAT and BEP. The results of screening indicate that none of the old cutting piles exceed the threshold imposed.

434 OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals, as amended by Decision 2005/1, OSPAR Recommendation 2005/2 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or which Contain Added Substances, listed in the OSPAR 2004 List of Chemicals for Priority Action, OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or which Contain Substances Identified as Candidates for Substitution, as amended by Recommendation 2019/2, OSPAR Recommendation 2010/4 on Harmonized Pre-Screening Scheme for Offshore Chemicals, as amended by Recommendation 2017/01 and Recommendation 2019/04.

435 Harrison (2017) *supra* n. 40, 218-219.

436 OSPAR Agreement 2010-3, The North-East Atlantic Environment Strategy, Offshore Oil and Gas Industry, 19-24, see also previous OSPAR Strategy on Environmental Goals and Management Mechanisms for Offshore Activities, Agreement 1999-12.

437 *Ibid*, para 3.2.c and d.

438 *Ibid*, para 3.2.a.

the effects of offshore oil and gas activities, the progressive determination of BAT and BEP, the promotion of information and experience sharing among the OSPAR parties, and the maintenance of an offshore hydrocarbon installation inventory.⁴³⁹ While its application is limited to offshore oil and gas activities, the Offshore Strategy follows an ecosystem approach by considering human activities and marine ecosystems in an integrated way. In this context, the Offshore Industry Committee (OIC) was created to facilitate the implementation of the Strategy.⁴⁴⁰ The OIC is tasked, *inter alia*, with assessing reports from the parties on the effectiveness of programmes and measures implemented by them and evaluating the need for any additional actions. Therefore, the OIC appears to have an essential role in the compliance process under the OSPAR Convention.

According to article 4(1) of Annex III of the OSPAR Convention, any authorisation and regulation of offshore oil and gas activities “*shall, in particular, implement the relevant applicable decisions, recommendations and all other agreements adopted under the Convention*”. It is debatable whether that provision creates an exception to article 13(4) of the OSPAR Convention to accord binding force to non-binding recommendations relating to offshore oil and gas activities. However, the word “*applicable*” indicates that parties only have to implement decisions and recommendations to the adoption of which they have not objected. Some of the normative developments already mentioned have taken the form of a decision and, therefore, are binding upon parties that have not opted out of them. Instead, the non-binding recommendations by the OSPAR Commission are primarily illustrating best-recommended practices.

Although the recommended actions are not necessarily the only way of implementing the obligations under the OSPAR Convention, when followed they serve as evidence that States have exercised due diligence. Taking these recommendations into consideration during decision-making becomes even more compelling since they are developed and are updated regularly based on scientific evidence. A party that deliberately ignores the scientific evidence and the relevant recommended practices could not easily prove that it had exercised due diligence in complying with its obligations under the OSPAR Convention. In any case, an OSPAR party would need to show that it had, at least, taken equivalent measures to the recommended measures. In the language of UNCLOS, decisions and recommendations adopted by the OSPAR Commission can be deemed to be international standards, recommended practices and procedures for the OSPAR parties, which must take measures “no less effective” than the ones prescribed by those instruments. Moreover, such non-binding recommendations can, according to article 32 of the VCLT, provide evidence of State practice, which confirms the meaning derived from the interpretative means under article 31 of the VCLT.⁴⁴¹

439 The North-East Atlantic Environment Strategy, Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010-2020 (OSPAR Agreement 2010-3), Part 2.2. Offshore Strategic Objectives.

440 Terms of Reference for OSPAR's Coordination Group and Committees, Agreement 2011-04, Annex 5.

441 S Raffaeiner (2016) 'Organ Practice in the Whaling Case: Consensus and Dissent between Subsequent Practice, Other Practice and a Duty to Give Due Regard', *European Journal of International Law*, 1056.

4.2. The moderate role of the institutions under the Helsinki Convention in substantiating standards for offshore oil and gas activities

Like OSPAR, the substantive provisions of the Helsinki Convention are supplemented by the establishment of an essential institutional framework. The existence of HELCOM and its working groups is fundamental in enabling the Helsinki Convention to develop continually, adapt its general obligations to the changing needs of the Baltic Sea area and guide States in the Convention's implementation. The mandate of HELCOM is broad, concerning both standard-setting and the implementation of the agreement.⁴⁴² Like the OSPAR Commission, HELCOM is the primary environmental body of the Helsinki Convention. It is responsible for adopting recommendations that can substantiate the content of the provisions of the Helsinki Convention and its Annexes.⁴⁴³

HELCOM provides a more specialist approach in the case of responses to accidental pollution, adapting the global obligations to the regional specificities of the Baltic Sea.⁴⁴⁴ The Response Working Group (HELCOM RESPONSE) has the competence to implement policies and strategies for oil spills.⁴⁴⁵ For instance, it is responsible for developing the HELCOM Manual on Co-operation in Response to Marine Pollution,⁴⁴⁶ whose rules elaborate on the obligations under Annex VII of the Helsinki Convention.⁴⁴⁷ HELCOM RESPONSE has also been instrumental in developing guidelines for the implementation of HELCOM's recommendations on accidental offshore oil pollution prevention and response.⁴⁴⁸ Moreover, HELCOM assists in the cooperation between the Baltic States in the context of responding to accidental pollution. States must report to HELCOM on their national compliance measures.⁴⁴⁹ Another critical role of the institutional arrangements of the agreement is the interaction and exchange of expertise and information with other competent international institutions. HELCOM and HELCOM RESPONSE cooperate closely with other relevant international global and regional bodies, such as the IMO and the previously mentioned Bonn Agreement working group, to ensure the effective implementation of measures to prevent and respond to accidental oil pollution in the Baltic Sea.⁴⁵⁰

442 Helsinki Convention, article 20.

443 HELCOM Ministerial Declaration 2013, Copenhagen 3 October 2013, 1(R), 4(R) and 5(R), agreeing on the necessity to strengthen regional response systems, see also M Gavouneli, 'Oil Spill Response in the EU' in Handl and Svendsen (2019) *supra* n. 358, 333.

444 Fitzmaurice (2017) *supra* n. 274, 298.

445 See for example Recommendation 11/13 "Development of national ability to respond to spillages of oil and other harmful substances", adopted 14 February 1990, Recommendation 19/17 'Measures in order to Combat Pollution from Offshore Units', adopted 24 March 1998, Recommendation 24/9 'Ensuring Adequate Emergency Capacity', adopted 25 June 2003.

446 HELCOM Manual on Cooperation in Response to Marine Pollution, Vol 1, available online at: <http://www.helcom.fi/Lists/Publications/HELCOM%20Manual%20on%20Co-operation%20in%20Response%20to%20Marine%20Pollution%20-%20Volume%201.pdf>.

447 Helsinki Convention, Annex VII, Regulation 11.

448 Guidelines for the implementation of HELCOM Recommendation 24/9 on ensuring adequate emergency capacity (HELCOM RESPONSE 2/2003, 13/1, Annex 3), Guidelines for applying HELCOM Recommendation 31/1 on development of national ability to respond to spillages of oil and other harmful substances (HELCOM RESPONSE 11/2009, 16/1/Rev.1, Annex 4).

449 Helsinki Convention, Annex VII, Regulation 10.1.

450 Helsinki Convention, Annex VII, Regulation 10.4.

However, unlike the OSPAR Commission, HELCOM has no authority to adopt binding decisions.⁴⁵¹ The particularities of cooperation in the Baltic are evident when compared with the standard-setting capacity of the OSPAR Commission, where the usually harmonious relationships between the OSPAR parties have enabled the institutional mechanisms to adopt binding decisions as well. The rigidity of the standard-setting procedure in the Helsinki Convention is highlighted further by the requirement of unanimity for the adoption of non-legally binding recommendations by the HELCOM. Nevertheless, the Baltic States are expected to implement the recommendations through the enactment of domestic legislation. Since the adoption of recommendations requires unanimity, there can be no strong objections on behalf of the parties to their content. Seemingly, within the context of the cooperation in the Baltic Sea, the choice of non-binding instruments avoided potential objections from Russia and, at the same time, allowed a certain degree of flexibility in their implementation by States without the risk of incurring State responsibility for the breach of binding obligations.

Nonetheless, their legal relevance is indisputable, given the fact that they provide specific guidance for their implementation, even when compliance takes place voluntarily. Recommendations spell out how the Baltic States are expected to comply with their obligations under the Helsinki Convention. In other words, they play an essential norm-shaping role, and they help to identify the conduct required by States in compliance with their obligation to exercise due diligence in the protection of the Baltic marine environment. By analogy with the ICJ's stance towards the decisions of the Whaling Committee in the *Whaling in the Antarctic* case,⁴⁵² the HELCOM recommendations, adopted by unanimity or by consensus could be considered as subsequent agreements among the Baltic States concerning the interpretation of the Helsinki Convention under article 31(3)(a) of the VCLT.⁴⁵³

For instance, with regard to non-binding decisions adopted by CoPs, ILC draft conclusion 11(3) states that they embody “*a subsequent agreement or subsequent practice under article 31, paragraph 4, in so far as it expresses agreement in substance between the parties regarding the interpretation of a treaty, regardless of the form and the procedure by which the decision was adopted, including by consensus*”. Even if that conclusion cannot apply by analogy to the recommendations of HELCOM, given its role under the Helsinki Convention, they can qualify as “other” practice relevant for the interpretation under article 32 VCLT.⁴⁵⁴ In that respect, the Commentary to the ILC draft conclusions acknowledges that the output of expert treaty bodies does not qualify as State practice, but instead, it is “*conduct mandated by the treaty the purpose of which is to contribute to the treaty's proper application*”.⁴⁵⁵ By analogy, the HELCOM recommendations can contribute to the determination of the ordinary meaning of the rules of the Helsinki Convention.⁴⁵⁶

451 Helsinki Convention, article 20(1)(b).

452 ICJ, *Whaling in the Antarctic (Australia v Japan)* Judgment 2014, para 226.

453 See chapter 3, sub-section 2.5.1. See also ILC Draft Conclusions on subsequent agreements/practice (2018), articles 11 and 13, 101.

454 I Buga, *Modification of Treaties by Subsequent Practice* (Oxford University Press, 2018) 46.

455 Comments and observation received from Governments on ILC Draft conclusions on subsequent agreements/practice, 21 February 2018, para 24.

456 *Ibid.*

Furthermore, the importance of these recommendations lies in their potential to influence domestic implementation measures. The voluntary compliance of the Baltic States with the recommended actions can result in the harmonisation of State practice in the implementation of the Helsinki Convention. Such consistent practice among the parties to the Helsinki Convention can constitute subsequent State practice for the interpretation of its rules. On that account, the HELCOM recommendations can initiate the creation of subsequent State practice among the Baltic States, which may be considered as a means of interpretation of the Helsinki Convention under article 31(3)(b) of the VCLT. The ILC draft conclusions have relevantly stressed that even the conduct by non-State actors, such as the conduct of treaty bodies, may be relevant when assessing the subsequent practice of parties to a treaty.⁴⁵⁷ In addition, the HELCOM recommendations can serve as a benchmark against which to evaluate the reasonableness of compliance measures adopted by the Helsinki parties. Even if States are not, strictly speaking, bound to follow the recommended actions to comply with their duties under the Helsinki Convention, taking the recommended course of action or equivalent measures would function as proof that they have acted diligently.

Furthermore, despite their non-binding character, the Helsinki Convention contains ample references to the recommendations adopted by HELCOM concerning the implementation of its provisions. For instance, Regulation 11 under Annex VII of the Helsinki Convention explicitly provides that the parties agree to apply the principles and rules included in the HELCOM Manual on Co-operation in Response to Marine Pollution. This Manual was adopted by the RESPONSE working group, as designated by the Commission to guide the implementation of regulation 11 by States.⁴⁵⁸ As far as prevention of, response to, and preparedness for accidental offshore oil pollution are concerned, recommendations by HELCOM regarding the establishment of sub-regional joint response agreements have led to the adoption of such instruments between Russia and Poland and between Russia and Lithuania.⁴⁵⁹

Regulation 5 of Annex VI on prevention of operational pollution prescribes that standards for discharges released from offshore oil and gas installations must be regulated and regularly updated through the recommendations adopted by HELCOM. The provision appears to function in a similar way to the rule of reference under article 208(3) of UNCLOS. The lack of a working group to specifically address the prevention of operational pollution from offshore oil and gas activities might explain why the relevant normative production by the HELCOM has been minimal in comparison with the OSPAR Commission. As discussed above, the OIC has been instrumental in further developing rules and standards and implementing the Offshore Oil and Gas strategy in the context of the OSPAR Convention. By contrast, HELCOM seems to be rather focused on the response to major offshore oil accidents.

Ministerial Declarations, despite their non-binding nature, have also contributed to the development of the legal framework for environmental cooperation in the Baltic area. At the 2010 Moscow Ministerial Meeting, State parties decided to update the Baltic Action Plan for the protection of the environment from offshore platforms. In particular, they agreed to apply a “zero-discharge” principle for all chemicals and substances used and produced during the operation of offshore platforms by

457 ILC (2018) draft conclusion 5(2).

458 *Supra* n. 446 with accompanying text.

459 HELCOM BRISK and BRISK-RU projects conclusions, *supra* n. 348.

2013. The 2013 Copenhagen Ministerial Declaration offers another example of their relevance to the sector. Specifically, under that Declaration, States undertook to implement the recommendations by HELCOM to strengthen the regional framework on preparedness for and response to accidental offshore oil pollution.⁴⁶⁰ Such Declarations can serve as supplementary means for the interpretation of the Helsinki Convention, according to article 32 of the VCLT. States may have recourse to such supplementary means for interpretation “*either in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31 leaves the meaning of the treaty or its terms ambiguous or obscure or leads to a result that is manifestly absurd or unreasonable*”.⁴⁶¹

As seen in the case of OSPAR, the establishment of the institutional framework is crucial for the ongoing development of the Helsinki Convention. Given the critical role of HELCOM recommendations in substantiating the obligations under the Helsinki Convention and adapting them to changes, the Convention has been characterised as a “*living treaty*”.⁴⁶² Despite their lack of bindingness, the recommendations can be used to specify the standard of diligence expected by its parties. However, even though the legal framework created by the Helsinki Convention is flexible enough to allow the HELCOM to push forward for stricter environmental protection standards, that flexibility can become a double-edged sword. The parties can also ignore recommendations to the detriment of environmental protection.

4.3. The recent “secondary” normative developments under the Mediterranean Offshore Protocol

As far as the institutional framework is concerned, the creation of the Barcelona Convention Offshore Oil and Gas Group (BARCO OFOG) in 2014 marks a remarkable development.⁴⁶³ Before its establishment, the only institutional arrangement relating to the Mediterranean Offshore Protocol was the REMPEC, whose competence is limited to the prevention of and response to accidental pollution. The OFOG serves as a technical body for the exchange of best practices, knowledge, and experiences between its members to assist the parties in promulgating international rules, standards, and recommended practices and procedures according to article 23 of the Mediterranean Offshore Protocol.⁴⁶⁴ It is also assigned the periodic examination and review of the Offshore Action Plan.⁴⁶⁵

In 2016, the parties to the Barcelona Convention adopted the Mediterranean Offshore Action Plan. Under the Action Plan, its parties have to identify region-specific

460 Copenhagen Ministerial Declaration, *supra* n. 391, 1(R).

461 ILC (2018) Draft Conclusions on subsequent practice / agreements with commentaries, 18.

462 Fitzmaurice (2017) *supra* n. 274, 301.

463 The Offshore Group works in two subgroups, one on the environmental impact and one on health and safety, with the direct involvement of several stakeholders, including the industry, the private sector, civil society and Non-Governmental Organisations, see Decision IG.21/8 (2014), Follow up Actions regarding the Offshore Action Plan, DOC UNEP/MED.IG.21/9, Annex, para 2.

464 *Ibid*, Annex, objective 2.

465 The tasks of the OFOG also include the preparation of guidelines on best practices, developing and applying common standards, keeping the technical content of the annexes under review, preparing draft measures to control the use of chemicals, oil and any other hazardous discharges from offshore oil and gas activities and assisting in defining targets for the implementation of the ecosystem approach, see Decision IG.21/8, Follow up Actions regarding the Offshore Action Plan, DOC UNEP/MED.IG.21/9, Annex II, 178.

measures that are expected to ensure the safety of offshore oil and gas activities and minimise their potential environmental impact.⁴⁶⁶ To that end, the Action Plan provides for the achievement of ten specific objectives with a timeline of implementation from 2016 to 2024.⁴⁶⁷ Upon its adoption, the parties agreed that several operational discharges should be regulated following the requirements under the Annexes of the MARPOL,⁴⁶⁸ because the Mediterranean Sea is designated as a Special Area under the MARPOL and, therefore, is subject to stricter standards as in the case of the Baltic Sea.

The core innovation of the Offshore Action Plan is the establishment of common standards and guidelines to harmonise State practice on the implementation of the Mediterranean Offshore Protocol, considering established rules and standards applicable in other marine regions. The Secretariat of the REMPEC has already compiled a detailed document with best practices that could be transplanted in the Mediterranean.⁴⁶⁹ Except for the international standards produced by global and regional organisations, the study takes stock of a series of offshore oil and gas industry guidelines and standards.⁴⁷⁰ Therefore, a significant expected output of the Action Plan is the development of regional standards and guidelines to guide the consistent implementation of the Mediterranean Offshore Protocol.⁴⁷¹ Although the Offshore Action Plan does not set any timeframe for its implementation,⁴⁷² there have already been some noteworthy normative developments.

The Offshore Action Plan also encourages the participation of the industry as observers at the OFOG. It supports the engagement with existing cooperation initiatives with the offshore energy industry,⁴⁷³ to include these crucial stakeholders in the implementation of the Offshore Protocol in the Mediterranean.⁴⁷⁴ For instance, the International Association of Oil and Gas Producers has played an essential role in the drafting of the guidelines mentioned above by providing valuable feedback from their members and oil and gas operators. Since the adoption of the Offshore Protocol, a wide range of industry associations, national and international (both global and

466 Decision IG/22/3, Mediterranean Offshore Action Plan in the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, DOC UNEP/MED IG.22, adopted in 2016.

467 Among those goals, the Offshore Action Plan set out to update the already elaborate norms included in Annexes III (factors to be considered for the issue of permits), IV (environmental impact assessment) and VII (Contingency planning) for the period from 1 March 2016 to 31 December 2024.

468 UNEP/MED WG.462/Inf.6, 6.

469 REMPEC/WG.34/19/Rev.1.

470 *Ibid.*, 2-3, where the study enumerates several examples of industry associations which have largely contributed to the development of best practices.

471 Those standards will address a wide range of issues, such as EIAs, standard rules on the use and discharge of harmful or noxious substances, modification of the “triple list” of chemicals as well as procedures for contingency planning and combatting accidental pollution, see Decision IG.22/3, Doc UNEP(DEPI)/MED IG.22/28, Objectives 7 and 8, 220.

472 Compare with the detailed timeframe for the implementation of the OSPAR Offshore Oil and Gas Industry Strategy, *supra* n. 436, 20-21.

473 Gavouneli (2019) *supra* n. 443, 132-133, mentioning the example of the cooperation with the Mediterranean Oil Industry Group (MOIG).

474 Decision IG.21/8, Follow-up Actions regarding the Offshore Action Plan, DOC UNEP/MED. IG.21/9 invited the relevant oil and gas industry to assist the Offshore Oil and Gas Group through technical support and financial contributions for the implementation of the program of work that might result from the Action Plan.

regional) organisations, have formulated many standards and guidelines relating to its objectives.⁴⁷⁵ The REMPEC undertook to draft a series of guidelines to consolidate these standards into a set of best practices for the Mediterranean.⁴⁷⁶ Instead of merely transplanting the best practices followed in other regions, the guidelines explicitly set out to adapt the recommended practice to the specificities of the Mediterranean and harmonise State practice in the implementation of the Offshore Protocol.⁴⁷⁷ During the second meeting of the OFOG Sub-Group on Environmental Impact,⁴⁷⁸ the representatives of the parties reviewed three guidelines, respectively addressing the conduct of EIAs for offshore oil and gas activities,⁴⁷⁹ the disposal of harmful substances emanating from such activities in the Mediterranean,⁴⁸⁰ as well as the establishment of restrictions and conditions for offshore activities in SPAs.⁴⁸¹ In December 2019, the MoP adopted two of those guidelines, namely on the disposal of specific harmful substances and concerning conditions for the conduct of offshore oil and gas activities in SPAs.⁴⁸² The relevant decision urges States to make every effort for the effective implementation of the guidelines.⁴⁸³ The OFOG also identified possible revisions to Annexes III (factors to be considered before the issue of a permit by the competent authority), IV (information on the EIA), and VII (contingency plans) of the Offshore Protocol.⁴⁸⁴ Although the effectiveness of these instruments cannot be assessed yet, these recent developments aptly illustrate the role of the new institutional bodies as catalysts for updating the provisions of the Mediterranean Offshore Protocol and adapting global and regional best practices to the region-specific needs.

475 In particular, the draft Mediterranean Guidelines refer to international best practices as outlined by international organizations and institutions such as OSPAR, IFC/World Bank and International Association of Oil and Gas Producers (IOGP), as well as countries with mature oil and gas industries and well-developed regulatory frameworks, such as the UK, Norway, the Netherlands and the US, see UNEP/MED WG.765/4/Corr.2, para 16.

476 UNEP/MAP Programme of Work for 2016-1017, adopted by COP 19.

477 Second Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) Sub-Group on Environmental Impact, UNEP/MED WG.376.4/Corr.1, Draft Note by the Secretariat, para 3.

478 See newsletter on 2nd Meeting on REMPEC's website, available online at: http://www.rempec.org/rempecnews_search.asp?NewsID=1512.

479 Mediterranean Offshore Guidelines and Standards: Guidelines for the Conduct of Environmental Impact Assessment (EIA), REMPEC/WG.45/13/1.

480 Mediterranean Offshore Guidelines and Standards: Common Standards and Guidance on the Disposal of Oil and Oily Mixtures, and the Use and Disposal of Drilling Fluids and Cuttings, REMPEC/WG.45/13/2.

481 Mediterranean Offshore Guidelines and Standards: Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan, UNEP/MED WG.461/20.

482 UNEP/MED IG.24/L2/ Add.9, Annexes I and II. See also, Summary of the 21st Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols by the International Institute for Sustainable Development, available online at: <https://enb.iisd.org/download/pdf/sd/enbplus186num20e.pdf>, 10-11. The guidelines on EIAs are to be finalised at the upcoming OFOG meeting during 2020-2021 and will be submitted for adoption by the next MoP.

483 Under the MoP decision, parties to the Mediterranean Offshore Protocol are required to control and report on the disposal of oil and oily mixtures and the use and disposal of drilling fluids and cuttings, as well as to report on the adoption of special measures to prevent, abate, combat and control pollution arising from offshore activities in SPAs, see IG.24/L2/Add.9.

484 UNEP/MED WG.476/7, Annex I.

4.4. The normative relevance of the output of the Arctic Council Working Groups

In terms of its institutional framework, the Arctic is perhaps the most exceptional of the examined regions. The *sui generis* form of cooperation between the Arctic States has largely influenced normative developments concerning the regulation of offshore oil and gas activities. The Arctic Council does not have an international legal personality, nor is it a formal institutional arrangement under an overarching legal agreement for the Arctic region.⁴⁸⁵ It has been established as an intergovernmental forum through the non-binding Ottawa Declaration and does not have the legal capacity to impose any binding obligations upon States.⁴⁸⁶ It offers a forum for the eight Arctic States to discuss “*common Arctic issues*” and “*in particular issues of environmental protection and sustainable development*”.⁴⁸⁷ The Arctic indigenous communities also participate actively in the forum as permanent participants and are involved through consultations in the decision making on regional issues, such as environmental protection.⁴⁸⁸ Upon the creation of the Arctic Council, the AEPS and its working groups⁴⁸⁹ were integrated into the new forum of cooperation.⁴⁹⁰ Building upon the work of the AEPS, the Arctic Council is primarily aimed at promoting cooperation among the Arctic States and environmental protection in the region. The Council’s various working groups have adopted instruments to achieve the Council’s twin aims, namely environmental protection and sustainable use of the Arctic natural resources.⁴⁹¹

Since the Arctic Council lacks legal personality, it cannot impose binding obligations on its members, permanent participants, and observers. However, its work in initiating research and cooperation activities among the Arctic States, as well as the scientific and normative outputs of that cooperation, are rather commendable. The establishment of a permanent Secretariat for the Arctic Council in May 2013 marked a significant institutional development.⁴⁹² The permanent Secretariat can assist in information sharing among the Arctic States, facilitate the work, and improve coordination among the various working groups dealing with offshore energy issues, following the example of the OSPAR Secretariat.⁴⁹³ The need for such

485 Arctic Council Rules of Procedure 1998, as amended in 2013.

486 Declaration on the Establishment of the Arctic Council, Ottawa, 19 September 1996. See also E Molenaar, ‘The Arctic, the Arctic Council, and the Law of the Sea’ in R Beckman, and T Henriksen, K Dalaker Kraabel, E Molenaar, J Ashley Roach (eds) *Governance of Arctic Shipping: Balancing Rights and Interests of Arctic States and User States* (Brill, 2017) 45.

487 Declaration on the Establishment of the Arctic Council, *supra* n. 486, article 1.

488 See Rules of Procedure, *supra* n. 485.

489 The six working groups are Arctic Contaminants Action Programme (ACAP), Arctic Monitoring and Assessment Programme (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Emergency Prevention, Preparedness and Response (EPPR), Protection of the Arctic Marine Environment (PAME), and Sustainable Development Working Group (SDWG).

490 S V Rottem, *The Arctic Council Between Environmental Protection and Geopolitics* (Springer, 2020) 4.

491 E T Canuel (2015) ‘The Four Arctic Law Pillars: A Legal Framework’, *Georgetown Journal of International Law*, 757.

492 The Arctic Council’s Secretariat is based in Tromsø, Norway, and is led by its Director, see Molenaar (2017) *supra* n. 486, 48.

493 S Andresen, and J Birger Skjaereth (1999) ‘Can International Environmental Secretariats Promote Effective Cooperation?’, available online at: <http://archive.unu.edu/inter-linkages/1999/docs/Andresen.PDF>, 13, stressing the important role that the OSPAR Secretariat has played in the development of the regime, Barry-Pheby (2014) *supra* n. 316, 11.

a coordination mechanism is considerable, given that all working groups address offshore oil activities.

With regard to offshore oil and gas activities, the Arctic Council has played a key role in conducting scientific assessments of their environmental effects and in producing non-binding instruments on the prevention and control of pollution associated with them. As far as scientific research is concerned, the working groups on Arctic Monitoring and Assessment (AMAP), Conservation of Arctic Flora and Fauna (CAFF), and Protection of the Arctic Marine Environment (PAME) have accomplished significant results in establishing environmental baselines.⁴⁹⁴ The number and high quality of the environmental assessments have arguably enhanced the Arctic Council's international role and influence.⁴⁹⁵ In addition, these large-scale scientific assessments have influenced relevant normative developments. Although the Senior Arctic Officials steer the research priorities of the working groups, the group's conclusions are perceived as highly authoritative, independent scientific findings. Based on the scientific findings, working groups also make policy recommendations to the Senior Arctic Officials and ministers.⁴⁹⁶ As seen in the case of the OSPAR Convention, scientific data can serve not only as a catalyst for the development of recommendations but also for building a shared understanding of the threats posed by offshore oil and gas activities and how to implement the duty to prevent such threats.⁴⁹⁷

In the context of the Arctic Council, science has contributed to norm-shaping mostly through its specific working groups.⁴⁹⁸ For instance, PAME has been instrumental in the development of Arctic-specific recommendations on offshore oil and gas activities by drafting and regularly updating the Arctic Offshore Oil and Gas Guidelines. The Guidelines have helped to define the Arctic States' obligations concerning the prevention of operational pollution as well as preparedness for and response to accidental pollution.⁴⁹⁹ In 2014, PAME issued new Guidelines on Safety Management and Culture to enhance and supplement the pre-existing ones. Taking stock of lessons learned from offshore oil incidents, the Guidelines recommend that operators and domestic regulators should follow best practices in improving their safety culture.⁵⁰⁰ In 2017, the focus of PAME expanded to cover the topics of offshore renewable energy, underwater noise, offshore and coastal mining, and offshore oil and gas.⁵⁰¹ Specifically, the Resource Exploitation and Development working group was created to gather regional data and, consequently, draft guidelines relating to the production of marine renewable energy in the Arctic.⁵⁰²

494 Kirk and Miller (2018) *supra* n. 101, 263.

495 T Koivurova, P Kanaanpaa, and A Stepien (2015) 'Innovative Environmental Protection: Lessons from the Arctic', *Journal of Environmental Law*, 293.

496 *Ibid.*

497 *Ibid.*, 311.

498 R L Johnstone (2016) 'Environmental Governance through the Arctic Council: The Arctic Council as Initiator of Norms of International Environmental Law', *PCRC Working Paper No 1*, 19.

499 See *supra* sub-section 3.2.4.

500 PAME (2014) *Systems Safety Management and Safety Culture: Avoiding Major Disasters in Arctic Offshore Oil and Gas Operations*, 19-21.

501 See PAME Work Plan 2017-2019 (updated every two years), available online at: <https://www.pame.is/index.php/projects/resource-exploration-and-development>, 10.

502 *Supra* sub-section 3.2.4.

Under the auspices of the Arctic Council, States have also created the Emergency Prevention, Preparedness, and Response working group (EPPR) to develop guidelines on addressing oil spills in the Arctic.⁵⁰³ The EPPR has offered a forum for promoting region-specific environmental emergency response information among the Arctic States. For instance, it has drafted a series of maps identifying internationally important biological resources at risk from potential oil pollution in the Arctic and has pinpointed protected areas and species at risk in each area.⁵⁰⁴ The EPPR has also formulated operational guidelines to assist the Arctic States in the implementation of the MOSPA.⁵⁰⁵ These guidelines aim to guide the cooperation, coordination, and mutual assistance for oil pollution preparedness and response in the Arctic.⁵⁰⁶ They can complement existing contingency plans or aid in the creation of new ones. Their legal relevance is reinforced by the establishment of a follow-up mechanism to keep abreast of new technological developments. Specifically, the EPPR has to review and update the operational guidelines annually, considering lessons learned or experience acquired concerning response to incidental offshore oil pollution.⁵⁰⁷ The work of the EPPR has significantly contributed to developing a procedural understanding of the obligation to prevent and control pollution from offshore oil and gas activities through preparedness and response systems.⁵⁰⁸

In 2015, the Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic was created to develop an Arctic Council Action Plan on oil pollution prevention. Its objective is to strengthen cooperation, including the exchange of information among the participating States, in the field of prevention of marine oil pollution, *inter alia*, from offshore petroleum activities in the Arctic.⁵⁰⁹ The majority of its provisions pertain to sharing lessons learned and best practices.⁵¹⁰ The Framework Plan does not create any binding obligations, but it highlights the relevance of the private offshore energy industry in the implementation of its provisions. In that respect, it underlines the importance of cooperation between States and the private sector to improve standards and best practices for the prevention of the pollution of the Arctic marine environment by oil.⁵¹¹ To that end, the EPPR working group published a report, which assesses the sufficiency of existing standards and best practices.⁵¹²

In recognition of the role of the private offshore energy sector, the Framework explicitly refers to industry standards with regard to standard setting.⁵¹³ Remarkably, the Arctic Council's instruments usually make recommendations which are not only addressed to domestic regulators but also to the offshore industry.⁵¹⁴ In that vein,

503 Ottawa Declaration, 19 September 1996, 1388.

504 Mayrand (2015) *supra* n. 428, 273.

505 MOSPA Agreement, Appendix IV.

506 *Ibid.* preamble. The operational Guidelines on MOSPA were most recently updated in 2017.

507 Arctic Council, Meeting of Senior Arctic Officials, Final Report, 20-21 March 2013.

508 See also, EPPR (2017) Overview of Measures Specifically Designed to Prevent Oil Pollution in the Arctic Marine Environment from Offshore Petroleum Activities.

509 *Ibid.* section 1.1.

510 *Ibid.* sections 3.1.1, 3.2.1, 3.2.2., 3.2.5., 3.2.6.

511 *Ibid.* section 1.6.2.

512 EPPR (2017) Standardization as a Tool for Prevention of Oil Spills in the Arctic.

513 *Ibid.* Section 2.2.

514 For instance, the 2013 Arctic Ocean Review had called upon Arctic States to encourage the involvement of the industry and regulators within PAME and EPPR working groups by utilizing

the 2014 Arctic Offshore Oil and Gas Guidelines on System Safety Management and Safety Culture contain provisions on the cooperation among industry operators and regulators and incorporate the work of standard-setting organisations to involve the offshore energy industry.⁵¹⁵ The 2014 Guidelines call on private industry and the regulators to work together to initiate, implement, monitor, and continuously improve standards and best practices for safety management systems and safety culture in Arctic offshore oil and gas operations.⁵¹⁶ Scholars have positively received this acknowledgement and direct involvement of the offshore industry as an expression of “*hybrid governance*” of offshore oil and gas activities in the Arctic.⁵¹⁷

Even though States have negotiated binding treaties under the auspices of the Arctic Council, it will probably remain a forum producing decision-shaping recommendations and guidelines rather than a law-making body.⁵¹⁸ However, it is commendable that the Arctic Council has worked on the prevention of pollution from offshore oil and gas activities and has recently expanded its focus to encompass research on the potential for offshore renewable energy generation in the Arctic. In terms of scope, the non-binding recommendations and guidelines issued by its working groups are sometimes wider than relevant treaties, and they take due account of regional specificities. Nonetheless, the norms contained in the recommendations are not formulated as international rules. Instead of imposing obligations on the Arctic States, they usually engage in reviewing the best practices and make recommendations to the national regulators as well as the industry and the other interested stakeholders.

5. The significance of the regional institutions for the implementation of the duty to protect and preserve the marine environment

Despite the variety of the examined regional approaches, regional agreements have the potential to be the best-suited instruments for elaborating and further updating the global duty to protect and preserve the marine environment in the context of offshore energy production activities. However, the development of more specific and elaborate rules, whether binding or not, does not guarantee the improvement of marine environmental quality. In practice, the quality of the marine environment is the issue that matters. If pollution is not prevented, and ecosystems are not preserved, much less restored, it does not matter how proactive regional agreements have been in creating norms and policy documents. In that respect, the implementation of regional rules and standards is fundamental. To enhance their implementation, at least the OSPAR, Helsinki, and Barcelona Conventions have established and updated their institutional arrangements on reporting and monitoring compliance. In that light, compliance review procedures, monitoring of implementation and measures in the case of non-compliance deserve a brief analysis.

existing industry forums or by convening an Arctic-specific oil and gas dialogue for industry and contractor groups, see Arctic Ocean Review – Final Report, Chapter 9 Recommendations, para 17.

515 Arctic Offshore Oil and Gas Guidelines on System Safety Management and Safety Culture, Section 4.2.

516 *Ibid.*, 19.

517 H Osofsky, J Shadian, and S L Fechtelkötter (2016) ‘Arctic Energy Cooperation’, *University of California Davis Law Review*, 1477.

518 S V Rottem (2015) ‘A Note on the Arctic Council Agreements’, *Ocean Development & International Law*, 56.

5.1. OSPAR's enhanced model of compliance with rules and standards

Although compliance in international environmental law can often be problematic, the system established under the OSPAR Convention has been remarkably effective. That is mostly due to the proactive role of the OSPAR Commission in supervising compliance by requiring regular reports that are followed up with additional decisions and the provision of support for the actual implementation at the domestic level. States are under a clear obligation to regularly report to the OSPAR Commission regarding the legal, regulatory, and any other measures taken by them to implement the Convention as well as the relevant decisions and recommendations developed by the Commission.⁵¹⁹ OSPAR parties must report on the effectiveness of their implementing measures as well as the problems encountered in implementing the decisions and recommendations of the OSPAR Commission.⁵²⁰ This reporting duty does not apply to parties which have expressed reservations (opting-out) on an OSPAR decision or recommendation unless and until such reservations are lifted.⁵²¹

Based on these periodical implementation reports, the OSPAR Commission assesses compliance by its parties.⁵²² Even though the system partly relies on States' diligence and the accuracy of the data in their reports, the OSPAR Convention contains some critical safeguards.⁵²³ The OSPAR Commission reviews the effectiveness of the measures adopted, the priorities, and the need for any additional or different actions.⁵²⁴ The assessment of compliance measures leads to the publication of overview assessments of the implementation reports by the OSPAR Commission,⁵²⁵ which offer a brief overview of the State practice under the OSPAR Convention. These reports are made publicly available according to the duty to provide access to information under article 9(2) of the OSPAR Convention.

What differentiates the OSPAR compliance framework from other regional regimes is that the OSPAR Commission is empowered, "*when appropriate, to decide upon and call for steps to bring about full compliance with the Convention, and decisions adopted thereunder, and promote the implementation of recommendations, including measures to assist a Contracting Party to carry out its obligations*".⁵²⁶ Arguably, the provision makes the OSPAR Commission the guardian of implementation of the Convention.⁵²⁷ Although the OSPAR Convention does not prescribe what measures have to be adopted to bring about full compliance, it indicates what they might be by referring to actions, which can assist a party in carrying out its obligations. In light

519 OSPAR, article 22(a).

520 *Ibid*, article 22(b) and (c).

521 See, for instance, OSPAR Commission (2011) Overview Assessment of Implementation Reports on OSPAR Recommendation 2005/2, Introduction, 4. A review of the decisions and recommendations on offshore oil and gas has revealed that, so far, the parties have not expressed any reservations.

522 OSPAR, article 23(a).

523 Y Tanaka (2009) 'Reflections on Reporting Systems in Treaties Concerning the Protection of the Marine Environment', *Ocean Development and International Law*, 157-162.

524 OSPAR, article 10(2)(b).

525 Detailed provisions are laid out in OSPAR's Standard Implementation Reporting and Assessment Procedure (Reference n 2003-23), as amended.

526 OSPAR, article 23(b).

527 R Lagoni, 'Monitoring Compliance and Enforcement of Compliance through the OSPAR Commission' in P Ehlers, E Mann-Borgese, and R Wolfrum (eds) *Marine Issues: From a Scientific, Political and Legal Perspective* (Kluwer Law International, 2002) 161.

of that, it seems rather unlikely that the OSPAR Commission would impose strict enforcement measures on non-complying Parties. Hard sanctions would not be an appropriate method, nor does the OSPAR Commission have any authority to impose them. Therefore, these measures would be administrative or could include technical and scientific assistance to States.⁵²⁸

Regular monitoring and follow-up procedures have supported, or even coerced, parties to harmonise the applicable standards for the prevention of operational pollution in the OSPAR region and, consequently, have resulted in limiting the pollution by offshore oil and gas production activities.⁵²⁹ For instance, the OSPAR decision 2000/3 explicitly required monitoring and reporting by States on measures taken for its implementation.⁵³⁰ The first set of implementation reports were submitted to the OIC in 2003 and subsequently in 2007, when the parties, following the recommendation of the OIC, agreed that they had fully and effectively implemented the decision in their domestic legal orders and, therefore, reporting on it should cease. Thus, the follow-up mechanisms seem to have borne fruit, at least in terms of implementation of measures established by the OSPAR Commission for the prevention of pollution in the offshore energy sector.

Even though the recommendations adopted by the OSPAR Commission are not legally binding, their implementation is monitored and followed up.⁵³¹ The OSPAR Commission has the power only to promote their implementation: it cannot pursue full compliance by States with non-binding recommendations. However, recommendations can provide the basis for voluntary measures adopted by States under the OSPAR Convention, and thus they form an integral part of the whole implementation process supervised by the OSPAR Commission.⁵³² The methods of monitoring and following up by the OSPAR Commission, alongside the potential naming and shaming by other States and NGOs, enhance the legal relevance of recommendations under the OSPAR Convention and assist in promoting compliance. For instance, the Oil and Gas Strategy section of the Annual Report of the OSPAR Commission followed up on measures taken by States to comply with Recommendation 2001/1 on the reduction of produced water.⁵³³ At least on paper, recommendations seem to be adequately adhered to by the OSPAR parties.⁵³⁴

5.2. The less-developed system of monitoring and compliance in the other regions

While it is safe to argue that the OSPAR Convention contains advanced rules and mechanisms concerning compliance procedures, that is not necessarily the case

528 *Ibid.*

529 Barry-Pheby (2014) *supra* n. 316, 8.

530 OSPAR Decision 2000/3, *supra* n. 431, para 3.2, see also OSPAR Commission, Overview Assessment: Implementation reports on OSPAR Decision 2000/3 (2007).

531 OSPAR, articles 21(2), 22 and 23.

532 Lagoni (2002) *supra* n. 527, 160.

533 Specifically, the Report mentions that in implementation of the Recommendation most of the contracting parties had been reinjecting the produced water in order to achieve the goal of 15% reduction by 2006 compared with the levels of 2000.

534 For instance, according to the latest overview assessment of implementation reports, the OSPAR Commission reported that most of the Parties have achieved or partly exceeded the reduction target as required by the recommendation for dispersed oil discharges in produced water, see OSPAR Commission (2010) Overview Assessment of the Implementation of OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations, Conclusions, 15.

for the other examined regions. As already stressed, the development of regional cooperation depends partly on the economic, political, and technical conditions of its parties. Compliance procedures are no exception. It is, therefore, not reasonable to expect the same level of development in all regions, given their structural differences. Indeed, the level of sophistication of the compliance system varies widely in the examined regional instruments.

5.2.1. *The “optimistic” developments regarding the implementation of the Mediterranean Offshore Protocol*

Under the Mediterranean Offshore Protocol, the system of compliance bears a noticeable resemblance to the elaborate framework under the OSPAR Convention. The Barcelona Convention creates a duty to report implementation measures concerning its Protocols and the recommendations adopted thereunder.⁵³⁵ It also empowers the MoP to ensure compliance. In particular, the MoP has to assess the regular implementation reports, recommend, when appropriate, the necessary steps to bring about full compliance with the Convention and its Protocols and promote the implementation of the decisions and recommendations.⁵³⁶ According to the Offshore Protocol, the MoP must keep the implementation of its provisions under review and consider the efficacy of adopted measures and the advisability of additional measures, in the form of annexes and appendices.⁵³⁷ The MoP has also created the Compliance Committee as a subsidiary organ to enhance implementation, considering the particularities of each party.⁵³⁸ The compliance procedure may be triggered by any party or the Secretariat which, after contacting the party concerned, may refer to any problems and difficulties encountered in complying with obligations under the Convention and its Protocols.⁵³⁹

The Compliance Committee may take progressive measures. These range from providing advice and technical or administrative assistance to States, to referring cases of non-compliance to the MoP.⁵⁴⁰ In the event of serious or recurring non-compliance, the MoP may issue a caution, publish reports on non-compliance and, as a last resort, take any additional action necessary to achieve compliance.⁵⁴¹ It is noteworthy that the meetings of the Compliance Committee are open to observers, and therefore NGOs could play a role in exerting “external” pressure for the

535 Barcelona Convention, article 26.

536 Barcelona Convention, article 27.

537 Offshore Protocol, article 30(2)(a).

538 Decision IG 17/2 on Procedures and Mechanisms on Compliance under the Barcelona Convention and its Protocols, Report of the 15th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, UNEP(DEC)/MED IG.17/10, Annex V, Decision IG 19/1 on Rules of Procedure for the Compliance Committee and its Work during 2010-2011 Biennium, UNEP(DEPI)/MED IG.10/8, Annex II.

539 Decision IG 17/2, V Procedure, para 18-23. On a general discussion about the compliance system under the Barcelona Convention, see I Papanicolopulu, ‘Procedures and Mechanisms on Compliance under the 1976/1996 Barcelona Convention on the Protection of the Mediterranean Sea and its Protocols’, in T Treves, L Pineschi, A Tanzi, C Pitea, C Ragni, F Romanin Jacur (eds) *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (Asser Press, 2009) 155-168.

540 *Ibid*, para 32.

541 *Ibid*, paras 33-34.

compliance by parties. Even though, as of today, no submissions have been received to trigger the compliance procedure with regard to the Offshore Protocol,⁵⁴² parties bear the duty to send every two years national implementation reports, which are reviewed by the MoP.⁵⁴³ Recently, during the second meeting of the Offshore Oil and Gas Meeting held in Athens in 2019, representatives of the parties examined an assessment of the implementation status of the Mediterranean Offshore Action Plan.⁵⁴⁴ While the achievement of the objectives under the Action Plan remains pending, the adoption of region-specific standards has been kickstarted.⁵⁴⁵

5.2.2. *The shortcomings of the compliance system under the Helsinki Convention*

In the context of the Helsinki Convention, the compliance system appears less sophisticated. Monitoring compliance with the Convention and the HELCOM recommendations relies heavily on the duty of its parties to report their actions to HELCOM. The main provision relating to implementation and compliance requires that States report to the HELCOM regularly on the legal, regulatory, and other measures adopted to implement the Convention, its Annexes, and relevant recommendations.⁵⁴⁶ That duty applies to the information on the effectiveness of implementation measures and problems encountered in the implementation of the Convention and the recommendations adopted under it. The Convention further requires that, on the request of a party or the Commission, States are to provide information on discharges permits, emission data, or information on environmental quality.⁵⁴⁷ Annex VII of the Helsinki Convention creates a similar reporting obligation concerning response to offshore oil pollution accidents. According to it, each party must require the operator or any other person in charge (*de facto* operator) of the offshore unit to bear an obligation to report any accidental release of oil at sea.⁵⁴⁸

HELCOM is mandated to observe the implementation of the Convention continually.⁵⁴⁹ It plays an important role in the reporting process through assessing the information provided in the reports and adopting guidelines on how States have to report.⁵⁵⁰ The assessment of the implementation reports is the most important stage of international monitoring of the compliance of its parties.⁵⁵¹ However, HELCOM has not been as innovative in terms of means for compliance control as

542 Decision IG.23/2 Compliance Committee: biennium 2016-2017, UNEP(DEPI)/MED IG.23/23, para 31.

543 The national reports are uploaded on the website of the Barcelona Convention Reporting System, but are not (yet) accessible to the public, https://idc.info-rac.org/bcrs/off_countries.

544 Status of Implementation of the Mediterranean Offshore Action Plan and Recommendations for Potential Updates, UNEP/MED WG./6, see also REMPEC Website Newsletter on the Second Meeting of the OFOG Sub-Group on Environmental Impact, available online at: http://www.rempec.org/rempecnews_search.asp?NewsID=1512.

545 *Ibid*, Table 1, Status of Implementation of Outputs relating to the Contracting Parties.

546 Helsinki Convention, article 16.

547 *Ibid*, article 16(2).

548 *Ibid*, Annex VII, Regulation 6.

549 *Ibid*, article 20(1)(a).

550 M Fitzmaurice, 'Compliance with the 1992 Convention on the Protection of the Baltic Sea Area (the "Helsinki Convention")', in U Beyerlin, P-T Stoll, and R Wolfrum (eds) *Ensuring Compliance with Multilateral Environmental Agreements: Academic Analysis and Views from Practice* (Brill, 2006) 117.

551 K Sachariew (1991) 'Promoting Compliance with International Environmental Legal Standards: Reflections on Monitoring and Reporting Mechanisms', *Yearbook of International Environmental Law*, 45.

it has been in defining preventative measures and approaches.⁵⁵² Even though it has the power to make recommendations directed to the parties on measures related to the purposes of the Helsinki Convention, it cannot take measures to bring about full compliance with it. Therefore, the system largely depends on self-assessment, as well as the informal “external review” and “naming and shaming” by the public and environmental NGOs, which can access the information provided in the reports.⁵⁵³ Even though the public and environmental NGOs do not have an official institutional role, the requirements for transparency offer an opportunity for greater involvement by those stakeholders in the evaluation of States’ compliance with the Convention.

Some working groups of the HELCOM have taken a positive step forward in assessing the status of implementation of recommendations.⁵⁵⁴ For example, following the agreement by the Heads of Delegations, the Helsinki parties were required to report on the implementation of recommendations under the RESPONSE working group. The resulting implementation reports illustratively revealed the shortcomings of the reporting system.⁵⁵⁵ Only four parties reported on the status of implementation of the recommendations.⁵⁵⁶ Regrettably, little progress has taken place since 2003, when the Status Report on the implementation of HELCOM recommendations on response to accidental offshore pollution had concluded that there were only a few recommendations, which were fully implemented by the parties.⁵⁵⁷ Therefore, it appears that the system of compliance under the Helsinki Convention is not on a par with the advanced system of the OSPAR Convention. In contrast with the commendable level of implementation of recommendations by the OSPAR parties, recommendations by HELCOM with regard to offshore oil and gas activities are paper tigers, primarily ignored by the parties to the Helsinki Convention.

5.2.3. Which implementation system for the Arctic Council?

The situation differs considerably in the Arctic region. Under MOSPA, which is the only binding agreement relating to offshore oil and gas activities, the MoP has to review issues concerning its implementation, as well as discuss and review operational matters about its application.⁵⁵⁸ The agreement does not establish any reporting obligations on implementation measures. However, its parties bear a relevant duty to exchange information and cooperate to improve the effectiveness of preparedness and response operations.⁵⁵⁹ Despite the lack of national implementation reports, the coastal States in the Arctic Ocean have already taken steps to implement MOSPA by conducting joint response exercises as provided under its provisions.⁵⁶⁰ Although MOSPA is an agreement among the coastal States in the Arctic, the EPPR

552 Ebbesson (2003) *supra* n. 89, 163.

553 Helsinki Convention, article 17. Several NGOs enjoy observer status and are permitted to participate in the HELCOM meeting by submitting reports, see M Fitzmaurice (2006) *supra* n. 550, 123.

554 HELCOM RESPONSE, Reporting on HELCOM Recommendations under the Response Working Group, 9 May 2019.

555 *Ibid.*

556 Denmark, Latvia, Poland and Sweden.

557 HELCOM 24/2003, Compliance with the Requirements of the Convention and HELCOM Recommendations, 25 June 2003, 1-2.

558 MOSPA, article 14.

559 *Ibid.*, article 12.

560 Cedervall Lauta (2014) *supra* n. 375, 243-244.

working group has played a significant role in its drafting and the development of the Operational Guidelines for its implementation. Therefore, the Arctic Council, through the EPPR, could also facilitate the implementation of the agreement by following up and updating the Operational Guidelines.

As already discussed, pollution from offshore oil and gas activities in the Arctic Ocean has been addressed primarily by a series of non-binding instruments. Creating follow-up mechanisms for the implementation of these non-binding instruments has been a thorny issue, perhaps because of resistance by States and lack of funding of the Arctic Council's working groups.⁵⁶¹ For instance, Koivurova suggests that one of the primary reasons for the lack of implementation of the Arctic EIA Guidelines has been the absence of any reporting and monitoring mechanism to oversee domestic implementation measures.⁵⁶² Even though the EIA Guidelines have been a valuable initiative, there was no obligation on or even encouragement for States to report to the Arctic Council or any of its working groups on the way they conduct EIAs.⁵⁶³ The only attempt to disseminate the findings of the EIA Guidelines was the development of a website, which contained information addressed to anyone with a general interest in Arctic EIA and not the domestic regulators.⁵⁶⁴

The Oil and Gas Assessment by the AMAP has stressed that the information on pollution from offshore oil and gas activities is insufficient. On that account, it has recommended governments and the industry to develop better reporting procedures for data on operational discharge from oil and gas installations, including data on waste disposal.⁵⁶⁵ Despite the calls for improvement, there is little indication that States or the industry have adhered to the recommendations for improving reporting and monitoring of offshore oil and gas activities in the Arctic.⁵⁶⁶

However, there have been some positive developments with regard to following up on the implementation of instruments related to offshore oil and gas activities. For instance, the application of Arctic Offshore Oil and Gas Guidelines has periodically been followed up by PAME.⁵⁶⁷ Such review has resulted in two subsequent updated versions of the Guidelines in 2002 and 2009, respectively. In 2017, PAME assessed the need for updating the Guidelines to meet the changing needs of the Arctic region.⁵⁶⁸ Similarly, the Arctic Council has followed up on the implementation of the 2015 Framework Plan by evaluating the relevant measures adopted in the area. This follow-up is a remarkable development in the context of the Arctic Council, which has been largely criticised for not monitoring the status of implementation of the recommendations and guidelines issued by its working groups.⁵⁶⁹

561 D Rothwell (2008) 'The Arctic in International Affairs: Time for a New Regime?', *Brown Journal of World Affairs*, 241.

562 Koivurova (2007) *supra* n. 151, 166.

563 R Warnern 'Environmental Assessments in the Marine Areas of the Polar Regions' in Molenaar, Oude Elferink and Rothwell (2013) *supra* n. 150, 153.

564 *Ibid.*

565 AMAP Oil and Gas Assessment, Section XIII, 2004.

566 Barry-Pheby (2014) *supra* n. 316, 9.

567 The Offshore Oil and Gas Guidelines provided that they should be subject to periodic review and, when necessary, amendment, to incorporate experiences in the management and control of offshore oil and gas activities, see Offshore Oil and Gas Guidelines, Chapter 1.7.

568 PAME, Work Plan 2017-2019, *supra* n. 501.

569 M Dubois, and C Tesar (2014) 'Making it Stick – A New Approach to Implementing Arctic Council Decisions and Recommendations', *Arctic Yearbook*, available online at <https://arcticyearbook>.

Interim conclusions

Building upon the general environmental obligations under UNCLOS, the examined regional arrangements have considerably contributed to the development of environmental rules and standards explicitly applicable to offshore energy production activities. In that respect, they shape the normative content and guide the implementation of the duty to protect the marine environment at the regional level. These agreements have attached binding force to some principles and concepts which until the Rio Conference in 1992, if at all, merely existed as non-binding recommendations. They oblige parties to adopt measures not only to prevent and reduce specific “traditional” sources of marine pollution, but also to protect and restore marine biodiversity, emphasising a more holistic, ecosystem-based approach to the problem of marine environment degradation by human activities. In some cases, they have established an obligation to take precautionary measures in the absence of full scientific awareness about their effects, which are significantly relevant for offshore energy production. Those general rules and principles are supplemented by more elaborate provisions regarding the procedural obligation to conduct EIAs before the commencement of offshore oil and gas activities and to continuously monitor their effects throughout their life-cycle. The specific rules under these regional sea conventions and the – initially drafted as regional – Espoo Convention, add valuable normative content to the duty of States to conduct EIAs under UNCLOS, introducing new elements, such as the duty to conduct SEAs and public participation.

Most importantly, the selected regional instruments contain substantive environmental rules, which define the normative contours of the duty to protect the marine environment in connection with offshore energy production at the regional level. Their normative developments on the prevention of and response to pollution stemming from offshore energy production activities have been neither linear nor uniform across the examined regions. Although regional approaches vary from the goal-oriented regulation in the case of the OSPAR Convention to more prescriptive models of management under the MOSPA, Helsinki and Barcelona Conventions, treaty-based rules appear to primarily focus on the response to accidental pollution rather than the prevention of operational discharges. Notwithstanding the diverse context in which these regional rules have been formulated, regional instruments largely converge concerning norms regulating offshore energy production activities across the examined regions. These rules can give normatively concrete content to the duty to “take all necessary measures” and specify the “best practicable means” to be used.⁵⁷⁰ For instance, they all subject offshore oil and gas activities to prior authorisation and require States to apply dynamic standards of diligence, such as BAT and BEP. The flexibility of these standards is a double-edged sword. Even though the content of BAT and BEP evolves in the light of technological and scientific developments, it is heavily conditioned upon the technological costs and the individual capacity of States.

com/arctic-yearbook/2014/2014-commentaries/100-making-it-stick-a-new-approach-to-implementing-arctic-council-decisions-recommendations.

570 See article 194 of UNCLOS.

States are also required to establish a system of supervision and control of the activities of the offshore energy industry to combat both operational and accidental pollution. In furtherance of the duties under UNCLOS and building upon the relevant rules of the OPRC, regional sea agreements contain elaborate procedural safeguards to prevent, respond to and control pollution caused by offshore oil and gas accidents. Apart from the State-centred duties of notification, consultation and cooperation, they oblige both States and the operators of offshore oil and gas installations to formulate contingency plans and conduct exercises to ensure their capability in immediately responding to acute pollution. In some cases, these rules are supported by specific regional institutions, such as the REMPEC or the working groups under the Bonn Agreement, the Helsinki Convention and MOSPA.

Remarkably, at present, there are no specific regional rules on the environmental regulation of marine renewables. Instead, the potential risks from marine renewable energy generation are regulated – often incidentally – under general environmental obligations and regional agreements relating to nature conservation. The environmental externalities of marine renewables are also addressed in several non-binding instruments by treaty bodies to regional agreements. These guidelines could offer valuable interpretative guidance on the implementation of general environmental obligations, considering the specificities of marine renewable energy production activities. In light of the projected expansion of marine renewables, several expert treaty bodies have engaged in the assessment of their environmental impacts and have provided valuable recommendations regarding their mitigation. *Inter alia*, they guide States' compliance with their duties to conduct EIAs and SEAs, to continuously monitor the effects of offshore energy devices on marine ecosystems and protected species, to regulate emissions and other disturbances and even prohibit such activities in areas which are particularly crucial for the conservation of the ecological balance. In that respect, the output of treaty bodies to regional agreements can contribute towards the development of best practices, which can also be operationalised in other marine regions.

Despite their structural differences, the regional arrangements in the examined regions offer examples of regional cooperation in the implementation of the duty to formulate and elaborate international rules, standards and recommended practices and procedures for the protection and preservation of the marine environment, taking into account characteristic regional features. They all reveal how regional cooperation can be dynamic and responsive to changes as well as capable of meeting specific regional needs and formulating region-specific approaches through “secondary” normative developments. The OSPAR, Helsinki, and Barcelona Conventions have progressively advanced their regulatory approaches through their institutional arrangements. These institutions have produced a broad range of decisions, recommendations and guidelines for the offshore energy sector. The Arctic regime on offshore energy production has followed its own path. Except for MOSPA, the Arctic coastal States have primarily managed to cooperate on an informal basis under the auspices of the Arctic Council and its relevant working groups and scientific bodies. The contribution of the working groups and scientific bodies in the development of a series of instruments, recommendations, guidelines, and environmental assessments is highly commendable.

Although most of these instruments are not binding, they are legally relevant in updating the normative content of the duty of States to protect the marine environment in the context of offshore energy production. Apart from their contextual significance in the process of interpretation under article 32 of the VCLT, their legal relevance lies in their capacity to stimulate consistent State practice. Such State practice can, consequently, serve as a means for the authentic interpretation of their respective agreements under article 31(3)(b) of the VCLT. Also, scientific reports by the treaty bodies can contribute to creating a shared understanding among the parties regarding the risks from offshore energy production and the necessary measures for their mitigation. Overall, this less formalistic approach of adopting non-binding instruments appears to have played a catalytic role in substantiating the due diligence obligation of prevention of pollution from offshore energy activities in all the examined regions. Noticeably, that less formalistic approach enables States to involve relevant stakeholders in the energy sector, be that indigenous populations, NGOs, or the private energy industry in the law-making and the implementation of environmental standards.

In addition, except for the Arctic region, States in the examined regions have established reporting systems, which provide the primary source of information about their compliance. The implementation reports are subject to assessment by the treaty commissions or the MoP. In some cases, these bodies can adopt measures and issue recommendations to bring about full compliance with the respective agreement and promote the implementation of decisions and recommendations adopted under it. In the case of the Arctic, most of the instruments do not provide for any reporting and monitoring mechanisms. However, the Arctic coastal States have taken steps to implement both binding and non-binding instruments related to offshore energy production activities. Therefore, institutional arrangements under regional agreements play a vital role in the development and implementation of environmental rules and standards. In that respect, the following chapter examines the potential of the EU, as a unique example of enhanced regional cooperation, to strengthen the required standard of marine environmental protection in relation to offshore energy production across Europe.

CHAPTER 7

The interplay between EU law and regional sea conventions: shaping marine environmental protection across Europe?

Introduction

The marine areas under the jurisdiction of the EU Member States combined are larger than their total land area.¹ Four marine regions surround the EU: the Baltic Sea; the Black Sea; the Mediterranean Sea; and the North Atlantic Ocean including the North Sea. Counting its outlying regions in the Atlantic, the Pacific, and the Caribbean, the EU has the world's largest coastal zone. Many of the parties to the examined regional sea conventions are concurrent Member States of the EU. Consequently, there is an overlap of the geographical coverage of EU instruments and the regional sea conventions, which apply to the maritime zones where Member States exercise sovereignty or jurisdiction. Those States, and in some cases, States of the European Economic Area (EEA),² have to implement the primary and secondary EU law relating to marine environmental protection.

Currently, the majority of hydrocarbon production in Europe occurs offshore, and there are around 550 installations in EU waters.³ In light of the grave environmental risks posed by such offshore activities, the EU decided to develop a legal framework for the prevention of pollution resulting from offshore oil and gas installations. In accordance with its competences under its founding Treaties and its duties under international law, the EU has adopted secondary legislation with direct and indirect implications for offshore energy production activities. In that sense, normative developments within the EU legal order have added another layer of regional regulation of offshore energy activities in the marine areas surrounding the EU. In light of the normative and institutional developments under the examined regional sea agreements, it is debatable whether such an extra layer of regional legislation is necessary. However, in theory, the EU can impose stricter pollution standards than the corresponding ones under regional sea conventions or the ones which Member States would individually adopt without any influence from the EU law.⁴ Moreover, the EU, as a regional organisation, retains a more robust legal and institutional framework than regional sea conventions, which can ensure the enforcement of environmental standards.⁵

The present chapter explores whether EU law instruments and the EU's sophisticated institutional framework can enhance the rules and standards under

1 Facts from the European Environment Agency, available online at: <https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/europes-seas-and-coasts>.

2 Besides the EU States, the EEA includes Iceland, Lichtenstein and Norway, allowing them to be a part of the EU's single market.

3 See for instance information provided by the EU, https://ec.europa.eu/energy/topics/energy-security/offshore-oil-and-gas-safety/offshore-oil-and-gas-operations-directive_en.

4 R Churchill, 'The European Union and the Challenges of Marine Governance: From Sectoral Response to Integrated Policy?', in P Schei, and D Vidas (eds) *The World Ocean in Globalization: Climate Change, Sustainable Fisheries, Biodiversity, Shipping, Regional Issues* (Brill, 2011) 412.

5 See *infra* sub-section 3.2.

the simultaneously applicable regional sea agreements, in terms both of adding normative content to them and supporting their enforcement. In that respect, this chapter examines the relevant EU law developments and their potential normative interactions with regional sea agreements to determine whether these interactions can shape the content of the duty to protect and preserve the marine environment in the context of offshore energy production activities across Europe. The chapter is structured as follows. After the overview of the competences and obligations of the EU regarding the protection of the marine environment from offshore energy production activities in section 1, section 2 discusses the secondary EU law instruments which have direct or indirect implications for the regulation of offshore energy production. Section 3 then illustrates how EU law interacts with regional sea conventions so as to be able to explore whether it can strengthen the relevant obligations under the latter. In practice, the interactions between those regional frameworks flow in both directions. The EU operationalises regional sea agreements to achieve the objectives of its directives relating to marine environmental protection. Through that process, regional sea agreements also influence developments at the EU level. For that reason, the chapter also examines the normative impact of regional sea conventions on the EU legal framework and its implementation in the context of offshore energy production.

1. Competences and international obligations of the EU regarding marine environmental protection and offshore energy production activities

Before delving into the EU legislative acts and measures relating to the regulation of offshore energy activities, it is necessary at this point to provide a brief overview of the relevant competences and the international obligations of the EU as a regional integration organisation. This overview clarifies that, at least concerning the regulation of offshore energy production activities, the EU does not have exclusive competence under the EU treaties, and it has not taken over the sovereign rights and duties of its Member States. Therefore, for the purposes of this chapter, the EU is perceived as a regional international organisation which, alongside its Member States, retains a *sui generis* role in developing and harmonising the environmental rules and standards applicable to offshore energy production activities.

According to the fundamental principle of attribution, the EU obtains competence to adopt policy and legislation insofar as such power has been granted to it by its Member States through the primary EU treaties⁶ to achieve the objectives established thereunder.⁷ The EU's competence may either be exclusive or shared with the Member States. In the first case, Member States no longer have the right to adopt legislation in the fields that have been delegated exclusively to the EU. In the second case, both the EU and its Member States may legislate and adopt legally binding acts when the Treaties confer shared competence on the EU.⁸ The Treaty on the Functioning of the European Union (TFEU) enumerates those matters where the EU has exclusive

6 Namely, the Treaty on the Functioning of the European Union and the Treaty on the European Union.

7 TEU, article 5(2). See also N Liu, and E Kirk (2015) 'The European Union's Potential Contribution to Protect Marine Biodiversity in the Changing Arctic: A Roadmap', *The International Journal of Marine and Coastal Law*, 260.

8 TFEU, article 2(2).

or shared competence to adopt measures.⁹ Apart from the internal allocation of EU competences to adopt legislative acts, the Treaties also spell out the prerequisites for the EU to be able to exercise its external competences in respect of third States and international organisations. In that respect, the Treaty on the European Union (TEU) has granted the EU international legal personality.¹⁰ Consequently, it has enabled the EU to become a member of international organisations, negotiate, conclude and participate in international agreements and, therefore, acquire international rights and duties. Given its international legal personality, its acquired international obligations can equally significantly determine and influence EU measures on the regulation of offshore energy production.

1.1. The EU's competences regarding marine environmental protection and offshore energy production

The legal basis of EU environmental action is established in article 192 of the TFEU, which defines how and by whom such measures can be adopted.¹¹ Articles 191 and 193 identify the content and the effects of legal rules adopted on the basis of article 192 of the TFEU.¹² The EU institutions have to take the necessary measures to, *inter alia*, achieve the preservation, protection, and improvement of the quality of the environment, prudent and rational utilisation of natural resources and the promotion of measures at the international level to deal with regional or global environmental issues.¹³ The TFEU makes it clear that the EU environmental policy must aim at a high level of protection,¹⁴ based on the precautionary, prevention and polluter pays principles.¹⁵ Nonetheless, what qualifies as a high level of environmental protection can vary depending on the corresponding regional needs. The provisions highlight the fact that environmental measures must consider the diversity of situations in the various regions of the EU.¹⁶ Therefore, the EU faces the challenge of balancing the risk of adopting the lowest environmental standards as a common denominator to harmonise Member States' legislation with the risk of imposing the highest degree of environmental protection on all Member States, regardless of their socio-economic conditions.

According to article 11 of the TFEU, the principle of environmental integration dictates that environmental protection considerations must be integrated into the implementation of EU policies and legislative acts to promote sustainable development, irrespective of the legal basis of the concerned legislative acts. It poses a concrete obligation to integrate environmental requirements, and not merely take them into account, both during the law-making process and the implementation of EU legal norms.¹⁷ This article needs to be read in combination with article 37

9 TFEU, articles 3 and 4, respectively.

10 TEU, article 47.

11 D Langlet, and S Mahmoudi, *EU Environmental Law and Policy* (Oxford University Press, 2016) 99.

12 *Ibid.*

13 TFEU, article 191(1).

14 According to the ECJ while the provision requires a high level of environmental protection, "such a level of protection, to be compatible with that provision, does not necessarily have to be the highest that is technically possible", C-284/95, Judgment of 14 July 1998, para 48.

15 TFEU, article 191(2).

16 TFEU, article 191(2) and (3).

17 N De Sadeleer, *EU Environmental Law and the Internal Market* (Oxford University Press, 2014) 25-26.

of the European Union Charter of Fundamental Rights (EUCFR) which, similarly, obligates the Member States to integrate a high level of environmental protection in the implementation of EU rules and to take measures for the improvement of the quality of the environment. The obligations stemming from article 191(2) of the TFEU and article 37 of the EUCFR have a dynamic nature.¹⁸ That is to say, they do not only require the EU to avoid degradation of the environment, but also to restore and improve the quality of the environment, as in the case of the examined regional sea agreements.¹⁹ Nonetheless, these provisions do not aim to assign priority to environmental considerations over any economic or social objectives pursued by the EU. Instead, they impose a duty on EU institutions to “reach an integrated and balanced assessment of the relevant environmental aspects,” and to ensure “that the resulting decision respects the principle of proportionality.”²⁰

Concerning environmental protection and protection of biological diversity,²¹ the EU has shared competence with its Member States according to the TFEU.²² That renders article 4(2) of the TFEU on shared competences between the EU and its member States applicable. In the case of shared competences, both the EU and its Member States may legislate and adopt measures in that field. However, the Member States can exercise their competence only where the EU has not used its power or has ceased to do so.²³ The exercise of the EU’s competence is subject to the principles of subsidiarity and proportionality. Specifically, the principle of subsidiarity requires the EU to “act only insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level.”²⁴ Also, following the principle of proportionality, “the content and the form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties.”²⁵

As far as offshore energy activities are concerned, it is noteworthy that the TFEU contains few explicit references to the EU’s competence to regulate marine-related matters.²⁶ The EU’s competence in environmental protection also appears to cover the marine environment, as attested by ocean-specific directives such as the Marine Strategy Framework (hereinafter MSFD) and Offshore Safety directives.²⁷ However, the generality of the EU treaty provisions in question may lead to political debates in the Council of the EU on the exact scope of the EU’s shared competence concerning the protection of the marine environment.²⁸ For instance, proposals by the EU Commission to adopt rules regarding dumping at sea have been rejected

18 *Ibid.*, 45.

19 See chapter 6, section 1.2.

20 E Morgera, ‘European Environmental Law’ in J H Bhuiyan, E Techera, and S Alam (eds) *Routledge Handbook of International Environmental Law* (Routledge, 2012) 29.

21 The EU only has exclusive competence in the “conservation of marine biological resources under the common fisheries policy”, see R Churchill, D Owen (eds) *The EC Common Fisheries Policy* (Oxford University Press, 2010) 48.

22 Churchill (2011) *supra* n. 4, 395.

23 TFEU, article 2(2), see also Langlet and Mahmoudi (2016) *supra* n. 11, 96.

24 TEU, article 5(3).

25 TEU, article 5(4).

26 Churchill (2011) *supra* n. 4, 400.

27 See *infra* sub-sections 2.2.-2.3.

28 Churchill (2011) *supra* n. 4, 400.

because dumping is a subject matter that should be left to the Member States, which are responsible for implementing the relevant applicable global and regional agreements.²⁹

Notwithstanding the lack of a specific reference to the protection of the marine environment in the EU treaties, the EU has adopted measures to prevent marine pollution from various sources in order to implement its environmental objectives. As a rule, secondary EU environmental legislation takes the form of regulations, decisions, directives and non-binding recommendations. In particular, regulations and decisions are binding in their entirety on the Member States. In contrast, directives are binding only in connection with what needs to be achieved, usually allowing a broad margin of discretion in their implementation by domestic authorities.³⁰ In light of the principle of subsidiarity, the majority of EU environmental instruments have taken the form of directives, which set specific goals that need to be achieved by the Member States.³¹ Moreover, the choice of directives is sometimes dictated during the law-making process as a compromise between the competing State interests at the EU level. For example, the EU Commission decided to change the legal nature of the initially proposed regulation on offshore safety to a directive due to the strongly expressed concerted reactions of several Member States and the offshore industry.³² However, that does not imply that the Member States' discretion in implementing environmental directives is unfettered, since the Court of Justice of the EU tends to interpret their margin for manoeuvre rather narrowly.³³

1.2. The EU's competence regarding energy and offshore energy activities

Concerning the EU's competence in the regulation of offshore energy activities, one of the most significant changes introduced by the TFEU is that energy is now explicitly included in the list of shared EU competences.³⁴ The TFEU assigns to the EU institutions the power to legislate in order to ensure the EU's energy objectives, such as the promotion of energy security and efficiency through the development of new and renewable sources of energy.³⁵ Moreover, the energy-specific article 194 of the TFEU explicitly refers to the EU's competence in environmental protection.³⁶

29 L Kramer, *EC Environmental Law* (Sweet and Maxwell, 6th edition, 2008) 295.

30 TFEU, article 288. However, the legal effects of EU legislative actions also depend considerably upon their content, since directives can also contain very detailed prescriptive rules, which restrain the Member States' discretion, see T van den Brink (2017) 'The Impact of EU Legislation on National Legal Systems. Towards a New Approach to EU-Member States Relations', *Cambridge Yearbook of European Legal Studies*, 216-218.

31 *Contra* Kramer (2008) *supra* n. 29, where Kramer claims that recently the general trend is for environmental directives to be vaguer in nature and far less prescriptive than regulations.

32 G Gordon (2014) 'Offshore Safety: The European Commission's Legislative Initiatives', *European Energy Law Report*, 143.

33 De Sadeleer (2014) *supra* n. 17, 196.

34 T Koivurova, K Kokko, S Duyck, N Sellheim, A Stepien (2012) 'The Present and Future Competence of the European Union in the Arctic', *Polar Record*, 366.

35 TFEU, article 194(1) lays down the EU's energy objectives.

36 Article 194(1) TFEU reads "1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to: (a) ensure the functioning of the energy market; (b) ensure security of energy supply in the Union; (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and (d) promote the interconnection of energy networks. See also, K Talus, and P Aalto 'Competences in EU Energy

Specifically, article 194 of the TFEU, which “constitutes the legal basis intended to apply to all acts adopted by the European Union in the energy sector”,³⁷ needs to be read in the context of the establishment and functioning of the internal market, taking into account the need for environmental preservation. As for environmental protection, it imposes an obligation on the EU institutions to take into consideration environmental concerns and integrate them in measures furthering the aims of article 194 of the TFEU.³⁸

Interestingly, the provision contains a significant caveat with regard to the regulation of offshore energy production. It stipulates that the EU policy and legislation should not infringe upon national sovereignty over natural resources.³⁹ To that end, article 194(2) of the TFEU requires that EU measures “shall not affect a Member State’s right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply”. This requirement appears to increase the legal uncertainty regarding the EU’s competence in the regulation of offshore energy production. The EU directive on the safety of offshore oil and gas operations⁴⁰ serves as an example of the complications and limits of the EU competence in regulating marine energy activities.⁴¹ While the EU Parliament referred to the connection of the EU measures in the field of offshore safety security with the EU’s energy policy and the corresponding article 194 of the TFEU in its 2011 resolution, the resulting directive does not contain any references to the EU’s energy competence.⁴² The initially proposed regulation and its rather robust prescriptive rules on offshore oil and gas safety would have had directly applicable effects in all Member States and would allow less discretion in its implementation.⁴³ On that account, adopting a prescriptive regulation on the offshore oil and gas safety could affect the right of Member States to determine the operating conditions of their energy resources, and, thus, exceed the limits of the EU’s competence under article 194 of the TFEU.⁴⁴ By contrast, the adopted directive has taken a far more lenient goal-based approach and only binds the Member States concerning the expected

Policy’, in R Leal-Arcas, and J Wouters (eds) *Research Handbook on EU Energy Law and Policy* (Edward Elgar, 2017) 20-22.

37 ECJ, C-490/10, *European Parliament v Council*, Judgment of 6 September 2012.

38 In the view of the EU Parliament “article 194 of the [TFEU] specifically supports the right of a Member State to determine the conditions for the exploitation of its energy resources while continuing to take into account solidarity and environmental protection”, EU Parliament Resolution of 13 September 2011.

39 With respect to the limits of the EU’s competence see K Haraldsdottir (2014) ‘The Limits of EU Competence to Regulate Conditions for Exploitation of Energy Resources: Analysis of Article 194(2) TFEU’, *European Energy and Environmental Law Review*, 208-218, A Johnston, and E van der Marel (2013) ‘Ad Lucem? Interpreting the New EU Energy Provision, and in Particular the Meaning of Article 194(2) TFEU’, *European Energy and Environmental Law Review*, 181-199.

40 It needs to be noted that the Offshore Safety directive does not refer to article 194 TFEU as its legal basis but is only based on the EU’s shared competence regarding environmental protection.

41 Y Farah, and M Makhoul, ‘Access to an Effective Remedy in Business-Related Human Rights Violations in the Context of Oil and Gas Disputes’, in Leal-Arcas and Wouters (2017) *supra* n. 36, 315.

42 EU Parliament, Resolution of 13 December 2011, which refers both to the EU’s competence relating to energy under article 194 TFEU and its environmental competences under articles 191 and 11 TFEU.

43 TFEU, article 288(2).

44 Another explanation for the lack of reference to article 194 TFEU in the offshore safety directive could be that the primary objective pursued by it is the protection of the marine environment and the health of workers on offshore platforms. Indeed, the ECJ has established that the main or predominant purpose of an instrument should dictate which legal basis is used, C-336/00, *Huber*, Judgment of 19 September 2002, para 31.

results, allowing the domestic authorities a wide margin of discretion to choose the means towards reaching the results.⁴⁵

1.3. The EU's obligations under UNCLOS

In the context of its competences, the EU has adopted measures to protect the marine environment prompted by its relevant international obligations.⁴⁶ As already mentioned, the EU has become an important subject of international law,⁴⁷ which has international legal personality and the external competence to conclude agreements with third States and international organisations.⁴⁸ These international agreements create rights and duties for the EU and, therefore, can significantly influence the content of EU rules on offshore energy production. International rules can, for instance, restrict and limit the way the EU exercises its competence to adopt and enforce environmental standards in the offshore energy sector. In that vein, UNCLOS can significantly affect the content of relevant EU measures. The EU has become a party to UNCLOS after signing and ratifying it through an EU Council Decision.⁴⁹ Consequently, UNCLOS has become binding on the EU's institutions, and its provisions form an integral part of the EU legal order, according to the TFEU.⁵⁰ In the hierarchy of sources of EU law UNCLOS, as a mixed agreement, ranks below primary EU law, namely the EU Treaties,⁵¹ and above secondary EU legislation, such as regulations, directives, and decisions.⁵² Given its hierarchical position, all secondary EU legislation needs to conform with UNCLOS⁵³ or at least

45 TFEU, article 288(3).

46 For instance, see the Nature directives on conservation of species and their habitats, which implement at the EU level duties under the Bonn and Berne Conventions, described below, sub-section 2.1.3.

47 B de Witte, 'The Emergence of a European System of Public International Law: The EU and its Member States as Strange Subjects', in J Wouters, A Nollkaemper, E de Wet (eds) *The Europeanisation of International Law* (TMC Asser Press, 2008) 39.

48 TFEU, article 216(1).

49 EU Decision 98/392/EC, 23 March 1998. UNCLOS enabled it to do so pursuant to its article 305 and the provisions of Annex IV. In accordance with article 308(2) of UNCLOS, the Convention entered into force for the EC on 1 May 1998 and, at the same time, the EC became a party to the 1994 Implementing Agreement for Part XI, see Council Decision 94/562/EC, 25 July 1994.

50 TFEU, article 216(2), C-459/03, *MOX Plant*, Judgment of 30 May 2006, para 82, C-308/07, *Intertanko*, Judgment of 3 June 2008, para 53.

51 As a subject of international law the EU is bound by *ius cogens* rules and, therefore, EU Treaties cannot derogate from such international law rules according to article 53 of the VCLT, see also K Ziegler (2016) 'The Relationship between EU Law and International Law' in D Patterson, and A Sodersten (eds) *A Companion to European Union Law and International Law* (John Wiley & Sons, 2016) 44.

52 R Long (2012) 'The European Union and Law of the Sea Convention at the Age of 30', *The International Journal of Marine and Coastal Law*, 713.

53 Contrary to the reasoning of the ECJ in the *Intertanko* case discussed below, it has upheld that it can review the legality of secondary EU law in light of binding agreements concluded by the EU, see C-377/98, *Netherlands v European Parliament and Council*, Judgment of 9 October 2001, and C-344/04 *IATA and ELFAA*, Judgment of 10 January 2006. However, in both cases the challenged secondary law instrument was found to be compatible with the international agreements. It appears that the ECJ has not clearly established the requirements that need to be fulfilled in order for international law rules to act as yardsticks for the review of legality of EU law rules, see for instance, M Mendez (2010) 'The Legal Effect of Community Agreements: Maximalist Treaty Enforcement and Judicial Avoidance Techniques', *European Journal of International Law*, 94.

be interpreted in conformity with its rules.⁵⁴ Therefore, UNCLOS lays down the normative parameters for ocean governance within the EU.⁵⁵

1.3.1. *The EU's obligations to protect and preserve the marine environment*

UNCLOS provides that an international organisation, such as the EU, obtains rights and duties under its provisions only regarding matters for which the relevant competence has been assigned to it by its Member States, which are concurrently parties to the Convention.⁵⁶ According to the declaration of competence⁵⁷ submitted by – at that time – the European Community upon the ratification of UNCLOS, the EU has shared competence with its Member States in the field of prevention of marine pollution (Part XII).⁵⁸ In the *MOX Plant* case, the ECJ confirmed that the EU could acquire duties under UNCLOS only on subject-matters that fall within its competence. That is because the relevant Council Decision 98/392, by which the EU acceded to UNCLOS, enabled it to become a party within the limits of its competence.⁵⁹ Based on the declaration of competence submitted by the EU, the ECJ ruled that the EU retains external competence insofar as the EU has legislated in the field of marine environmental protection. The ECJ concluded that, since the EU has adopted legislative measures on marine environmental protection, the environmental provisions of UNCLOS have become an integral part of EU law with binding effects upon both the EU's institutions and its Member States.⁶⁰

Since it acceded to UNCLOS, the EU has continued to enact rules on the protection of the marine environment progressively.⁶¹ Those normative developments mostly form part of the EU Integrated Maritime Policy (IMP), which rests on the “clear recognition that all matters relating to Europe's oceans and seas are interlinked, and that sea-related policies must develop in a joined-up way”.⁶² The IMP aims, *inter alia*, to enhance the EU's capacity for facing the challenges of the degradation of the

54 C-286/02 *Bellio Filli Srl*, Judgment of 1 April 2004, para 33, C-335/05 *Rizeni Letoveho Provozu*, Judgment of 7 June 2007, para 16 with references to similar previous cases. The ECJ has expressed the view that even though it does not have jurisdiction to assess the conformity of secondary EU law with the provisions of UNCLOS, the former must be interpreted in conformity with the latter, see *infra* sub-section 1.3.1. See also, E Paasivirta (2015) ‘The European Union and the United Nations Convention on the Law of the Sea’, *Fordham International Law Journal*, 1062-1063.

55 R Long, ‘Principles and Normative Trends in EU Ocean Governance’ in C Schofield, S Yi, and M-S Kwon (eds) *The Limits of Maritime Jurisdiction* (Brill, 2014) 702.

56 UNCLOS, Annex IV, article 4(3).

57 The declaration of competence aims to clarify the matters on which the EU acquires rights and obligations under UNCLOS, see L Lijnzaad, ‘Declarations of Competence in the Law of the Sea, a Very European Affair’ in M Lodge, and M Nordquist (eds) *Peaceful Order in World's Oceans: Essays in Honor of Satya N Nandan* (Brill, 2014) 189.

58 Declaration Concerning the Competence of the European Community with regard to Matters Governed by the United Nations Convention on the Law of the Sea of 10 December 1982 and the Agreement of 28 July 1994 Relating to the Implementation of Part XI of the Convention, Council Decision of 23 March 1998, 1.

59 ECJ, *MOX Plant*, para 98.

60 *Ibid.*, paras 105-111.

61 Initially, 30 EU instruments were listed under the heading of protection and preservation of the marine environment in the declaration of competence, see L Lijnzaad (2014) *supra* n. 57, 197.

62 Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions – An Integrated Maritime Policy for the European Union, 10 October 2007, 1.

marine environment and energy security.⁶³ An integrated and long-term maritime policy can presumably contribute to a stable regime on the use of the EU's seas and allow for the full exploitation of the energy potential therein.⁶⁴ *Inter alia*, the IMP is relevant to offshore energy production as it requires linking the particular concerns from each marine economic sector with the general objective of developing a coherent approach to the seas, considering all economic, environmental, and social aspects.⁶⁵

In that respect, the MSFD consists of the environmental pillar of the IMP, establishing a framework for EU action in the field of marine environmental protection. It marks the first EU law instrument which highlights the need to address the cumulative effects of all activities on the marine environment around the EU. The MSFD aims to fulfil the EU's environmental obligations under UNCLOS. Its rules are directly relevant to achieving the due diligence obligation of the EU and the Member States to protect and preserve the marine environment.⁶⁶ As further explained in subsection 2.2.1, by requiring the attainment of the good environmental status of all European marine waters by 2020, the directive appears to be consistent with the letter and spirit of Part XII of UNCLOS.⁶⁷ Building upon the due diligence obligation to “*take all necessary measures to achieve or maintain good environmental status in the marine environment*”,⁶⁸ the MSFD paved the way for the development, *inter alia*, of specific EU rules and standards relating to offshore oil and gas activities.⁶⁹

1.3.2. EU laws and regulations to prevent, reduce and control pollution related to offshore energy activities

Waters off EU shores are exploited intensively for the production of oil and gas.⁷⁰ In light of the relevant obligations under UNCLOS, the EU has recently decided to adopt a proactive stance concerning the regulation of offshore energy activities.⁷¹ At the EU level, the regulation of offshore oil and gas activities is considered a prerogative of Member States and thus has traditionally been subject to domestic law.⁷² However, this approach has gradually changed, asserting EU competence in the regulation of the offshore energy sector. The EU Member States need to conform to common EU criteria and apply the precautionary principle when issuing authorisations for the

63 *Ibid.*

64 Commission Staff Working Document, Energy Policy and Maritime Policy: Ensuring a Better Fit, SEC (2007) 1283, 10 October 2007, 15.

65 Proposal for a regulation, recital 6.

66 MSFD 2008/57/EC, Recital 17.

67 *Ibid.*, article 1.

68 *Ibid.*, article 1(1).

69 Directive 2013/30/EU, recital 7, mentions both the IMP and the MSFD as the environmental pillar of the IMP.

70 According to the International Association of Oil and Gas Producers (OGP), 40% of the oil and 60% of the gas consumed in Europe come from the EU waters, see EU Commission Communication, COM (2007) 575 final, 9.

71 R Long, ‘The Inexorable Rise of the United Nations Convention on the Law of the Sea within the European Legal Order’ in Lodge and Nordquist (2014) *supra* n. 57, 164.

72 See EU Parliament Report on Facing the Challenges of Safety of Offshore Oil and Gas Activities (2011/2072(INI)), 26 July 2011, 6 which mentions that “*issuing licences and other authorisations for the exploration and exploitation of hydrocarbon resources is a Member State prerogative, and that any suspension of activities is at the discretion of the Member State concerned*”.

exploitation of offshore oil and gas. In response to the Deepwater Horizon accident, the EU adopted a directive setting the minimum safety standards to be adhered to by the industry and domestic regulators involved in offshore oil and gas activities.⁷³ The Offshore Safety directive is consistent with the IMP and the MSFD, expanding their scope to explicitly cover the risk of pollution from accidents related to offshore oil and gas activities. The directive expressly refers to its intention to contribute to the achievement of the environmental objectives of the MSFD. By reducing the risks posed by major offshore oil and gas accidents, the directive can be instrumental in the attainment of the good environmental status of the EU seas by 2020.⁷⁴

Another relevant matter is whether the EU, as a party to UNCLOS, must adopt measures “no less effective than international rules and standards” under article 208(3) of the Convention, because it maintains shared competence in this field with its Member States. The lack of exclusive competence cannot release the EU from its individual duty to adopt measures, which are, at least, as equally effective as the generally accepted international rules and standards. That requirement applies insofar as the EU, subject to the principles of subsidiarity and proportionality, exercises its competence to adopt instruments regulating offshore energy production activities.⁷⁵ Even though EU law instruments rarely mention the incorporation of such minimum international standards explicitly, they contain ample references to international instruments that have served as benchmarks or at least as sources of inspiration for EU law norms. For instance, the Offshore Safety directive mentions standards under IMO Conventions, the IMO Resolution on MODU, as well as regional sea conventions.⁷⁶

The ECJ has not yet touched upon the issue of the EU’s duty to meet international rules and standards when regulating offshore energy activities. However, its case-law can provide some useful indications on the matter. For instance, the *Intertanko* case raised the question of whether individuals can invoke UNCLOS and MARPOL, as reflecting international standards, to contest the validity of an EU directive on vessel source pollution.⁷⁷ Concerning UNCLOS, the ECJ upheld that the nature of the Convention prevented it from assessing the validity of an EU directive against its provisions.⁷⁸ In the ECJ’s view, although the EU’s international obligations prevail over its secondary legislation, the former can only serve as benchmarks to assess the validity of an EU instrument subject to two conditions. First, the nature and the broad logic of the international treaty that aims to function as a standard of legality must not preclude assessing the validity of an EU instrument. Second, the treaty’s provisions must be unconditional and sufficiently precise, in terms of

73 Directive 2013/30/EU of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC.

74 *Ibid.*, recital 6, 7 and 50.

75 *Supra* sub-section 1.1. It is stressed that the EU’s legislative instruments do not release its Member States from their individual responsibility to adopt domestic legislation which is “no less effective” than the international rules and standards. Both the Member States and the EU have a responsibility to meet the minimum international standards when adopting legislation for the regulation of offshore energy production activities.

76 *Ibid.*, recitals 32, 50, 51.

77 ECJ, C-308/06 *Intertanko v Secretary of State for Transport*.

78 The nature of the agreement (as one which might confer rights on individuals) has been deemed to be a decisive criterion to identify whether an international agreement, to which the EU is a Party, can be used as a benchmark to assess the validity of EU measures, see Paasivirta (2015) *supra* n. 54, 1066.

content.⁷⁹ According to the ECJ, the fact that UNCLOS is an integral part of the EU law order does not necessarily mean that its norms can be directly relied on by EU subjects before a European court to assess the validity of EU secondary legislation. Therefore, the ECJ rejected the claim that UNCLOS constitutes an agreement conferring rights on individuals, which can be invoked directly before a domestic or European court.⁸⁰ However, the ECJ's opinion that the provisions of UNCLOS lack the necessary normative specificity to confer rights on individuals appears to undermine the exceptional character of the Convention, which represents one of the most elaborate international instruments ever concluded by the EU in the form of a mixed agreement.⁸¹ Seemingly, the ECJ used its direct effect doctrine to limit the legal effects of duties under UNCLOS so as to safeguard the autonomy of the EU's legal order.⁸² The ECJ could have, at the very least, engaged in the interpretation of the contested EU legislation in conformity with the provisions of UNCLOS,⁸³ which are also binding upon the EU as part of customary international law.⁸⁴

The ECJ also dismissed the argument that the contested directive must be assessed against the standards under the MARPOL because the EU is not bound by it. The ECJ considered that the EU is not a member of or a formal observer in the IMO. Also, the EU is not a party to the IMO conventions, despite the wealth of EU instruments on maritime safety and prevention of pollution from shipping.⁸⁵ According to the ECJ's view, the EU has not adhered to the rules of MARPOL, nor are

79 ECJ, *Intertanko*, para 45.

80 ECJ, *Intertanko*, paras 54-65.

81 By contrast, in the *Etang de Berre* case, the ECJ emphasised the clarity and unconditionality of the rules under the 1980 Athens Protocol to uphold its direct effect, without examining whether they actually granted individuals justiciable rights, see P Eeckhout (2009) 'Case Note on *Intertanko*', *Common Market Law Review*, 2054-2055.

82 J W van Rossem (2009) 'Interaction between EU law and International Law in the light of *Intertanko* and *Kadi*', *Centre for the Law of EU External Relations Working Paper 2009/4*, 14. See similar argument raised by the author in respect of the ECJ's stance towards international human rights obligations as a vehicle to safeguard the autonomy of the EU's legal order, N Giannopoulos (2011) 'Autonomous Protection of Fundamental Rights or Protection of the EU's Autonomy? Observation on the General Court's Decision T-85/09 Yassin Abdullah Kadi v European Commission', *To Syntagma*, 121-139 (in Greek).

83 In the *Brown Bear* case, the ECJ stressed the importance of interpretation in accordance with the provisions of article 9(3) of the Aarhus Convention, even though it ruled that the article did not have direct effect, because it was not precisely clear and unconditional, C-240/09, Judgment of 8 March 2001, para 51. See also F Casolari, 'Giving Indirect Effect to International Law within the EU Legal Order: The Doctrine of Consistent Interpretation' in E Canizzarro, P Palchetti, and R Wessel (eds) *International Law as Law of the European Union* (Martinus Nijhoff, 2012) 396, where Casolari suggests that the requirement to interpret EU law taking into account international agreements is a way of giving the latter "indirect effect".

84 See for instance C-286/90, *Poulsen*, Judgment of 24 November 1992, paras 10-11, where the ECJ had relied on UNCLOS as an expression of customary international law, referring also to articles on the right of innocent passage, which were at stake in the *Intertanko*. See also C-162/96, *A Racke GmbH v Hauptzollamt Mainz*, Judgment of 16 June 1998, paras 45-47, where the ECJ declared the potential invalidity of EU legislation due to its conflict with customary international law, without examining whether the customary rule had direct effect, see also A Gianelli, 'Customary International Law in the European Union', in Cannizzarro, Palchetti and Wessel (2012) *supra* n. 83, 104, P Eeckhout, *External Relations of the European Union: Legal and Constitutional Foundations* (Oxford University Press, 2004) 332.

85 L Sciano di Pepe, 'Environmental Emergencies at Sea in the European Union's Third Maritime Safety Package' in G Andreone, C Caligiuri, and G Cataldi (eds) *Emergences environnementales et droit de la Mer* (Editoriale Scientifica, 2012) 363-385.

they binding upon the EU in any way, as they do not qualify as customary international law.⁸⁶ The ECJ failed to examine whether the rules and standards of MARPOL are binding on the EU through the rule of reference under article 211(5) of UNCLOS. Nevertheless, the ECJ ruled that, since MARPOL might have consequences for the interpretation of UNCLOS, it was incumbent upon the ECJ to take MARPOL into account when interpreting the relevant provisions of the EU secondary law.⁸⁷ That conclusion seems to be in line with the previous ECJ case law, according to which there is a duty of consistent interpretation of EU measures in the light of non-directly applicable international law rules, which bind the Member States.⁸⁸

In the author's opinion,⁸⁹ the judgment of the ECJ in *Intertanko* regrettably overlooked the fact that certain rules of UNCLOS might be sufficiently clear and unconditional and, therefore, could confer justiciable rights on individuals.⁹⁰ That is especially true if the provisions of UNCLOS are interpreted embedded in their normative context, which is formed by other relevant environmental agreements.⁹¹ Even if that is not the case regarding most of the provisions of UNCLOS, the lack of direct effect does not diminish their legal relevance, nor does it relieve European institutions of their duty to comply with them. Despite the provisions lacking a direct effect under EU law, they are still binding upon the EU and its institutions.⁹² EU law has to be interpreted in conformity with UNCLOS and other marine environmental agreements to which the EU has become a party. Although in the *Intertanko* case, the ECJ dismissed the issue on the grounds of jurisdiction, that does not preclude the possibility of invoking the EU's international responsibility for violating its obligations under UNCLOS. In that respect, UNCLOS dictates that, in the case of a conflict between the EU's obligations under the Convention and EU law, the former must prevail.⁹³ As the ECJ observed, "*the powers of the Community must be exercised in observance of international law*". Therefore, regardless of whether individuals can challenge the legality of EU measures before domestic or EU courts, EU instruments must comply with the relevant standards set out in UNCLOS.⁹⁴

86 *Intertanko*, paras 48-51.

87 *Ibid*, para 52.

88 The ECJ argued that such duty to interpret EU law taking into account international agreements binding upon its Member States is a corollary of the duty of sincere cooperation under article 4(3) of the TFEU, as well as the principle of good faith. J W van Rossem (2009) *supra* n. 82, 14, C Eckes, 'International Law as Law of the EU: The Role of the European Court of Justice', in Cannizzaro, Palchetti and Wessel (2012) *supra* n. 83, 354-365.

89 The reasoning of the ECJ in the case has been the subject of criticism by other scholars, see for instance, M Mendez (2010) 'The Enforcement of EU Agreements: Bolstering the Effectiveness of Treaty Law?', *Common Market Law Review*, 1750-1752, J Klabbers, 'The Validity of EU Norms Conflicting with international Obligations', in Cannizzaro, Palchetti and Wessel *supra* n. 83, 126, K Ziegler, 'International Law and EU Law: Between Asymmetric Constitutionalisation and Fragmentation' in A Orakhelashvili (ed) *Research Handbook on the Theory of International Law* (Edward Elgar, 2011) 301.

90 Provisions under Part XI might qualify as rules with direct effect, see *Intertanko*, para 63. See also, E Denza (2008) 'A Note on *Intertanko*', *European Law Review*, 875. See below on the opinion by the AG, and discussion on the justiciability of relevant rules under regional sea agreements.

91 *South China Sea Arbitration*, para 942.

92 TFEU, article 216(2).

93 UNCLOS, Annex IX, article 5(6).

94 It seems that the ECJ is of the view that, in the case of non-directly effective international rules, these are only to be taken into account for the interpretation of EU measures.

The above criticism of the judgment appears in line with the opinion by Advocate General (AG) Kokott. The AG argued that the extent to which UNCLOS has direct effect and, thus, confers rights directly on individuals depends on the content of each separate provision.⁹⁵ The AG posited that the content of UNCLOS provisions should be read in the normative context provided by other relevant international agreements. That premise allowed her to consider the rules of MARPOL through the rule of reference of article 211(5) of UNCLOS. In the AG's opinion, even though MARPOL does not directly impose duties on the EU, its provisions are incorporated in UNCLOS as generally accepted international standards.⁹⁶ Therefore, even though the EU is not a party and, thus, is not bound by the IMO Conventions, any EU measures related to discharges from ships must comply with the generally accepted rules, which are contained in the MARPOL Convention. By analogy, the author argues that EU instruments on the environmental regulation of offshore energy production activities must be no less effective than international rules, standards and recommended practices and procedures, which serve as the minimum international standards under article 208(3) of UNCLOS. Even if the EU has not explicitly adhered to them, they serve as international benchmarks against which to assess the reasonableness of EU measures.⁹⁷

Therefore, it is posited that when the EU exercises its power to regulate the environmental impacts of offshore energy production activities, the content of secondary legislation has to meet the minimum international standards at least. The duty of the EU to adopt instruments which are "no less effective" than the generally accepted rules and standards also has repercussions for its Member States. Accordingly, the EU Member States, as parties to UNCLOS, cannot avoid adopting measures equivalent to the international rules and standards as dictated by the Convention, simply by claiming that their domestic laws and regulations comply with EU law. It should be noted that the rule of reference contained in article 208(3) of UNCLOS seeks to impose only minimum standards concerning the environmental regulation of offshore energy activities. Therefore, it allows considerable leeway to the EU to contribute to strengthening the regional framework for environmental regulation of offshore energy activities by adopting and enforcing more stringent environmental rules and standards.

As already stressed, the premise that the regulation of offshore energy activities is an exclusive prerogative of the EU Member States has been abandoned progressively. Given the gradual recognition of the EU's significant role in substantial environmental rules and standards for marine environmental protection, the following section of the chapter examines whether and to what extent the EU has contributed to the formulation of normatively specific rules and standards on offshore energy production activities.

95 *Intertanko*, Opinion of AG, paras 48-59.

96 *Ibid.*, para 69.

97 See discussion on the function of the rule of reference, chapter 2, sub-section 2.2.4.

2. Secondary EU law and the regulation of offshore energy production: an extra layer of regional rules and standards across European seas

While operational discharges from offshore oil and gas exploitation activities are subject to elaborate regulations under the examined regional sea conventions, the EU has not formulated any equivalent rules. Before the Deepwater Horizon accident in the Gulf of Mexico, there were no specific EU rules dealing with any form of pollution from offshore energy activities. Instead, provisions incidentally applicable to offshore energy activities were spread across different EU instruments, which either did not cover various relevant aspects of the sector or only set minimum requirements.⁹⁸ As conceded by the EU Commission, before the adoption of the Offshore Safety directive, the EU rules amounted to “*a broader Union acquis that, often only partially, applied to the offshore sector.*”⁹⁹

That fragmented EU legal framework applicable to offshore energy activities resulted in wide variations in respect of its implementation by the EU Member States. Consequently, different environmental requirements for offshore oil and gas activities applied in the waters of the Member States. That difference is partly explained by the ecological specificities of each maritime area and the different rules under the applicable regional sea agreements. However, the EU has been concerned about the diversification of domestic regulations, because it can lead to additional costs for the industry and hamper the functioning of the internal market. As is analysed below, for a long time the EU did not adopt specific rules on the protection of the marine environment. As a result, the general EU environmental directives also applied to the marine environment. The lack of specific EU marine environmental rules has been remedied gradually since the adoption of the IMP, which was the first of a series of normative developments unequivocally applicable to the EU’s maritime areas. That process has led to the adoption of the Offshore Safety directive, which is the most specific EU instrument on offshore energy production. In that respect, the following section discusses the relevant EU instruments in order of increasing specificity, starting from the initially more general environmental instruments which have implications for offshore energy production, before examining the ones with specific rules on marine environmental protection.

2.1. The fragmented rules applicable to offshore energy production activities: the general environmental law directives

The EU environmental law instruments address several issues related to offshore energy production activities, such as the assessment of their environmental impact and the management of their produced waste. Some of them, though, do not apply directly to offshore energy production activities. Under this category, the EU instruments which seek to protect the marine environment and its biodiversity, can pose contextual restrictions on the location and operation of such potentially harmful activities. However, as illustrated below, these general EU environmental

98 Communication from the Commission to the European Parliament and the Council, Facing the Challenge of the Safety of Offshore Oil and Gas Activities, 12 October 2010, COM (2010) 560 final, 4.

99 EU Commission, Proposal for a Regulation of the European Parliament and of the Council on Safety of Offshore oil and Gas Prospection, Exploration and Production Activities, COM (2011) 688 final, 27 October 2011, 3.

instruments only offer a piecemeal regulation of the environmental risks posed by offshore energy activities at the EU level. That said, these EU environmental law directives do not operate in a legal vacuum. Instead, they apply within the context of global and regional agreements on the protection of marine biodiversity, including the CBD,¹⁰⁰ the Ramsar,¹⁰¹ the CMS¹⁰² and its regional sub-agreements,¹⁰³ the regional sea agreements applicable in the marine waters surrounding the EU, as well as subsequent EU instruments specifically relevant to marine environmental protection.

2.1.1. *Assessing the Impact of Offshore Energy Activities: the EIA directive*

The EU has implemented the Espoo Convention and its Kiev Protocol through the EIA and SEA directives. Both of these legal instruments are directly relevant to offshore energy production activities. The EIA directive aims to harmonise the principles of assessing the environmental impacts of specific activities and introduce the minimum requirements for such assessments at the EU level. Arguably, the directive has contributed to overcoming some of the inherent weaknesses of the Espoo Convention.¹⁰⁴ Specifically, the EIA directive requires the conducting of an EIA before offshore energy projects not only when they are susceptible to causing transboundary environmental impacts but also when their impacts are confined within the marine zones falling under the jurisdiction of an EU Member State.

The EIA directive makes the conduct of EIAs compulsory for offshore energy production activities under certain conditions. For offshore oil and gas activities, Annex I provides that an EIA is mandatory for commercial offshore oil and gas extraction where the amount exploited exceeds 500 tonnes a day.¹⁰⁵ Therefore, the directive does not necessitate the carrying out of an EIA unless it concerns relatively large-scale offshore oil and gas projects.¹⁰⁶ However, the Espoo Convention has included offshore oil and gas extraction in its Appendix I, making the conduct of an EIA mandatory without envisaging any threshold for such projects.¹⁰⁷ Therefore, as long as an offshore oil and gas installation is likely to cause significant adverse transboundary environmental impact, Member States are required to conduct an EIA according to their commitments under the Espoo Convention, regardless of the quantities of hydrocarbons extracted. In that respect, the two legal instruments seem to complement each other.

100 Convention on Biological Diversity (adopted on 5 June 1992, entered into force 28 December 1993) 1760 UNTS 79.

101 Convention on Wetlands of International Importance especially as Waterfowl Habitat (adopted on 2 February 1971, entered into force 21 December 1975) 996 UNTS 245.

102 Convention on the Conservation of Migratory Species of Wild Animals (adopted on 23 June 1979, entered into force 1 November 1983) 1651 UNTS.

103 See chapter 6, sub-section 3.3.2.

104 See chapter 6, sub-section 2.4. for a discussion on the shortcomings of the Espoo Convention concerning offshore energy production activities.

105 EIA directive, Annex I, 14.

106 Relevantly, the ECJ in the case of *Kornhuber* concluded that the scope of this provision does not cover exploratory drilling for oil and gas. Since the provisions links the obligation to conduct an EIA to the amount of hydrocarbons extracted, it provides for certain thresholds which must be exceeded daily. That indicated that it only aims at offshore energy projects which undertake relatively large-scale extraction operations, see ECJ, C-531/13, Judgment of 11 February 2015, paras 23-25.

107 See chapter 6, sub-section 2.4.

Moreover, Annex II of the EIA directive has explicitly included offshore wind energy installations, industrial installations for the production of electricity and plants for hydroelectric energy production. Therefore, it has brought all types of marine renewable energy generation projects under its scope of application.¹⁰⁸ In contrast, the Espoo Convention has only included offshore wind farms under its Annex I, referring to activities which presumably can cause significant transboundary environmental damage and, thus, makes the conduct of an EIA mandatory only in their case. On that account, the EIA directive arguably provides broader protection concerning marine renewable energy production activities than the Espoo Convention.¹⁰⁹

The European Parliament called for an expansion of the EIA directive to cover all offshore energy project phases in 2011. It stressed the need to add specific requirements for EIAs in the case of such projects in deep waters, complex wells and challenging drilling conditions.¹¹⁰ Nonetheless, the 2014 amendment of the EIA directive did not address these calls. Therefore, some offshore energy projects still fall under Annex II of the EIA directive. As far as projects falling under Annex II are concerned, the EU Member States enjoy a broad margin of discretion to decide whether an EIA is necessary based on a case-by-case examination. However, they have to carry out screening to determine whether the project could cause significant impacts. For instance, Member States have introduced screening thresholds for offshore wind farms based on the number of wind turbines, their capacity for electricity production, and their size.¹¹¹ This requirement applies to any change or expansion of installations, which have been authorised, executed or are due to be executed.¹¹²

The Member States' discretion is also subject to judicial scrutiny by the ECJ.¹¹³ In particular, the ECJ has declared that the Member States' discretion is limited by the obligation set out in article 2(1) of the EIA directive.¹¹⁴ Its article 2(1) provides that projects which are likely to have significant effects on the environment, by virtue of their size, nature or location, must be subject to an EIA. In addition, article 4(3) of the EIA directive obliges the Member States to consider all the relevant selection criteria laid down in Annex III, *inter alia*, the environmental sensitivity of the geographic area that the installations may affect. A Member State cannot decide to consider only the size of the project and disregard the other criteria.¹¹⁵ Crucially for offshore oil and gas activities, Annex III, as amended in 2014, explicitly requires the Member States to take into account "*the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge*".¹¹⁶

108 EIA directive, Annex II, energy industry, sub section 3, a and h.

109 As mentioned in the previous chapter, only wind farms are included under the Annex to the Espoo Convention, and, thus, presumably require the prior conducting of an EIA when they might create significant transboundary impact, see chapter 6, sub-section 2.4.

110 EU Parliament Report *supra* n 72, 7.

111 EU Commission (2015) Interpretation of Definitions of Project Categories of Annex I and II of the EIA Directive, 44-45.

112 ECJ, C-215/06, Judgment of 3 July 2008, para 108.

113 K Talus, *EU Energy Law and Policy: A Critical Account* (Oxford University Press, 2013) 204.

114 ECJ, C-121/03, *Commission v Spain*, Judgment of 8 September 2005, para 87.

115 ECJ, C-66/06, *Commission v Ireland*, Judgment of 20 November 2008, paras 62-64.

116 EIA directive, Annex III, 1(f).

2.1.2. *The partial regulation of waste disposal from offshore oil and gas installations under the Waste Framework directive*

Another EU instrument with potential implications for the environmental management of offshore oil and gas activities is the Waste Framework directive,¹¹⁷ which aims to lay down measures for the protection of the environment by preventing or reducing the adverse impacts of the generation and management of waste.¹¹⁸ The directive defines wastes in a broad way, including waste oils used for industrial installations.¹¹⁹ According to the ECJ, the directive applies fully to accidental oil spills. In the case concerning the Erika tanker accident, the ECJ ruled that hydrocarbons accidentally spilt at sea constitute waste within the meaning of the directive, where they are no longer capable of being exploited or marketed without prior processing.¹²⁰

Similarly, oil accidentally released from offshore oil and gas drilling appears to fall under the directive's definition of waste. Therefore, its release in the marine environment suffices for imposing an obligation to clean it up on the polluter.¹²¹ In the case of a severe oil leak from offshore oil and gas installations, the operator would be perceived as a producer of waste for the directive and thus would bear the costs of waste management. By contrast, it is debatable whether operational hydrocarbon discharges can qualify as waste because they are not accidentally released and, therefore, do not appear to fall under the scope of the directive. The calls by the EU Commission and the EU Parliament for a legislative clarification on the applicability of the directive to offshore oil spills have been shelved.¹²² It is, though, noteworthy that the revised list of waste referred to in article 7 of the Waste Framework directive explicitly includes residues resulting from exploration, mining, quarrying of minerals, such as wastes from mineral excavation, drilling muds, and other drilling wastes.¹²³

2.1.3. *The Birds and Habitats directives and offshore energy production activities*

The Birds and Habitats directives form the main instruments for the implementation of the Bern Convention on the Conservation of European Wildlife and Natural Habitats¹²⁴ and the Bonn Convention on the Conservation of Migratory Species of Wild Animals at the EU level.¹²⁵ Initially, some Member States had interpreted the

117 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and Repealing Certain Directives.

118 Waste Framework directive, article 1.

119 Waste Framework directive, article 3(1) and 3(3).

120 C-188/07, *Commune de Mesquer*, Judgment 24 June 2008, where the ECJ concluded that oil following a shipwreck, mixed with water and sediment, drifting along or being washed onto the coast of Member States constitutes waste within the meaning of the directive.

121 Waste Framework directive, article 15(1).

122 Commission Staff Working Paper, Impact Assessment Accompanying the document Proposal for a Regulation of the European Parliament and of the Council on Safety of Offshore Oil and Gas Prospection, Exploration and Production Activities, COM (2011) 688 final, 46-47, EU Communication from the Commission to the European Parliament and The Council, Facing the Challenge of the Safety of Offshore Oil and Gas Activities, COM (2010) 560 final, 2.3.

123 Decision 2014/955/EU amending Decision 2000/532/EC on the List of Waste Pursuant to Directive 2008/98/EC of the European Parliament and of the Council, 18 December 2014.

124 Bern Convention on the Conservation of European Wildlife and Natural Habitats, (adopted on 19 September 1979, entered into force 1 June 1982) UKTS 56.

125 F Fleurke, and A Trouwborst, 'European Regional Approaches to the Transboundary Conservation of Biodiversity: The Bern Convention and the EU Birds and Habitats Directives', in L Kotze, and

scope of application of these directives restrictively, stipulating that their obligations under these instruments are limited to their internal waters and territorial seas. However, the ECJ clarified that the Habitats directive should also apply in the EEZ and the continental shelf of Member States, insofar as they exercise sovereign rights and jurisdiction in those areas.¹²⁶ In the Court's view, as long as a Member State has jurisdiction over the continental shelf or the EEZ, so does the EU.¹²⁷ Nonetheless, the implementation of area-based protection mechanisms under the directives in the marine environment has been reportedly slow in comparison to that on land.¹²⁸ That difference might be partially attributed to the fact that the Annexes to the Habitats directive have a somewhat limited focus on marine species and their habitats.¹²⁹ At least in comparison to the OSPAR List of marine protected species,¹³⁰ the Habitats directive leaves much to be desired concerning the coverage of marine species and their habitats.

The directives' objective is the achievement of a "*favourable conservation status*" for the animal and plant species and their natural habitats falling under their scope to contribute to biodiversity conservation within the EU.¹³¹ Among others, the directives cover few marine species¹³² and areas relevant to their biodiversity.¹³³ The nature directives use two main approaches to achieve their goals. First, they require the EU Member States to establish area-based protection measures to maintain or restore the conservation status of natural habitats and protected species.¹³⁴ Following a procedure involving the Member States and the EU Commission, sites of importance for habitats and species are designated as "Special Areas of Conservation" (SACs).¹³⁵ Collectively these SACs, alongside the special protection areas (SPAs) established

T Marauhn (eds) *Transboundary Governance of Biodiversity* (Martinus Nijhoff, 2014) 137.

- 126 C-6/04, *Commission v United Kingdom*, Judgment 20 October 2005. Similarly, it is argued that the Birds directive applies in maritime zones, where EU Member States exercise sovereign rights and jurisdiction. Such interpretation is in line with the relevant case-law of the ECJ, which has recognised that EU's competence to adopt instruments aimed at the conservation of marine biological diversity covered all maritime zones to the high seas, see ECJ, C-3/4 and 6/76 *Cornelis Kramer and others*, Judgment of 14 July 1976.
- 127 In C-347/10, *Salemink*, Judgment of 17 January 2012, the ECJ ruled that work carried out on fixed or floating installations on the Netherlands' continental shelf for the exploitation of offshore resources was to be considered work in the territory of the State for the purposes of applying EU law, see also ECJ, C-405/92, *Mondiet*, Judgment of 24 November 1993.
- 128 S Luk, and S Gegerson, 'Marine Species Protection and Management in the European Union. Who Will Save our Dolphins?', in C-H Born, A Cliquet, H Schoukens, D Misonne, and G van Hoorick (eds) *The Habitats Directive in its EU Environmental Law Context. European Nature's Best Hope?* (Routledge, 2014) 406.
- 129 European Commission (2007) Guidelines for the establishment of Natura 2000 Network in the Marine Environment: Application of the Habitat Directive, 14.
- 130 See chapter 6, sub-section 3.3.1.
- 131 Habitats directive, article 2, Birds directive, articles 1 and 2.
- 132 For example, many marine birds fall under Annex I of the Birds directive, while the duty to designate SPAs also applies with regard to migratory marine birds, which are not listed thereunder.
- 133 Luk and Gegerson (2014) *supra* n. 128, 404. However, the authors argue that the EU Directives cover significantly fewer marine species and habitats than the related Bern Convention, which the directives aim to implement at the EU level. That is partly attributable to the provision of article 4(1) of the Habitats directive which requires a high evidentiary burden to identify protection sites for aquatic species which range over wide areas.
- 134 Member States are required to use the ecological criteria, which are provided in the Annexes of the directives, to select and delimitate sites of protection, see Habitats directive, Annex III.
- 135 Habitats directive article 3.

under the Birds directive,¹³⁶ are intended to form an ecologically coherent network of protected areas, called Natura 2000.¹³⁷

Within these designated areas, Member States must take the necessary conservation measures, included within a framework of protective actions detailed under the directives.¹³⁸ Plans or projects which may cause significant disturbances to species and their habitats are subjected to a restrictive authorisation system.¹³⁹ Any plan or project not directly connected with or necessary to the management of the site, but likely to have adverse effects on it, is subject to an appropriate assessment of its implications for the conservation status of the protected area. Based on such evaluation, the competent authorities can only move forward with the project after having ascertained that it will not adversely affect the integrity of the site concerned.¹⁴⁰ The ECJ has read the relevant obligation in light of a strict application of the precautionary principle.¹⁴¹ In that respect, the ECJ has determined that under the Habitats directive, plans or projects may only be authorised “*where no reasonable scientific doubt remains as to the absence of harmful impacts*”.¹⁴² Such strict application of the precautionary principle is particularly relevant for marine species and their habitats because “*the availability of data at a regional scale of distribution of Annex II species is very sparse, and data are not available for all marine areas*”.¹⁴³

The Birds and Habitats directives can have significant implications for the authorisation of offshore energy production activities even though they do not explicitly exclude such activities from taking place in marine areas falling within the Natura 2000 network. When such projects take place within protected areas, the authorising State must prove that the operation will not harm the specific conservation goals set out for the area concerned.¹⁴⁴ Therefore, their potential impacts must be evaluated on a case-by-case basis, considering the particular formulation of conservation objectives for each site. In other words, the nature directives require an appropriate assessment of plans or projects, such as offshore energy production, that may significantly impact a designated Natura 2000 site. Such an evaluation is mandatory unless it can be excluded based on objective information that the proposed activities will have a significant effect on the area in question.¹⁴⁵ If the proposed

136 Birds directive, article 3.

137 Habitats directive, article 3.

138 Habitats directive, article 6(1). The EU Commission has issued a series of guidance documents, which can assist Member States in the implementation of their duties under the Habitats directive, see “Managing Natura 2000 sites. The provisions of article 6 of the Habitats directive”, “Assessments of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of article 6(3) and (4) of the habitats directive”, “Guidance document on article 6(4) of the habitats directive”, available online at: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm.

139 Habitats directive, article 6(3) and (4).

140 *Ibid*, article 6(3).

141 Langlet and Mahmoudi (2016) *supra* n. 11, 358-359, see also C-127/02, Judgment of 7 September 2004, para 44.

142 ECJ, C-127/02, paras 58 and 61.

143 European Commission, Guidelines for the Establishment of the Natura 2000 Network in the Marine Environment: Application of the Habitats and Birds Directive, May 2007, para 4.3.1.

144 S van Hees (2018) ‘Large Scale Water-related Innovative Renewable Energy Projects and the Habitats and Birds Directives: Legal Issues and Solutions’, *European Energy and Environmental Law Review*, 20-21.

145 ECJ, C-127/02, paras 43-44.

offshore energy project might cause lasting adverse effects on the integrity of the protected site, then it should, in principle, be forbidden according to the directives.¹⁴⁶ For instance, wave or tidal energy turbines might prevent or risk preventing certain marine species from reaching their protected marine habitats and, thus, adversely affect their conservation status.¹⁴⁷ According to the precautionary principle, such prohibition is to apply even in a case of scientific uncertainty regarding the impacts of the proposed offshore energy project.

Even when offshore energy projects take place outside designated protected areas, the Member States are still bound by their duty under article 6(2) of the Habitats directive to take all necessary measures to avoid deterioration and disturbance caused by such activities.¹⁴⁸ However, that does not mean that such projects are strictly forbidden under the nature directives. Under certain conditions, they can be authorised even if they adversely affect protected sites.¹⁴⁹ The Habitats directive provides that where there are no alternative solutions and the project must be conducted for imperative reasons of overriding public interest despite a negative assessment about its implications, the Member State can authorise it but needs to take compensatory measures.¹⁵⁰ For instance, the production of marine renewable energy to achieve climate change mitigation goals can be considered as an overriding public interest which could justify the authorisation of relevant projects. However, whether or not such interest should be prioritised over conservation goals needs to be assessed individually.¹⁵¹ Thus, the directive offers a tool to balance competing interests, but the outcome of this delicate balancing exercise also depends on the relevant facts.¹⁵²

The second approach for biodiversity conservation under the nature directives is the establishment of a system of strict protection for animal species listed in the Habitats directive,¹⁵³ and the species of birds covered by the Birds directive, both within and outside the protected areas. These measures are much broader in reach than the ones related to the protection of Natura 2000. They include prohibiting several harmful activities, such as deliberate killing or capture, destruction of natural habitats and disturbance of species, particularly during the period of breeding and

146 Habitats directive, article 6(3).

147 van Hees (2018) *supra* n. 144, 21.

148 D Owen, 'The Marine Implementation of the EC Birds and Habitats Directives: The Cases of Shipping and Oil Exploration Compared', in L Visser (ed) *Challenging Coasts: Transdisciplinary Excursions into Integrated Coastal Zone Development* (Amsterdam University Press, 2004) 176.

149 If the site concerned hosts a priority species or habitat, the only considerations which may be raised are those relating to human health or public safety, or after the Commission has issued an opinion, to other imperative reasons of overriding public interest, article 6.

150 Habitats directive, article 6(4).

151 S van Hees (2018) *supra* n 144, 27, who refers to two decisions by the highest Dutch administrative court, which has accepted that wind energy projects could be deemed to be necessary and thus of overriding public interest, when the competent authority substantiates why that interest should be prioritized over the conservation goals of a particular site.

152 As discussed below, the potential incompatibility of offshore energy developments with the protection of species and habitats may also be resolved through maritime spatial planning, which can operate as a valuable tool for an integrated decision-making process to avoid or minimise environmental conflicts at the project level, see also E van Doorn, and S F Gahlen, 'Legal Aspects of Marine Spatial Planning' in K Yates, and C Bradshaw (eds) *Offshore Energy and Marine Spatial Planning* (Taylor & Francis, 2018) 81.

153 Habitats directive, articles 12 and 13, Birds directive, article 5.

rearing.¹⁵⁴ The ECJ has interpreted the meaning of the term “deliberate” quite broadly, encompassing not only actions taken intentionally to kill or capture protected species but also those which, at the very least, accepted the resulting killing or capture as a possibility.¹⁵⁵ What is required for an action to be deliberate is that the actor, in light of the available scientific information, is sufficiently aware and informed that the action will be likely to lead to an offence against a species and yet performs the action.¹⁵⁶

Even when the taking is not forbidden as deliberate, Member States are under a strict obligation to establish monitoring systems to control the incidental capture and killing of species and “*take further research or conservation measures as required to ensure that incidental capture and killing does not have a significant negative impact on the species concerned*”.¹⁵⁷ The ECJ has clarified that the directives impose an obligation of due diligence, which does not only require prohibiting the enumerated activities but also the taking of all measures to ensure that the prohibitions are not violated or circumvented in practice.¹⁵⁸ It presupposes the adoption of preventive measures, which must be enforced concretely.¹⁵⁹ Additionally, the strict species and habitats protection framework makes the monitoring of their conservation status mandatory on a systematic and permanent basis.¹⁶⁰ To that end, Member States must allocate sufficient resources to facilitate offshore enforcement and monitoring.¹⁶¹

Such a reading of the direct obligations towards species protection has significant implications for offshore wind farms, which can apparently lead to substantial fatalities of migratory birds, bats and marine mammals, and disturb their aquatic habitats.¹⁶² As discussed in chapter 6, scientific bodies under nature conservation agreements have obtained scientific data on the effects of wind farms on various marine species, birds and bats.¹⁶³ In light of the increasing scientific evidence regarding their effects on protected species, authorising States and operators of wind farms are and should be aware of the risks posed by such offshore installations. Thus, the potential killing or capture of protected species caused by offshore wind farms would be deliberate in the meaning of the directives, because the actors have made an informed decision to proceed with the operation, accepting the risk for the protected species. Consequently, Member States are under a duty to ensure that offshore wind energy activities do not result in such prohibited actions.

154 Habitats directive, article 13.

155 ECJ, C-221/04, *Commission v Spain*, Judgment of 18 May 2006, para 72.

156 European Commission (2007) ‘Guidance document on the strict protection of animal species of Community interest under the Habitats directive 92/43/EEC’, para II.3.1.

157 Habitats directive, article 12(4).

158 ECJ, C-518/04 *Commission v Greece*, Judgment of 16 March 2006, C-221/04, *Commission v Spain*, Judgment of 18 May 2006.

159 ECJ, C-183/05, *Commission v Ireland*, Judgment of 11 January 2007, paras 29, 30.

160 Habitats directive, article 11. Comparable duties are laid out in the Birds directive, see articles 5 and 9.

161 For instance, the Advocate General in the case of *Commission v Ireland* (C-183/05) decided that Ireland’s monitoring measures were “*ad hoc and confined to certain geographical areas*” and for that reason held that Ireland had failed to establish that protected species under the Habitats directive were subject to a comprehensive, systematic and ongoing monitoring programme and that the resources allocated were meagre, see Opinion of AG Leger, para 84.

162 See chapter 6, sub-section 3.3.2.

163 See chapter 3, sub-section 3.1. and chapter 6, sub-section 3.3.2.

Given the rapid development of offshore wind energy generation in the EU, the EU Commission has issued a guidance document that aims to ensure that such projects are compatible with the provisions of the Birds and Habitats directives.¹⁶⁴ Similarly, the production of other sources of energy at sea, either due to the emission of polluting substances or the introduction of light, noise or any other source of energy to the marine environment, could be considered as deliberate disturbance of protected species and areas under the nature directives. That understanding was confirmed by the ECJ, which has held that the use of noisy explosives to construct an offshore gas pipeline amounted to deliberate disturbance of cetaceans protected under the Habitats directive.¹⁶⁵

According to the EU Commission's view, Member States must take measures to prevent "any disturbing activity that affects the survival chances, the breeding success or the reproductive ability of a protected species or leads to a reduction in the occupied area". Therefore, any authorisation of such projects should consider their potential impacts on species of EU interest covered by the two directives, even outside protected areas. To avoid the refusal of future renewable energy projects, mainly because of the scientific uncertainty regarding their environmental impacts on protected species and their habitats, Member States may use mitigation measures or promote further scientific research to ensure that uncertainty is diminished. Examples of such mitigation measures can be found in the recommendations produced by treaty bodies to international agreements, such as the regional sea agreements or the global and regional nature conservation conventions.¹⁶⁶

As is the case with most of the general EU environmental instruments, neither of the directives requires regional cooperation or any kind of normative harmonisation across neighbouring States for the achievement of their goals.¹⁶⁷ However, both directives acknowledge that the effective conservation of protected species and their natural habitats constitutes a matter of a transboundary nature.¹⁶⁸ Therefore, their provisions could be interpreted as requiring cooperation among the Member States bordering a marine region, when that cooperation is necessary for the achievement of the favourable conservation status of protected marine species. In particular, at least as far as marine species and habitats are concerned, the duties under the nature directives must be interpreted in the light of the relevant duties of regional cooperation under the MSFD,¹⁶⁹ which was explicitly formulated to promote marine environmental protection. Such an interpretation seems to be more in line with the *effet utile* doctrine emphasised in the case-law of the ECJ, which requires Member States to adopt the most effective implementation measures of EU directives to achieve specific environmental results, despite their considerable discretion on how to achieve them.¹⁷⁰

164 EU Guidance on Wind Energy Development in Accordance with the EU Nature Legislation (2011) available online at: https://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf.

165 ECJ, C-183/05, *Commission v Ireland*, para 36.

166 See chapter 3, sub-section 3.1. and chapter 6, sub-section 3.3.2.

167 Fleurke and Trouwborst (2014) *supra* n. 125, 142.

168 Birds directive, recital 4, Habitats directive, recital 5.

169 MSFD, articles 5(2) and 6(2).

170 Fleurke and Trouwborst (2014) *supra* n. 125, 144.

2.1.4. *The scarcity of environmental considerations in the Hydrocarbons Licensing directive*

The Hydrocarbons Licensing directive provides another example of the broader EU “*acquis*” that applies to offshore oil and gas activities.¹⁷¹ This directive lays down the conditions for granting authorisations for the prospection, exploration, and production of hydrocarbons. Before the adoption of the Offshore Safety directive, it was the most specific EU instrument with direct implications for offshore oil and gas operations. The Hydrocarbons Licensing directive establishes common rules which Member States must follow when issuing petroleum extraction licenses to ensure a competitive, non-discriminatory and transparent EU market and improve the security of energy supply. To that end, it deals with competitive aspects of licensing procedures in the field of hydrocarbons exploitation to ensure equal access for entities across the EU. The directive explicitly recognises the sovereign rights of Member States over hydrocarbon resources in waters falling under their jurisdiction.¹⁷² In that respect, it allows each Member State to set its requirements for granting exploitation permits. It appears that, in this fashion, the directive wholly overlooks the fact that offshore drilling activities for the exploitation of hydrocarbons are not merely a domestic issue, because they may have significant impacts in areas beyond the jurisdiction of the authorising State. Furthermore, it does not impose any restrictions on determining the geographical areas for exploiting hydrocarbons. However, the Member States have to report annually on the opened sites, the authorisations granted, the entities holding those permits and the reserves within their territory.

Article 6(2) of the Hydrocarbons Licensing directive confirms that the Member States may, to the extent justified by the need to protect the environment and biological resources, impose conditions and requirements on the operation of oil and gas production activities. Despite acknowledging the prerogative of Member States to impose conditions and requirements for the exploitation of hydrocarbon resources when these are justified for the protection of the environment and the conservation of biological diversity, the directive seems to allow a broad discretion to States to decide upon them. Thus, the provision appears to be redundant because taking such measures for the protection of the environment and marine biological resources is already required by the precautionary principle.

In contrast with the strict pronouncements of the precautionary principle under certain specified instruments,¹⁷³ the Hydrocarbons Licensing directive does not create any duty on the Member States to impose any preventive or precautionary measures as requirements for issuing licences for the exploration and exploitation of hydrocarbon resources. Therefore, it has a rather insignificant impact on Member States’ sovereign rights to adopt environmental protection measures in respect of offshore energy production activities. Its limited influence on EU Member States’ regulatory discretion becomes evident if it is compared with the prohibition on authorising any offshore oil and gas activities, which might have an impact on the

171 Directive 94/22/EC of the European Parliament and of the Council of 30 May 1994 on the Conditions for Granting and Using Authorizations for the Prospection, Exploration and Production of Hydrocarbons.

172 Hydrocarbons Licensing directive, preamble.

173 See for instance the formulation of the precautionary principle under the OSPAR and Helsinki Convention, chapter 6, sub-section 1.4.

marine environment, under the Mediterranean Offshore Protocol.¹⁷⁴ In light of these deficiencies of the Hydrocarbon Licensing directive, the EU Commission called for the adoption of EU measures setting common standards for environmental performance and safety of offshore oil and gas activities following the internationally accepted best practices.¹⁷⁵

2.2. The development of specific rules for marine environmental protection: EU legislation functioning within the Integrated Maritime Policy

Until 2008, except for fisheries regulation, EU environmental legislative instruments devoted to the protection of the marine environment were rather scarce.¹⁷⁶ The MSFD marked a significant milestone, as it was the first EU law instrument expressly aimed at protecting and preserving the marine environment, preventing its deterioration and, where practicable, restoring marine ecosystems in areas where they have been adversely affected.¹⁷⁷ In contrast with the pre-existing EU environmental directives, the MSFD explicitly states that its geographical scope of application covers sea areas under the sovereignty and jurisdiction of Member States according to UNCLOS.¹⁷⁸ The directive embraces a variety of environmental issues that have already been the subject of pre-existing general environmental EU instruments. Nonetheless, the MSFD does not purport to replace those general environmental instruments but, instead, aims to supplement them in promoting marine environmental protection.¹⁷⁹ For instance, measures adopted for the protection of marine biodiversity under the nature directives or regional sea conventions form part and parcel of the measures required under the MSFD.¹⁸⁰

Similarly, the Maritime Spatial Planning (MSP) directive seeks to contribute to the achievement of the objectives of the IMP, and notably to support the sustainable development of seas and oceans and the sustainable use of marine resources through the application of an ecosystem-based approach.¹⁸¹ Supplementing the MSFD, the MSP directive adopts an ecosystem-based approach to ensure that the collective pressure from activities within regional marine ecosystems remains at levels compatible with the achievement of the good environmental status of the seas. This sub-section briefly explores the implications of these two ocean-specific EU instruments on the regulation of offshore energy production activities in EU maritime spaces.

174 See chapter 6, sub-section 3.1.3 and 3.2.3.

175 Commission Communication (2010) *supra* n. 122, 5.

176 It is relevant that while the EU shares competence on marine environmental protection with its Member States, it has exclusive legal competence in the domain of fisheries conservation.

177 MSFD, recital 43.

178 MSFD, article 3(1)(a).

179 MSFD, recitals 6 and 19, article 13(4).

180 A Trouwborst, and H Dottinga (2011) 'Comparing European Instruments for Marine Nature Conservation: The OSPAR Convention, the Bern Convention, the Birds and Habitats Directives, and the Added Value of the Marine Strategy Framework Directive', *European Energy and Environmental Law Review*, 132.

181 MSP directive, recitals, 2 and 3.

2.2.1. *The MSFD and offshore energy production activities*

The MSFD establishes a fundamental duty to achieve the good environmental status of the seas surrounding the EU by 2020.¹⁸² However, it does not prescribe any substantive measures to attain that goal. Echoing the relevant rules under Part XII of UNCLOS, it reiterates the due diligence obligation to protect the marine environment, which allows the Member States discretion as to the measures of implementation. However, in the context of the MSFD, the duty of the Member States to take action towards reaching the objective is embedded in a sophisticated legal framework, which sets the legal parameters for its implementation, provides detailed guidance, and vests the EU with enhanced powers of oversight and compliance control. The MSFD adopts a decentralised, bottom-up approach, where the Member States are responsible for devising marine environmental strategies and measures. These marine strategies must aim towards the preservation and protection of the marine environment and, if practicable, the restoration of marine ecosystems through the application of the precautionary approach.¹⁸³ As in the case of the equivalent obligations under regional sea conventions, Member States must prevent or reduce pollution to ensure that there are no significant impacts on or risks to “*marine biodiversity, marine ecosystems, human health or other legitimate uses of the sea*”¹⁸⁴

Seemingly, the Member States maintain considerable discretion in selecting management measures to achieve the good environmental status of their marine waters. However, the directive includes several checks and balances to restrict that discretion. For instance, Member States need to comply with a series of procedural obligations set out in the directive. The good environmental status is not perceived as a one-off assessment by the Member States. Instead, its meaning can evolve and adapt in light of environmental changes as well as technological and scientific advancements.¹⁸⁵ In that respect, the directive establishes an ongoing obligation to take measures based on periodic assessments of the status of the marine environment, monitor the effects of offshore activities throughout their operation, and formulate specific environmental targets.¹⁸⁶ The MSFD lays down a particular timetable for various actions to be taken by the Member States and the EU Commission with clearly set deadlines.¹⁸⁷ Although the Member States enjoy some flexibility in adopting measures to achieve the goals of the directive, a series of factors influences the precise nature of these measures. Specifically, the adopted measures are strongly correlated with the results of the initial assessment of the environmental status of their waters, the determination of the good environmental status and the establishment of environmental targets, which are assessed and evaluated by the EU Commission. To that end, the Commission may require further information to determine whether

182 The MSFD defines good environmental status (GES) as “*the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations*”, article 3(5).

183 MSFD, article 1(1) and (2).

184 *Ibid*, article 1(2).

185 L Juda (2010) ‘The European Union and the Marine Strategy Framework Directive: Continuing the Development of European Ocean Use Management’, *Ocean Development & International Law*, 39.

186 MSFD, recital 38.

187 MSFD, article 5(2)(a) and (b).

national and regional programmes of measures meet the requirements of the MSFD.¹⁸⁸

Moreover, the MSFD establishes guidelines that need to be adhered to by the Member States to ensure its coherent and consistent application. For example, assessments of the status of the marine environment must be conducted utilising the list of the ecological descriptors found in Annexes III and V of the directive. Also, the precise characteristics of the good environmental status for each marine region are to be determined based on the 11 descriptors found in Annex I of the directive.¹⁸⁹ Among those descriptors, the changing state of biological diversity (descriptor 1), the effects on hydrographical conditions (descriptor 7), and the introduction of energy, including noise, to the marine environment (descriptor 11) are the most relevant to offshore energy production activities.¹⁹⁰ The EU Commission, drawing upon data gathered, *inter alia*, under the regional sea conventions, adopted a decision establishing criteria to be used by the Member States to determine the good environmental status of the marine waters and to guide their assessments of that status.¹⁹¹ These developments attest to the fact that the management approach supported by the MSFD directive, like the approach taken by the regional sea agreements,¹⁹² is science-driven, adaptable and focused on cooperation between States at the regional level.

As its framework nature implies, the MSFD cannot operate as a standalone instrument. Instead, it purports to function within a broader normative framework and complement a system of EU legislative measures and global and regional marine environmental instruments.¹⁹³ The MSFD brings together a whole raft of EU directives and regional sea conventions that apply to the marine environment surrounding the EU.¹⁹⁴ For example, the directive highlights the need for integrating coordination of the efforts to protect the marine environment with the relevant duties under other EU law instruments, such as the Habitats and Birds directives to avoid unnecessary duplication of efforts. In respect of the species and habitats protected under these directives, the achievement of the good environmental status entails reaching the favourable conservation status for those species.¹⁹⁵ Interpreting the nature directives in the light of the MSFD could result in broadening the former's scope of protection, because the latter requires the protection of all marine species and

188 MSFD, article 16.

189 MSFD, article 9(1).

190 For instance, according to descriptor 11, EU Member States must keep the introduction of energy and underwater noise at levels that do not adversely affect the marine environment to achieve the good environmental status of their marine waters, see MSFD, Annex I, 11.

191 Commission Decision 2010/477/EU, 1 September 2010. These criteria were revised in 2017, taking stock of relevant values set under regional cooperation structures, including those agreed within the regional sea conventions, see Commission Decision 2017/848, 17 May 2017, recitals 3, and 18 and articles 3(3) and 4(1)(j).

192 See also chapter 6, section 4.

193 MSFD, recital 9.

194 R Long (2011) 'The Marine Strategy Framework Directive: A New European Approach to the Regulation of the Marine Environment, Marine Natural Resources and Marine Ecological Services', *Journal of Energy and Natural Resources*, 13, see also EU Commission (2020) Communication on EU Biodiversity Strategy 2030, COM (2020) 380 final, section 2.2.6 on the restoration of "the good environmental status of marine ecosystems", which highlights that the full implementation of the MSFD alongside the Birds and Habitats directives is essential for the achievement of the good environmental status of marine ecosystems.

195 Habitats directive, article 1.

ecosystems, regardless of whether they are listed in the Annexes of the Habitats and Birds directives. Another significant contribution of the MSFD to the conservation of marine species protected under the nature directives is that the MSFD requires conservation measures within specified deadlines.¹⁹⁶ In that respect, the MSFD reinforces existing obligations under the Birds and Habitats directives.

Regional cooperation and coordination are at the heart of the implementation of the MSFD. The directive requires the Member States to cooperate and coordinate their actions amongst themselves as well as with third States in designing and implementing marine strategies. Such cooperation must occur through the relevant regional bodies and agreements covering the four EU marine regions: the Baltic Sea, the North-East Atlantic Sea, the Mediterranean Sea, and the Black Sea.¹⁹⁷ Even though each Member State is responsible for developing measures specific to its marine waters, these measures need to reflect the broader perspective of the marine region of which it forms part, and they need to contribute to the achievement of the good environmental status of the region.¹⁹⁸ That requirement appears to be consistent with the duty under article 123(1)(b) of UNCLOS, which requires States bordering an enclosed or semi-enclosed sea to endeavour to coordinate the implementation of their rights and duties concerning the protection and preservation of the marine environment.¹⁹⁹

The “region” under the MSFD corresponds to an ecological region, which is defined by its “*hydrological, oceanographic and biogeographic features*”.²⁰⁰ The introduction of marine regions and sub-regions as a management approach seems to be an acknowledgement of the ecological diversity across EU seas. It facilitates the adoption of region-specific measures considering their particular needs. It further promotes the application of ecosystem-approach management at the regional level.²⁰¹ Member States should have sufficient flexibility to focus on the predominant pressures and their environmental impacts on the diverse ecosystems in each region to monitor and assess their marine waters in an effective manner and to enable prioritisation of actions to be taken to achieve the good environmental status.²⁰²

Nonetheless, the directive has some normative weaknesses, which resemble the ones observed in the selected regional sea agreements. For example, the Member States must adopt measures that are “*cost-effective and technically feasible*”,²⁰³ a qualifier that can lower the standard of marine environmental protection. The directive allows the Member States to justify not taking measures when they would be disproportionate, taking into account the risks to the marine environment, provided that there is no further deterioration, and the achievement of good environmental

196 Trouwborst and Dotinga (2011) *supra* n. 180, 141.

197 MSFD, article 4(1).

198 *Ibid*, recitals 10, 11 and 27.

199 See also article 208(4) of UNCLOS with respect to the harmonisation of regulation of seabed activities at the appropriate regional level.

200 MSFD, article 3(2).

201 *Ibid*, article 6. The MSFD explicitly endorses an ecosystem-based approach to the management of human activities in the marine environment, allowing for the sustainable use of ocean resources, but giving priority to achieving the good environmental status of the marine environment through the implementation of the precautionary principle, see MSFD, recitals 8 and 44.

202 Decision 2017/848/EU, 17 May 2017, recital 19.

203 MSFD, article 13(3).

status is not irreversibly compromised.²⁰⁴ Also, article 14 of the MSFD includes some quite generous exceptions. However, socio-economic considerations must not impair the achievement of the good environmental status of marine waters.²⁰⁵ Therefore, the Member States have to interpret the exceptions narrowly.

The MSFD offers an excellent example of how regional cooperation can define and continuously update the standard of care that has to be exercised by States in protecting the marine environment. It plays a meaningful, albeit contextual, role with regard to the environmental regulation of offshore energy activities. Even though it does not contain substantive standards for the prevention of pollution stemming from such activities, it requires States to take all necessary measures and delineates their discretion through a framework of robust procedural obligations strictly overseen by the EU Commission.²⁰⁶ The MSFD integrates the relevant environmental measures taken under regional sea conventions and brings them under the scrutiny of the EU institutions.²⁰⁷ Moreover, it shapes the measures of marine environmental protection through specific descriptors, which are directly relevant to offshore energy production activities. As further mentioned in section 3.3.1., its interaction with the normative and institutional framework of the regional sea conventions can enhance marine environmental protection from offshore energy activities at the EU level.²⁰⁸

2.2.2. *The Maritime Spatial Planning (MSP) directive and offshore energy production*

The 2014 MSP directive marks another critical development towards achieving the ecosystem-based management of marine waters surrounding the EU. The directive defines MSP as “*a process by which the relevant Member States’ authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives*”.²⁰⁹ In the EU context, MSP can serve as a tool to reconcile competing human activities at sea and arbitrate between sectoral interests to manage their assimilative impact on the marine environment.²¹⁰ The recognition that sectoral management approaches often do not measure up to the challenges of marine governance lies at the heart of the MSP concept. On that account, MSP promotes an integrative area-focused management approach.²¹¹ MSP can reconcile conflicting uses of the oceans by assigning them to different areas, as well as identifying activities

204 *Ibid*, article 14(4).

205 It is noteworthy that article 14(1) and (2) attaches numerous preconditions for the application of the exceptions, such as that States must take appropriate ad hoc measures aiming to continue pursuing the environmental targets, and must ensure that modifications or alterations do not permanently preclude or compromise the achievement of the good environmental status at the level of the marine region or subregion concerned.

206 The EU Commission has the power to evaluate the measures adopted at the regional levels and offer guidance for their improvement, see MSFD, article 12.

207 See further discussion in section 3.

208 See *infra* section 3.

209 MSP directive, article 3(2).

210 EU Commission (2008) A Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU, COM (2008) 791 final, 2.

211 The MSFD had recognized that the “*rapidly increasing demand for maritime space for different purposes, such as installations for the production of energy from renewable sources, oil and gas exploration and exploitation...require an integrated planning and management approach*”, see recital 1.

that can co-exist.²¹² In that respect, States could develop MSP in the implementation of their duty under UNCLOS to pay due regard to the rights and duties of third States while they exercise their sovereign rights in their EEZ and continental shelf.²¹³

Member States are required to contribute to the sustainable development of the offshore energy sector, which presupposes that they will protect and improve the quality of the marine environment.²¹⁴ Even though the directive does not create any substantive duties for the protection of the marine environment, it contains procedural obligations that are relevant to offshore energy activities. Member States bear a clear duty to formulate and implement MSP at the domestic level.²¹⁵ While the directive allows them a wide margin of discretion in formulating those plans, it imposes some restrictions, which have implications for offshore energy production. In particular, Member States must include any offshore energy production infrastructure located in their maritime zones in the formulation of their MSP.²¹⁶ Moreover, the directive stresses that MSP should be founded on an enhanced ecosystem-based approach, taking into account not only those environmental, economic, and social elements traditionally associated with sustainable development, but also “safety aspects”.²¹⁷ The latter element refers to the requirement to consider normative developments on the safety of offshore energy activities, such as the 2013 Offshore Safety Directive, analysed in sub-section 2.3.2.

While it seems that the MSP directive entails a robust environmental protection element,²¹⁸ the formulation of MSP is equally relevant for the competitiveness of the EU’s marine economy.²¹⁹ It can play a facilitative role in the development of the offshore energy industry. Specifically, it can boost legal predictability and, thus, attract investment in both traditional hydrocarbons exploitation and marine renewable energy generation.²²⁰ MSP can assist in the resolution or the prevention of conflicts between competing uses of the oceans and, thus, can bring long-term legal certainty, which gives investors the clarity they need to make highly capital-intensive investments in offshore energy infrastructure.²²¹

It should be noted that the duty to formulate MSP is not a one-off event, but consists of an iterative process. The duty entails an ongoing procedure of revising and adapting the plan at regular intervals to take into account changes in environmental

212 M Young (2015) ‘Building the Blue Economy: The Role of Marine Spatial Planning in Facilitating Offshore Renewable Energy Development’, *The International Journal of Marine and Coastal Law*, 158.

213 UNCLOS, articles 56(2) and 78(2), respectively. In fact, the territorial scope of application of the MSP Directive excludes ICZM, as it does not apply in cases where Member States apply terrestrial planning to coastal waters or parts thereof, see MSP directive, recital 17.

214 MSP directive, article 5(2).

215 *Ibid*, article 3(1).

216 *Ibid*, article 8(2).

217 *Ibid*, article 6(b).

218 The directive’s legal basis is founded on the shared competences of the EU under article 192(1) TFEU on environmental policy, article 194(2) TFEU on energy policy, as well as article 100(2) TFEU on sea transport and article 43(2) TFEU on common fisheries policy. The conservation of marine biological resources under the CFP constitutes the only domain where the EU has exclusive competence regarding maritime spatial planning, see article 3 TFEU.

219 A Zervaki (2015) ‘Introducing Maritime Spatial Planning Legislation in the EU: Fishing in Troubled Waters?’ *Maritime Safety and Security Law Journal*, 103.

220 MSP directive, recital 5.

221 N Schaefer, and V Barale (2011) ‘Maritime Spatial Planning: Opportunities and Challenges in the Framework of the EU Integrated Maritime Policy’, *Journal of Coastal Conservation*, 244.

circumstances, as well as technological and scientific developments.²²² That duty is intrinsically connected with the relevant obligations of States to continuously monitor the effects of offshore activities on the marine environment so as to create a scientifically based understanding which underpins the necessary protective measures. In that context, the MSP directive reinforces the duty of States to base their decision-making processes on best available environmental data, *inter alia*, about offshore energy activities.²²³ Moreover, it requires the Member States to organise the sharing of such scientific information and data between them to improve their MSP.²²⁴ Through this process, MSP can play a supporting role in bridging the existing knowledge gap on the impacts that large scale deployment of offshore renewable energy production activities might have on marine ecosystems.²²⁵ Therefore, similar to the MSFD, the MSP calls for an adaptive, science-driven approach to maritime management, which ensures the ongoing refinement of the duties of Member States in achieving the good environmental status of their marine waters.

As in the case of MSFD, the MSP directive aims to boost “enhanced regional cooperation” in accordance with the relevant provisions of UNCLOS to contribute to the achievement of good environmental status through the application of the ecosystem-based approach.²²⁶ To that end, the MSP directive requires Member States bordering a marine region to cooperate with the other coastal States (both EU Member States and third States) surrounding that region when establishing their MSP.²²⁷ That harmonisation of plans at the regional level is in line with the provisions of UNCLOS, which requires cooperation among States bordering enclosed or semi-enclosed seas.²²⁸ The directive explicitly acknowledges the need for the Member States to pay due regard to the specificities of the marine regions, which they border.²²⁹ In particular, it requires that the ecosystem-based approach is applied in a way that is adapted to the specific ecosystems of the different marine regions, taking into account the ongoing efforts within the regional sea conventions, and building on their knowledge and experience in protecting the marine environment.²³⁰ The ecosystem approach, as required under the CBD, has been a source of inspiration for the EU directive on MSP.²³¹ Notably, the MSP directive builds upon the CBD CoP decision XI/18, which required the use of MSP as a tool to enhance the conservation and protection of the marine environment.²³² In addition, MSP as a tool for the implementation of the ecosystem-based approach can be considered as a measure to be included in the marine strategies and programmes of measures elaborated under the MSFD. Indeed, MSP has to be integrated as a measure that allows the planning

222 MSP directive, article 6(3).

223 MSP directive, article 10(2)(a) and (b).

224 *Ibid*, article 10(1).

225 Young (2015) *supra* n. 212, 170.

226 MSP directive, article 1(2).

227 *Ibid*, articles 11 and 12.

228 UNCLOS, article 123(1). See F Maes (2008) ‘The International Legal Framework for Marine Spatial Planning’, *Marine Policy*, 799, where Maes claims that article 123 of UNCLOS can be used as a legal basis for joint MSP initiatives by states bordering enclosed or semi-enclosed seas.

229 MSP directive, article 4(5).

230 *Ibid*, recital 14.

231 The EU is a party to the CBD, which has called for an ecosystem-based approach in the conservation of biological diversity. See CoP to the CBD, Decision V/6, 15-26 May 2000.

232 CBD CoP Decision XI/18, December 2012.

of offshore energy activities to respect the carrying capacity of marine ecosystems alongside their maintenance and, when appropriate, their restoration.²³³

The above analysis illustrates that the EU has developed a relatively sophisticated legal framework regarding the protection of the marine environment by implementing its IMP. However, until 2013, the virtual absence of specific EU legislative instruments relating to the risks from offshore oil and gas activities significantly limited the EU's role in the prevention of pollution from such operations.²³⁴ Even though all the directives mentioned above have implications for offshore energy production activities taking place within the EU, their lack of specificity and their heterogeneity increase the risks posed to the marine environment by the potential of another significant offshore accident. Even though the Offshore Safety directive only partially reinforces the existing "satellite" EU directives,²³⁵ it is at least commendable as it consists of an instrument dedicated to some aspects of offshore oil and gas activities. As its preamble attests, the Offshore Safety directive is embedded in the IMP and forms part of the EU's efforts to achieve the objectives under the MSFD.²³⁶

2.3. Specific EU law developments regarding offshore energy production activities

The Offshore Safety directive appears to confirm that, in many instances, law plays a reactive role as it, unfortunately, develops after significant disasters have occurred.²³⁷ The Deepwater Horizon accident in 2010 functioned as a catalyst for specific normative developments on offshore energy activities at the EU level. In the aftermath of this wake-up call, the EU institutions were alarmed about the potential of major offshore oil and gas accidents to cause devastating and irreversible consequences to the marine environment of the seas surrounding the EU.²³⁸ The establishment of an EU-wide legal framework to ensure the safety of offshore oil and gas activities became all the more necessary because many installations had started to show their age.²³⁹ In addition, the ageing of oil fields near the coasts of the Member States made them less profitable. As a result, the operation of older installations has been taken over by less developed companies, which are sometimes less well-prepared and lack the necessary expertise to prevent significant accidents.²⁴⁰ At the same time, the ongoing need to exploit offshore hydrocarbon resources has attracted the attention of

233 HELCOM – VASAB, Guideline for the Implementation of Ecosystem-Based Approach in Maritime Spatial Planning (MSP) in the Baltic Sea Area, 5.

234 P Volondat, 'La Nouvel Encadrement Européen des Activités Pétrolières et Gazières Offshore' in P Chaumette (ed) *Wealth and Miseries of the Oceans: Conservation, Resources and Borders* (GOMILEX, 2018) 186.

235 *Ibid.*

236 Offshore Safety directive, recital 6 which mentions "By reducing the risk of pollution of offshore waters, this Directive should therefore contribute to ensuring the protection of the marine environment and in particular to achieving or maintaining good environmental status by 2020 at the latest, an objective set out in Directive 2008/56/EC".

237 J de Dieu, 'EU Policies Concerning Ship Safety and Pollution Prevention versus International Rule-Making' in H Ringbom (ed) *Competing Norms in the Law of Marine Environmental Protection – Focus on Ship Safety and Pollution Prevention* (Kluwer Law International, 1997) 146.

238 Offshore Safety Directive, recitals 4 and 6.

239 S Trevisanut, 'Regulating the Decommissioning of Offshore Installations: A Fragmented and Ineffective International Regulatory Framework' in C Banet (ed) *The Law of the Seabed – Access, Uses and Protection of Seabed Resources* (Brill, 2020).

240 P Volondat (2018) *supra* n. 234, 179.

the industry to ultra-deep marine reservoirs, where drilling activities incur a higher risk of devastating environmental repercussions.

In response to an EU Parliament resolution calling for EU action concerning offshore oil and gas exploitation activities,²⁴¹ the EU Commission published a communication, which concluded that environmental and safety aspects of such activities are subject to a heterogeneous body of rules across the Member States.²⁴² According to the EU Commission, the existing fragmented legal framework was inadequate in responding to accidents and created uncertainty concerning the obligations of the industry. In the EU Commission's opinion, introducing "a state of the art framework at EU level" could result in the consistent application of best practices across the EU Member States and could remedy the deficiencies of the pre-existing framework.²⁴³ To that end, the EU Commission formulated an ambitious proposal for the adoption of a regulation, which would automatically be binding at the domestic level without requiring any implementation measures, and thus, could achieve an enhanced harmonisation of the regulatory framework across all the EU Member States.²⁴⁴ The proposed instrument would improve EU legislation in the field of offshore oil and gas activities by addressing specific safety risks, identified in the Impact Assessment conducted by the EU Commission in 2011.²⁴⁵

However, the proposed regulation faced strong opposition from several Member States and relevant stakeholders.²⁴⁶ Due to the concerted pressure exercised by certain Member States and the industry, the format of the proposed instrument changed from a regulation to a directive.²⁴⁷ The main concern regarding the proposed regulation was that imposing a uniform set of rules on all EU Member States would undermine the high safety and environmental standards already applicable in the North Sea.²⁴⁸ Indeed, the lessons and experience gained within the OSPAR framework, regarding

241 EU Parliament, Resolution of 7 October 2010 on EU Action on Oil Exploration and Exploitation in Europe, where the Parliament asked the Commission to propose a new legal framework to ensure the uniform application of enhanced rules on the safety of offshore oil and gas activities across Europe.

242 EU Commission (2010) Communication from the European Commission to the European Parliament and the Council, 'Facing the Challenges of the Safety of Offshore Oil and Gas Activities', COM (2010) 560 final.

243 *Ibid.*, 15.

244 EU Commission (2011) Proposal for a Regulation of the European Parliament and of the Council on Safety of Offshore Oil and Gas Prospection, Exploration and Production Activities, COM (2011) 688 final, 27 October 2011.

245 Commission staff working paper impact assessment accompanying the document proposal for the Regulation of the Parliament and of the Council on safety of offshore oil and gas prospection, exploration and production activities (SEC/2011/1293).

246 Oil and Gas UK, Comments on the Proposed EU Regulation on Offshore Safety, available online at: <https://oilandgasuk.co.uk/continued-concern-over-proposed-eu-regulation-of-offshore-safety/>, where it is highlighted that a directive would encourage Member States which do not currently reach the high standards applied in the North Sea, while allowing them discretion with regard to the implementation measures. In the view of the authors of the Comments, that would protect the existing strong safety regime in Member States, such as the UK, Norway and the Netherlands, and would minimise costs for the operators of such activities, who would otherwise be obliged to strictly abide by the prescriptive rules of the proposed regulation.

247 M Gavouneli 'Oil Spill Response in the EU' in G Handl and K Svendsen (eds) *Managing the Risk of Offshore Oil and Gas Accidents: The International Legal Dimension* (Edward Elgar, 2019) 135.

248 L Schiano di Pepe (2017) 'Environmental Law Principles in the European Union Legislation Governing Offshore Oil and Gas Operations' in Z Keyuan (ed) *Sustainable Development and the Law of the Sea* (Brill, 2017) 109.

the implementation of a goal-oriented approach to prevention of and response to oil pollution from offshore energy activities have been hugely influential in the legislative process, replacing the stricter prescriptive provisions envisaged by the EU Commission.²⁴⁹ A significant issue for the industry and the Member States in the North Sea was that the primarily prescriptive model of regulation used by the USA, which provided for uniform standards across the board without considering the specificities of the Gulf of Mexico, was one of the crucial factors which led to the Deepwater Horizon accident.²⁵⁰ Following intense consultations with the Member States, and tricky negotiations,²⁵¹ an EU instrument in the form of a directive on the safety of offshore hydrocarbon activities was adopted as a compromise solution in June 2013. As already discussed, the choice of a directive allows the Member States and the offshore industry a broader margin of discretion on the measures necessary to achieve their goals and does not prevent them from adopting stricter rules and standards at the domestic level as they see fit.²⁵²

2.3.1. *The lack of specific EU environmental rules on marine renewables*

Notwithstanding the paramount importance of adopting an EU instrument specifically relevant to offshore oil and gas activities, the fact that it does not include any reference to installations for the generation of marine renewable energy cannot be ignored. In a similar fashion to the regional sea conventions, marine pollution and other disturbances of marine ecosystems by the emerging deployment of marine renewables remain virtually unregulated under EU law. Although there are currently no international rules with direct implications for marine renewables, the lack of specific environmental rules and standards in the context of the EU seems somewhat paradoxical, given the emphasis that EU institutions have put on the use of such methods of energy generation.

At the primary EU law level, the new energy specific article 194 of the TFEU explicitly states that, *inter alia*, EU measures must aim to promote renewable energy forms. Indeed, the EU has fostered marine renewable energy generation due to its potential to achieve the EU's climate change objectives,²⁵³ its contribution to energy security, and the improvement of the competitiveness of the EU energy market.²⁵⁴ Given the potential environmental impacts of marine renewables,

249 EU Commission (2010) Communication, *supra* n. 122, 2, stressing that “*the regulatory regime must ensure that industry complies with clear, robust and ambitious rules*”.

250 G Gordon (2014) *supra* n. 32, 143.

251 *Ibid*, 144-150.

252 See TFEU, article 193(1), which provides that Member States can adopt stricter environmental measures, as long as they are consistent with EU law and they are notified to the EU Commission.

253 Most recently, the Council of the EU has stressed the importance of marine renewables and recommended Member States to pay special attention to the emerging blue energy sector, due to its potential in, *inter alia*, mitigating climate change, see EU Conclusions of 19 November 2019, Ocean and Seas Threatened by Climate Change, 14249/19. See also Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the “European Green Deal”, COM/2019/640 final, section 2.1.2. on supplying clean, affordable and secure energy and Communication on the “EU Biodiversity Strategy for 2030”, COM (2020) 380 final, 20 May 2020, section 2.2.5.

254 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Offshore Wind Energy: Action Needed to Deliver on the Energy Policy Objectives for 2020 and beyond, COM (2008) 786 final,

the EU has emphasised its responsibility to ensure the protection of the marine environment from the risks they pose.²⁵⁵ The EU institutions have repeatedly called for the stepping up of efforts to protect the marine environment from the adverse consequences of cumulative impacts from offshore activities to keep offshore energy activities compatible with achieving the good environmental status of European seas by 2020.²⁵⁶ For instance, the recent EU Parliament Resolution on international ocean governance in the context of the 2030 Sustainable Development Goals emphasised that the EU must achieve an equitable transition away from offshore hydrocarbons exploitations and highlighted the major potential of energy produced from the flow of waves and tides or from the thermal and salinity gradients of oceans and seas to become an alternative cost-effective form of energy generation.²⁵⁷ Nonetheless, offshore oil and gas exploitation remains an effective way of covering the EU's energy needs. For instance, despite the calls by the EU Parliament and its recent attempts to impose a ban on Arctic offshore oil and gas drilling,²⁵⁸ Member States continue their oil and gas exploitation activities, sometimes even within or near marine protected areas.

The Renewable Energy directive provides the general regulatory framework for the promotion of energy from renewable sources within the EU.²⁵⁹ Since the adoption of the 2009 EU Renewable Energy directive, the Member States must meet individually renewable energy production targets to meet the collective EU-wide renewable energy production targets set out for 2020.²⁶⁰ The recast 2018 Renewable Energy directive obliges Member States to collectively ensure a binding EU renewable energy target by 2030, without setting any additional national goals.²⁶¹ Even though the subsequent Renewable Energy directives introduced mandatory targets to increase the use of renewable energy at the EU level, the means to achieve the objectives are primarily left to the discretion of Member States.²⁶² In that respect, marine renewables could play a key role in meeting the EU's renewable energy targets. Whereas offshore wind energy production is the most advanced form of marine renewables within the EU, other sources of ocean energy such as tidal energy,

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Blue Energy Action Needed to Deliver the Potential of Ocean Energy in European Seas and Oceans by 2020 and beyond, COM (2014) 8 final.

255 Decision 1386/2013/EU of the European Parliament and of the Council on a General Union Environment Action Programme to 2020, 20 November 2013, Annex, paras 21-22.

256 EU Council Conclusions on Blue Growth of 26 June 2017, 10662/17, para 24.

257 EU Parliament Resolution of 16 January 2018 on international ocean governance: an agenda for the future of our oceans in the context of the 2030 SDGs, 2017/2055(INI), paras 90 and 92.

258 *Infra* n. 390 and accompanying text.

259 B Huarte Melgar, 'EU Energy Law in the Maritime Sector', in Leal-Arcas and Wouters (2017) *supra* n. 36, 345.

260 Directive 2009/28/EC of the European Parliament and of the Council on the Promotion of the Use of Energy from Renewable Sources, Annex I, which prescribed different targets for each Member State.

261 Directive 2018/2001/EU of the European Parliament and of the Council of 11 December 2018 on the Promotion of the Use of Energy from Renewable Sources, article 1. However, the directive applies the principle of non-regression, requiring that Member States must ensure that their renewable energy consumption does not fall below their 2020 targets, see RED II, article 3(4).

262 T Iliopoulos (2018) 'Dilemmas on the Way to a New Renewable Energy Directive', *European Energy and Environmental Law Review*, 216-217, ECJ, Joint Cases C-215/16, C-216/16, C-220/15, C-221/16, Judgment of 20 September 2017, paras 29, 32.

wave energy, and the installation of solar panels on offshore platforms could also contribute to reaching those targets.²⁶³

Nonetheless, it is remarkable that neither of the Renewable Energy directives includes any rules relating to the regulation of environmental aspects of renewable energy production.²⁶⁴ So far, EU legislation appears to be overly preoccupied with economic considerations, such as removing the barriers for the development of marine renewables and attracting investments by harmonising the national support schemes, to ensure energy security and the functioning of the internal EU energy market. Indeed, the EU has been somewhat reluctant to lay down environmental restrictions and requirements.²⁶⁵ As a consequence, in the absence of a specific EU instrument regulating the environmental impacts of marine renewable energy activities, ocean energy projects are still subject to the various EU directives which have implications for the protection of the marine environment.²⁶⁶ Perhaps the MSFD is the most significant EU law development regarding the regulation of marine renewables, integrating the relevant rules and standards developed under regional sea conventions around Europe. As already mentioned in chapter 6, these regional sea agreements create at least a core of legal duties with implications for marine renewables, complementing the relevant EU secondary legislation.²⁶⁷ Even so, the existing EU environmental legal framework has many basic gaps when it comes to the regulation of emerging marine renewable energy activities.²⁶⁸ Consequently, Member States retain broad discretion in formulating their domestic protection measures and are enabled to prioritise economic interests related to the production of marine renewable energy. The normative gap regarding the regulation of marine renewables at the EU level becomes evident in juxtaposition to the specific EU directive applying only to offshore oil and gas activities.

2.3.2. *The normative content of the Offshore Safety directive in the context of regional sea agreements*

As the title of the Offshore Safety directive reveals, its material scope of application is narrower than the corresponding scope of the relevant rules under the examined regional sea agreements. Specifically, the directive does not contain any provision directly related to the prevention of operational pollution from offshore oil and gas installations.²⁶⁹ Instead, it focuses only on the prevention and control of accidental

263 S van Hees (2018) 'Investment State Aid for Ocean Energy Projects in the EU: A Lack of Integration with the Renewable Energy Directive?', *European State Aid Law Quarterly*, 222-223.

264 A Cudennec (2016) 'The European Legal Framework for Marine Renewable Energies', *Ocean Yearbook*, 495.

265 V Gutierrez Castillo, and J Garcia Blesa (2012) 'The Environmental Protection Regimes Governing Marine Renewable Energies in the EU and their Implementation in the Marine and Coastal Areas of South Spain', *Spanish Yearbook of International Law*, 41.

266 R Long (2014) 'Harnessing Offshore Wind Energy in Europe: Legal Challenges and Policy Conundrums in the European Union', *International Journal of Marine and Coastal Law*, 12-13, Churchill (2011) *supra* n. 4, 416.

267 See chapter 6, section 3.3.1. See also C Soria-Rodriguez (2016) 'Marine Renewable Energies and the European Regional Seas Conventions', *Climate Law*, 333-335.

268 E Martinez Perez, 'The Environmental Legal Framework for the Development of Blue Energy in Europe', in G Andreone (ed) *The Future of the Law of the Sea* (Springer, 2017) 142-143.

269 J Juste-Ruiz (2014) 'La Directive Européenne sur la Sécurité des Opérations Pétrolières et Gazières en Mer', *Revue Juridique de l'environnement*, 286.

pollution relating to offshore oil and gas activities.²⁷⁰ Its objective appears to be twofold. First, the directive aims to prevent as far as possible the occurrence of major accidents²⁷¹ relating to offshore oil and gas operations and thus protect the marine environment. Second, it aims to improve response mechanisms in case of such accidents through dealing with cooperation between the Member States and establishing emergency preparedness and response plans, including coordination with third States. These two pillars are complemented by an attempt to clarify the applicable liability regime.²⁷² However, the primary goal of this sector-specific EU instrument was to achieve the consistent application across the EU of best practices on offshore oil and gas safety, as established in the most advanced region, *i.e.* the North Sea.

The directive's provisions fall short of the Commission's initial expectations. The original rules of the proposed regulation were phrased in more wide-ranging terms and referred to minimum requirements, which would apply broadly to the industry and the national authorities involved in offshore oil and gas operations performed following the awarding of an authorisation.²⁷³ Moving away from the ambitious objectives of the initially proposed regulation,²⁷⁴ the directive seeks to establish minimum requirements²⁷⁵ for preventing major accidents in offshore oil and gas operations and limiting the consequences of such accidents.²⁷⁶ Instead of achieving a uniform level of safety across the EU, the directive only strives to establish minimum harmonisation among the Member States.²⁷⁷ Moreover, its scope of application has been limited to encompass only major accidents,²⁷⁸ as restrictively defined by the directive, within the marine waters under the jurisdiction of Member States.²⁷⁹

270 The directive defines oil and gas operations as “*all activities associated with an installation or connected infrastructure, including design, planning, construction operations and decommissioning thereof, related to exploration and production of oil or gas, but excluding conveyance of oil and gas from one coast to another*”, article 2(3).

271 Offshore Safety directive, article 2(1). According to these provisions it appears that a major environmental incident only falls within the scope of the directive insofar as it causes or is likely to cause damage that seriously affects the environment in accordance with the Environmental Liability directive (2004/35/EC) or/and as a result of an accident that causes or is most likely to cause death or serious harm to human health.

272 M Gavouneli (2019) *supra* n. 247, 133. Still, it seems that the EU Directive leaves much leeway for Member States to decide on matters of responsibility and liability. By contrast, the Mediterranean Offshore Protocol introduced much stricter obligations, such as the mandatory financial guarantees for offshore operators, see article 27(2)(b).

273 Proposal for a regulation, *supra* n. 99, article 1(1) which aimed to lay down minimum requirements for industry and national authorities involved in offshore oil and gas operations.

274 L Schiano di Pepe, ‘Offshore Oil and Gas Operations in the Mediterranean Sea: Regulatory Gaps, Recent Developments and Future Perspectives’ in J Juste Ruiz, V Bou Franch (eds) *Derecho Del Mar Y Sostenibilidad Ambiental en El Mediterraneo* (Tirant, 2014) 381.

275 The wording “minimum requirements” is deemed necessary to demonstrate that the subsidiarity and proportionality principles required under article 5 TEU have been satisfied, see Schiano di Pepe (2017) *supra* n. 248, 106.

276 Offshore Safety directive, article 1(1).

277 According to article 193 TFEU measures adopted by the EU “*shall not prevent any Member State from maintaining or introducing more stringent protective measures*”, so long as they are compatible with the EU Treaties and duly notified to the EU Commission.

278 Given the fact that the gravity of the accident cannot be predicted in advance, it would be more logical, at least as far as the prevention aspect of the directive is concerned, to cover any potential accidents related to offshore oil and gas activities.

279 Offshore Safety directive, article 2(1) and (2).

In recognition of the cardinal role of the offshore industry in the prevention of and response to major accidents, the directive creates a due diligence obligation to ensure that operators take “*all suitable measures*” to prevent such accidents in offshore oil and gas operations.²⁸⁰ The pressure from the offshore industry, which expressed a strong preference for a goal-oriented and self-regulatory approach, was successful.²⁸¹ Several duties require the Member States to “ensure” that operators comply with the – mostly procedural – rules of the directive.²⁸² In that regard, the directive implicitly acknowledges the need for a goal-oriented approach to regulation, which allows the offshore energy industry to choose the best feasible techniques and measures to achieve the required safety goals.²⁸³ Like the examined regional sea agreements, the Offshore Safety directive relies heavily on the requirement of prior licensing for offshore oil and gas activities. The system of licensing is operationalised to ensure that such activities will be conducted only by operators who have obtained the appropriate authorisation, after demonstrating that they can meet the minimum safety standards.²⁸⁴ All offshore oil and gas production infrastructure has to operate in specific licensed areas and can only be operated by the authorised operators.²⁸⁵

In that context, the directive seeks to harmonise the licensing procedures for offshore oil and gas activities across the EU. Primarily, the Member State assessing an applicant’s capacity to meet the directive’s requirements needs to consider that applicant’s technical and economic capacity.²⁸⁶ Expanding the requirements of the Hydrocarbons Licensing directive, the Offshore Safety directive provides that such capacity must be sufficient to cover liabilities potentially deriving from the applicant’s offshore oil and gas activities.²⁸⁷ A significant novelty of the directive is that the Member States during the licensing procedure need to consider duly “*the risk, the hazards and any other relevant information relating to the licensed area concerned, including, where appropriate, the cost of degradation of the marine environment*” as referred to in the MSFD.²⁸⁸ Also, the directive highlights that, when assessing the

280 *Ibid*, article 3(1). Similarly, Member States must ensure that operators take all suitable measures to limit the consequences for human health and the environment, article 3(3).

281 See Oil & Gas UK (2018) Response to Evaluation Roadmap for Offshore Safety Directive Review, stressing that “*As the UK has many decades experience of the benefits brought by a goal-setting approach to safety legislation, including technological innovation and continuous improvement, we would be opposed to any moves to increase prescription or to move to a different legislative model in the Directive as a result of the review*”. Similarly, on the importance of goal-based regulation for the offshore industry, see IOGP (2018) Response to Evaluation Roadmap for Offshore Safety Directive Review.

282 In that respect it is argued that it becomes difficult to identify whether the provisions are meant to create obligations on both Member States and the industry and to specify the content of those duties, J Juste-Ruiz (2014) *supra* n. 269.

283 Compare with the relevant provisions of the examined regional sea conventions, which all require States to take measures to prevent pollution from offshore oil and gas activities, see chapter 6, section 3.1.

284 Offshore Safety directive, articles 4 and 11, see also L Schiano di Pepe, ‘International Marine Environmental Law and the EU: An Adequate Framework to Address Environmental Emergencies?’ in I Govaere, and S Poli (eds) *EU Management of Global Emergencies: Legal Framework for Combating Threats and Crises* (Brill, 2014) 309.

285 Offshore Safety directive, article 6, compare with Offshore Protocol which also imposes the same obligations on *de facto* operators of offshore oil and gas activities.

286 Similarly, Hydrocarbons Licensing directive, article 5(1).

287 Offshore Safety directive, article 4(3).

288 *Ibid*, article 4(2)(a).

technical and financial capabilities of applicants for a licence, the Member States must pay special attention to any environmentally sensitive marine environment and ecosystems, such as those protected under the nature directives and protected areas established under environmental agreements.²⁸⁹

Notwithstanding those references to environmental considerations, the directive still appears to lack substantive marine environmental protection considerations in the licensing of offshore oil and gas activities. Although the protection of the environment forms the legal basis for the adoption of the directive, its provisions do not refer to nor do they reflect the strict precautionary principle,²⁹⁰ as enshrined in the examined regional sea conventions. As previously mentioned, the Hydrocarbons Licensing directive provides that the adoption of restrictive measures can be justified on the grounds of environmental protection. However, neither of the directives requires licences to be subjected to restrictions or to be refused based on the potential adverse impacts of offshore oil and gas activities.²⁹¹ It is somewhat troubling that the directive provides that the “*Member States shall require operators to ensure ... that the residual risks of major accidents to persons, the environment and offshore installations are acceptable*”²⁹² Given that the directive does not substantiate an objective way to determine the acceptable level of residual risks to the marine environment, that provision seems to be inconsistent with the strict version of the precautionary principle as enshrined in the TFEU.²⁹³ Although the directive explicitly mentions the sensitive ecological nature of marine protected areas, it is merely a consideration to be given “special attention” when assessing the economic and technical capacity of the operators. In other words, the competent authority is allowed to authorise offshore oil and gas operations in such fragile areas when the operators demonstrate that they have the means either to control the results of a major accident or to compensate for the liability incurred by such accident.²⁹⁴

Rather than focusing on prevention, the directive appears to emphasise response to accidental pollution and the attribution of liability to the operators.²⁹⁵ Although the EIA directive forms part of the EU legal framework applicable to offshore oil and gas activities, it is regrettable that the Offshore Safety directive does

289 Offshore Safety directive, article 4(6).

290 J Juste-Ruiz (2014) *supra* n. 269, 23.

291 See Mediterranean Offshore Protocol, article 4(2).

292 Offshore Safety directive, article 3(4).

293 TFEU, article 191(2).

294 Such approach seems to be in line with the provisions of the Nature directives, which as explained above, do not strictly forbid the operation of offshore energy projects within or in proximity of specially protected areas, see *supra* sub-section 2.1.3.

295 Offshore Safety directive, recital 63, articles 7 and 38. The approach adopted by the directive, according to which the operators are to be liable for damages from major offshore oil and gas accidents, seems to comply with the polluter pays principle. Pursuant to article 39 of the directive, on behalf of the Commission research has been conducted on the availability of financial security instruments among Member States, see “Civil liability, financial security and compensation claims for offshore oil and gas activities in the EEA”, available online at: https://ec.europa.eu/energy/sites/ener/files/documents/BIO_Offshore%20Civil%20Liability_Revised%20Final%20Report%20%2831102014%29.pdf. See also Report from the Commission to the European Parliament and the Council on liability, compensation and financial security for offshore oil and gas operations pursuant to article 39 of directive 2013/30/EU, COM (2015) 167 final, and relevant Report by the EU Parliament, INI (2014) 2352, 1 December 2016.

not include any cross-references²⁹⁶ to the requirement for EIAs before the licensing process.²⁹⁷ Despite the calls by the EU Parliament for expanding the scope of the duty to conduct EIAs to all offshore oil and gas operations,²⁹⁸ the directive failed to do so. However, the lack of references to EIAs in the Offshore Safety directive can be remedied through its implementation in the context of the other relevant obligations stemming from the corresponding rules in regional sea conventions, the Espoo Convention and the EIA directive. On a positive note, as far as the potential effects of the planned offshore oil and gas operations on the marine environment are concerned, the directive requires enhanced public participation under the relevant EU directives, which implement at the EU level the Aarhus convention.²⁹⁹ Through the provisions for public participation, the directive allows the interests of the coastal communities to set conditions for the issuance of authorisations for offshore oil and gas activities.³⁰⁰

Concerning response and preparedness for accidental pollution, the directive includes several duties relating to the cooperation among the Member States and third States, the drafting of internal and external emergency response plans, as well as transboundary emergency response plans, including measures to protect third States.³⁰¹ In the case of potential transboundary accidental pollution, the directive imposes on the State of origin a duty of notification of the potentially affected Member States, the EU Commission and, assuming reciprocity, third States surrounding the same marine region.³⁰² In the event of accidents with potential transboundary effects, the directive appears to follow the model of rules on cooperation established under the Espoo agreement. For instance, a potentially affected Member State may request the provision of all relevant information from the State of origin, and they must endeavour to adopt measures together to prevent and control the repercussions of the accident.³⁰³ These obligations under the Offshore Safety directive appear to build upon the relevant international obligations of States under the OPRC regarding transboundary inter-State cooperation and the establishment of emergency response plans.³⁰⁴

Nonetheless, going beyond the traditional State-centred obligations found in many of the regional sea agreements,³⁰⁵ the Offshore Safety directive assigns an exceptional role to the industry. In particular, the operators of offshore oil and

296 However, the preamble to the directive explicitly refers to the need for Member States to “*establish and apply specific provisions in accordance with the UN/ECE Convention on Environmental Impact Assessment in a Transboundary Context done at Espoo*”, Offshore Safety directive, recital 33.

297 Schiano di Pepe (2017) *supra* n. 248, 112. As mentioned above, the EIA directive does not apply to all offshore oil and gas exploitation activities, but only those producing at least five hundred tonnes a day, EIA directive, article 4(1) and Annex 1, para 14, see also *supra* sub-section 2.1.1.

298 EU Parliament Resolution of 13 December 2011, *supra* n. 42.

299 Offshore Safety directive, article 5, see also F Schneider (2014) ‘Le droit de l’Union européenne au défi de la sécurisation des activités pétrolières et gazières en mer’, *Revue juridique de l’environnement*, 290.

300 Volondati (2018) *supra* n. 234, 194.

301 Offshore Safety directive, articles 27-32.

302 *Ibid*, article 31(5) and (6).

303 *Ibid*, articles article 31(1) and (3).

304 See chapter 3, 1.3.1.

305 See, however, the Mediterranean Offshore Protocol, which also creates a series of obligations for offshore *de facto* and *de jure* operators of offshore oil and gas activities, see chapter 6, sub-sections 3.1.3. and 3.2.3.

gas installations are under an obligation to prepare and submit to the competent domestic authority a series of documents relating to the management of risks associated with those activities.³⁰⁶ Namely, the operators must provide a corporate major prevention policy,³⁰⁷ a company safety and environmental management system,³⁰⁸ a report on major hazards,³⁰⁹ an internal emergency response plan,³¹⁰ and a description of the installation's scheme of independent verification.³¹¹ The major hazards reports are probably the most crucial of those documents.³¹² These reports are tailored for particular installations³¹³ and must demonstrate that all major hazards relating to their operation have been assessed and the appropriate measures have been identified to reduce risks to an acceptable level for the marine environment, safety, and health.³¹⁴ Once offshore oil and gas activities have commenced, operators are required to ensure that their corporate prevention policy applies throughout the life-cycle of the installations by taking all necessary measures, including setting up appropriate monitoring mechanisms to ensure the effective implementation.³¹⁵

Instead of imposing prescriptive standards for the operation of the offshore installations, the directive calls for the adoption of a series of procedural measures to reduce risks of offshore oil and gas activities. According to the goal-oriented approach promoted by the directive, the offshore industry is primarily responsible for the safety of its oil and gas operations. The industry needs to take care of the costs involved in the case of major accidents. Moreover, the Offshore Safety directive contains ample references to “best practices and standards”, which resembles the primary obligation of States to ensure the use of BAT and BEP under the regional sea conventions.³¹⁶ The references to those best practices and standards are an acknowledgement that offshore oil and gas activities are regulated by norms which are often established by the offshore energy industry. These norms regularly follow a performance-based approach rather than being based on more rigid prescriptive requirements imposed by the Member States.³¹⁷ To disseminate such best regulatory practices established

306 Offshore Safety directive, article 11.

307 *Ibid*, article 19(1).

308 *Ibid*, article 19(5)(b).

309 *Ibid*, article 12.

310 *Ibid*, article 14.

311 *Ibid*, article 15.

312 Annex I of the directive lists the minimum formal requirements for the major hazards report, offering a list of 16 individual points to be adhered to by the operators. In practice, almost all other legal requirements of the directive form part of the report on major hazards, see H Jessen (2015) ‘Future Risk/Future Requirements: Directive 2013/30/EU – An Efficient European Reaction to the Montara and Macondo Accidents?’, paper presented during INTERSPILL 2015 in Amsterdam, available online at: <http://www.interspill.org/previous-events/2015/WhitePapers/Interspill2015ConferenceProceedings/25%20MARCH%202015/Future%20Risk%20-%20Recent%20Trends/Directive-201330EU-An-Efficient-European-Reaction-to-the-Montara-and-Macondo-Incidents.pdf>, 14.

313 Offshore Safety directive, article 12(3).

314 *Ibid*, article 12(2) and Annex I.2(3).

315 *Ibid*, article 11(1) (h), (i) and (j). See also articles 15 and 16.

316 Relevantly, the EU Commission has initiated an exchange of information, which culminated in the development of a Guidance Document on BAT for selected environmental issues during offshore hydrocarbon exploitation activities, see EU Commission, Best Available Techniques Guidance Document on Upstream Hydrocarbon Exploration and Exploitation, 27 February 2019.

317 M Nordquist, and A Fausser, ‘Offshore Drilling in the Outer Continental Shelf: International Best Practices and Safety Standards in the Wake of the Deepwater Horizon Explosion and Oil Spill’ in

by the offshore industry, reinforce the exchange of information, and enhance cross-border cooperation among the Member States, the EU Commission has created the European Union Offshore Oil and Gas Authorities Group.³¹⁸ That forum brings together the competent national authorities from all the regional seas around the EU as well as representatives of the industry, following the example of the North Sea Offshore Authorities Forum (NSOAF).³¹⁹

Seemingly, the directive places significant responsibility upon the industry for drafting the appropriate measures. However, State supervision of the industry's normative developments and monitoring of their implementation are indispensable.³²⁰ One of the most significant lessons learned from the Deepwater Horizon blowout is that the existence of binding rules cannot safeguard the safety of operations and prevent major accidents. Instead, it is the rigorous compliance with those rules by the industry that plays the biggest role.³²¹ To that end, Member States must take all measures and show constant vigilance to ensure that operators fully comply with the regulatory framework and with their commitments undertaken in the documents mentioned above, such as the major hazards report.³²² The Member States need to regulate and monitor the activities of the authorised operators of offshore oil and gas installations to ensure the prevention of accidental pollution.³²³ That requires that the competent authorities do not simply accept, as a matter of trust, any measures which the industry suggests (such as the major hazard reports, notification of well or combined operations). The authorities need to assess the validity of those instruments regularly.³²⁴ For instance, the competent authority has to review and evaluate the updates of the major hazards plan, which are due at least once every five years in the case of production installations, to keep abreast of technological, scientific, and environmental changes.³²⁵

Additionally, the directive envisages independent verification and continuous inspection of offshore installations before the commencement of the operation and periodically after the start of the activities to assess whether the operator complies with the major hazards report and all other documents submitted for the issuing of the licence.³²⁶ The mechanism of independent verification also allows for the application of BEP in the industry.³²⁷ Appropriate monitoring has to take place regularly to ensure a high level of safety and environmental protection.³²⁸ The directive requires its functional and institutional separation from the competent authority which is mandated to issue the licences, so as to safeguard the independence and the

Lodge and Nordquist (2014) *supra* n. 57, 115-145.

318 EU Commission, Decision of 19 January 2012, OJ 2012/C 18/07.

319 Schneider (2014) *supra* n. 299, 285.

320 *Ibid.*, 284.

321 S Vinogradov (2013) 'The Impact of the Deepwater Horizon: The Evolving International, Legal Regime for Offshore Accidental Pollution Prevention, Preparedness and Response', *Ocean Development & International Law*, 350.

322 Offshore Safety directive, article 8(1).

323 *Ibid.*, article 3(1) and (3).

324 Gordon (2014) *supra* n. 32, 168-169.

325 Offshore Safety directive, article 12(7).

326 *Ibid.*, articles 17, 21(3).

327 J Rochette, W Wemaere, L Chabason, S Callet (2014) 'En Finir Avec Le Blue Pétrole: Pour Une Meilleure Régulation des activités Pétrolières et Gazières Offshore', *IIDRI*, 20.

328 Offshore Safety directive, article 19(2).

objectivity of the competent monitoring authority.³²⁹ In the case of a serious breach of the safety standards described in those documents, the competent monitoring authority may require the operator to completely cease the production activities,³³⁰ when the prevention measures are not deemed to be appropriate. Moreover, the Member States are required to initiate investigations following major accidents that occur within their jurisdiction.³³¹

At the institutional level, the Offshore Safety directive has been supplemented by the expansion of the mandate of the European Maritime Safety Agency (EMSA).³³² In particular, the directive provides that the EMSA must offer assistance, at the request of Member States, with the preparation and execution of external emergency response plans, especially where there are transboundary effects within and beyond offshore waters of Member States.³³³ The directive enables the EMSA to assist the Member States for the monitoring and control of accidental offshore pollution using its technical expertise in the field. However, it is a rather deplorable omission that the EMSA was not granted any independent monitoring and supervision role to oversee the implementation of the directive by the Member States.³³⁴ This omission is considered a significant drawback of the Offshore Safety directive, given that the proposed regulation had opted for the creation of an independent EU agency.³³⁵

Nonetheless, the Offshore Safety directive cannot be assessed as a self-standing EU law instrument. Its implementation takes place within the context of the already existing elaborate rules and standards under the examined regional sea conventions.³³⁶ Normative interactions with those regional rules could remedy certain deficiencies of the directive.³³⁷ In that respect, the real challenge has been not the establishment of new standards for the prevention of and response to accidental pollution, but rather the need for convergence among the existing regulatory frameworks and for harnessing synergies among the simultaneously applicable regional rules.³³⁸ The relevance of establishing synergies with regional sea arrangements is particularly evident in the

329 *Ibid*, article 4(2).

330 *Ibid*, articles 15(2), 16(2) and 19(9).

331 *Ibid*, article 26.

332 The need for such an expansion of EMSA's mandate to also cover offshore oil and gas installations had already been stressed by the Parliament, see EU Parliament Resolution of 7 October 2010, para 19.

333 Offshore Safety directive, article 10(2)(b).

334 N Ros, 'Problems of Marine Pollution Resulting from Offshore Activities According to International and European Law' in A Caligiuri (ed) *Offshore Oil and Gas Exploration and Exploitation in the Adriatic and Ionian Seas* (Editoriale Scientifica, 2015) 41.

335 That agency would conduct inspections and investigations, monitor performance, ensure consistency in the implementation of the relevant obligations by both the Member States and the offshore industry and contribute to capacity building for the less developed Member States, see Proposal for regulation, *supra* n. 99, 9.

336 It is, however, noticeable that the EU Commission had suggested that the fragmentation of the legal framework between Member States in the regulation of offshore oil and gas activities reflected *inter alia* "the virtual absence of international law instruments", see Proposal for a regulation, *supra* n. 99, 3. That statement seems to be an exaggeration, given the elaborate regional rules and standards provided by the examined regional sea conventions around Europe. It could, however, be read as an excuse used by the EU Commission, which was deemed necessary to justify the adoption of the EU directive in light of the principles of subsidiarity and proportionality.

337 E Truilhé, and C Bouillard (2017) 'Quel encadrement juridique pour les activités pétrolières offshore en droit de l' Union européenne?' in C Oliveira (ed) *Meio Ambiente Marinho e Direito*, Volume II, available online at: <https://hal.archives-ouvertes.fr/hal-01829840/document>, 15.

338 Gavouneli (2019) *supra* n. 247, 133.

case of the Mediterranean, where the Offshore Safety directive applies to only one-third of the coastal States. Any significant divergences between the EU directive and the Mediterranean Offshore Protocol could lead to further fragmentation of the legal regime applicable in the Mediterranean Sea and to the creation of competing obligations, with unforeseeable consequences on the environmental status of the environment.³³⁹ Also, cooperation with third States in respect of preventing major offshore oil and gas accidents can be enhanced through interactions of the EU legal framework with the existing regional cooperation arrangements created by the regional sea conventions.³⁴⁰ It is, however, noticeable that in comparison with the MSFD, the Offshore Safety directive does not include many references to regional sea arrangements.³⁴¹

3. Normative interactions between EU law and Regional Sea Conventions

The concurrent participation of EU Member States in regional sea conventions and the geographical overlap of the application of EU law with those conventions gives rise to normative interactions among them. The efforts of State parties to protect the marine environment under the regional sea conventions are linked to normative developments under EU law. In practice, the implementation of the obligations of parties to regional sea conventions occurs within the framework of EU law. In some cases, the States of the European Economic Area must also implement measures under the MSFD, and the Habitats and Birds directives. At the same time, the implementation of EU obligations under the MSFD and MSP directives has triggered new developments in regional sea conventions, illustrating the complementarity of the efforts at the EU and the regional sea conventions level. As discussed in this section, these interactions between the EU law and regional sea conventions have been mutually beneficial. The EU's participation in the regional sea conventions has had significant legal impacts on the further development and implementation of the conventions. The existing institutional frameworks under regional sea conventions have been engaged to achieve the EU's marine environmental protection goals, whilst regional sea conventions have built upon the EU's initiatives, incorporating them in their strategies towards reaching their environmental objectives.

3.1. The legal effects of the EU's participation in regional sea cooperation frameworks

EU environmental instruments duly consider both the economic and social development of the EU as a whole and the balanced development of its regions.³⁴² The extensive use of directives, instead of regulations or specific decisions, which

339 The EU Council, however, was of the view, that the Offshore Protocol is an area that is largely covered by the EU acquis. "*It includes, for example, aspects such as the protection of the marine environment, the assessment of environmental impacts and environmental responsibility*", see Council Decision of 17 December 2012 on the accession of the EU to the Offshore Protocol, para 12.

340 Gavouneli (2019) *supra* n. 247, 138.

341 It is also interesting that the 2010 Communication from the Commission which aimed to assess the regulatory framework applicable throughout the EU does not seem to pay special attention to the elaborate rules and standards produced under regional sea conventions with respect to the offshore energy sector. For that reason, it concluded that there is a virtual absence of international rules regulating the safety of offshore oil and gas activities, which is not an actual representation of the existing regional frameworks.

342 TFEU, article 191(3).

apply a “one size fits all” approach, is considered more appropriate to address the varied problems in each region because directives allow more discretion in their implementation by the Member States.³⁴³ The choice of directives allows a differentiated level of environmental protection when socio-economic and environmental factors differ across marine regions. In that respect, the EU Strategy for the Baltic Sea Region provides an example of the regional implementation of the IMP, as it is designed to accommodate the local specificities of the Baltic Sea.³⁴⁴ According to the EU Council, the Strategy should help address the urgent environmental challenges related to the Baltic Sea and, at the same time, provide the basis for external cooperation in the region with non-EU States.³⁴⁵ This macro-regional Strategy aims to enhance cooperation among coastal States, by strengthening existing cooperation schemes in the Baltic Sea region instead of developing new ones.³⁴⁶ Although the EU Strategy for the Baltic Sea is a non-binding policy and cannot create any duty for non-EU States, it requires close cooperation with Russia.³⁴⁷ The EU Commission’s assessment of the strategy has concluded that it has already borne precise results in terms of projects and more integrated policymaking in the Baltic Sea region.³⁴⁸

However, such initiatives have not yet been developed for other EU maritime regions.³⁴⁹ Most EU environmental instruments, with the exception perhaps of the MSFD and MSP, do not explicitly provide for such differentiation among EU regions.³⁵⁰ A general issue is that the EU seeks to harmonise the applicable standards in maritime areas surrounding the EU Member States and does not wish to address the particularities of regional seas.³⁵¹ That is because EU environmental instruments appear to have a double purpose: they do not only aim to enact high environmental standards but also to guarantee a level playing field for the offshore industry. Differentiated standards in different regions could lead to additional costs for the industry and hamper the functioning of the EU internal market.³⁵² Therefore, the relevant directives instead aim towards reaching a minimum harmonisation among

343 L Juda (2007) ‘The European Union and Ocean Use Management: The Marine Strategy and the Maritime Policy’, *Ocean Development & International Law*, 266.

344 Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Baltic Sea Region, 10 June 2009, COM (2009) 248 final, 6, referring to the unique features of the Baltic Sea and its environmental pressures which demand a macro-regional approach to management.

345 EU Council Presidency Conclusions, 14 December 2007.

346 R Benson (2009) ‘An EU Strategy for the Baltic Sea Region: Good Intentions Meet Complex Challenges’, *Swedish Institute for European Policy Studies*, 3.

347 EU Commission (2013) Commission Staff Working Document Accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Concerning the Added Value of Macro-Regional Strategies, SWD (2013) 233 final, 31.

348 EU Commission (2013) Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Concerning the Added Value of Macro-Regional Strategies, 486 final, 11.

349 On the EU’s proposal for an environmental strategy for the Mediterranean, see EU Commission (2006) Communication from the Commission to the Council and the European Parliament, Establishing an Environmental Strategy for the Mediterranean, COM (2006) 475 final.

350 Langlet and Mahmoudi (2016) *supra* n. 11, 101-102.

351 *Ibid.*

352 Communication from the Commission to the European Parliament and the Council, Facing the challenge of the safety of offshore oil and gas activities, 12 October 2010, section 2.2.

the Member States.³⁵³ Such an approach seems consistent with primary EU law. Specifically, article 193 of the TFEU provides that environmental measures adopted by the EU “*shall not prevent any Member State from maintaining or introducing more stringent protective measures*” insofar as they are compatible with the EU Treaties and are notified to the Commission.

In contrast, under the regional sea agreements examined, parties have adopted measures requiring a varied level of protection, according to their ecological, political, and economic characteristics. In light of the diverse regional needs and capabilities, the effectiveness of creating uniform environmental standards would be contested by the Member States bordering different regions. In that respect, a balance needs to be struck between the objective of creating an EU-wide level playing field and the objective of protecting diverse ecosystems and needs of marine regions all over Europe.

3.1.1. The “Europeanisation” of regional sea conventions and the EU’s role in their standard-setting processes

The gradual adoption by the EU of a body of secondary legislation on marine environmental protection has led to significant normative overlaps with the regional sea agreements applying to seas around Europe. At the same time, the gradual enlargement of the EU has also resulted in considerable parallel membership with the examined regional sea agreements.³⁵⁴ For instance, the vast majority of parties to the OSPAR Convention are also Member States of the EU. In addition, many EU directives apply to those parties that belong to the EEA, such as Iceland and Norway. In the Baltic Sea, all of the coastal States, except Russia, have become members of the EU.³⁵⁵ In light of these circumstances, it is not surprising that the EU has opted to participate in the regional environmental agreements applying to EU waters. Due to the EU’s international legal personality under the EU treaties, it is equipped with the external competence to accede to these agreements. Another critical factor has been, of course, that the agreements in question were opened for signature by regional international organisations.³⁵⁶

Under those circumstances, the EU became a party to the Helsinki Convention following its revision in 1994.³⁵⁷ It was only four years later that the EU acceded to the 1992 OSPAR Convention;³⁵⁸ previously, the former European Community (EC) had been a party to the Paris Convention because the protection of the marine environment from land-based sources of pollution fell within its competences.³⁵⁹

353 J Hans, and H Vedder, *European Environmental Law* (Europa Law Publishing, 2012) 108.

354 D Tromp, and K Wieriks (1994) ‘The OSPAR Convention: 25 Years of North Sea Protection’, *Marine Pollution Bulletin*, 625.

355 Sweden and Finland joined the EU in 1995, while Poland, Lithuania, Latvia and Estonia joined in 2004.

356 Pursuant to article 34 of the 1992 Helsinki Convention, the agreement was explicitly opened for signature by both States and by the European Economic Community. Similarly, see OSPAR, article 25(d).

357 Council Decision 94/157/EC on the Conclusion on Behalf of the Community of the 1992 Revised Helsinki Convention, 21 February 1994 and Council Decision 94/156/EC on the Accession of the Community to the 1974 Helsinki Convention, which was deemed necessary to secure its participation until the entry into force of the revised agreement.

358 Council Decision 98/249/EC on the Conclusion of the Convention for the Protection of the Marine Environment in the North-East Atlantic, 7 October 1997.

359 L de La Fayette (1999) ‘The OSPAR Convention Comes into Force: Continuity and Progress’, *International Journal of Marine and Coastal Law*, 261.

In the Mediterranean, the EC had already ratified the initial Barcelona Convention alongside its Dumping Protocol in 1977.³⁶⁰ Subsequently, the EU acceded to the revised 1995 Barcelona Convention³⁶¹ and all its protocols.³⁶²

Since the EU retains shared competence concerning marine environmental protection, it is, in principle, entitled to participate in the decision-making processes within regional sea conventions alongside its Member States. In that respect, the EU's right to attend and vote could significantly affect environmental standards set out thereunder. That concerned not only the EU Member States that wished to maintain their sovereign rights over the regulation, *inter alia*, of offshore energy activities, but also the non-EU States, which were worried about the disruptive effect of EU's participation in regional sea bodies. For that reason, parties to the regional sea agreements have drafted the relevant provisions on voting rights in such a way as to circumvent the EU's voting power.

Under the OSPAR Convention, the EU cannot exercise its right to vote in the case where its Member States use their power to vote and *vice versa*.³⁶³ In the case of exclusive competences, the EU can vote instead of its Member States. The EU is then entitled to votes equal to the number of its members that are parties to the OSPAR Convention.³⁶⁴ In that respect, the EU could not only block the adoption of decisions and recommendations within the OSPAR Commission but also has the potential to force the adoption of decisions.³⁶⁵ However, since the EU's competence regarding the regulation of offshore energy activities remains shared, its Member States retain their rights to vote.³⁶⁶ Therefore, it seems that the formal impact of the EU's participation in the OSPAR Commission on the regulation of offshore energy activities thereunder is marginal. However, the EU Commission and the Council have attempted to encourage the adoption of OSPAR decisions concerning offshore oil and gas installations.³⁶⁷ For example, representatives of the EU Commission regularly participate and express the EU's views on matters that touch upon its competence at the annual meetings of the OSPAR Offshore Industry Committee.³⁶⁸

A similar rule, restricting the power of the EU to vote, has been incorporated in the Helsinki Convention. Article 35(4) of the Helsinki Convention provides that

360 Council Decision 77/585/EC, 25 July 1977.

361 Council Decision 1999/802/EC on the Acceptance of Amendments to the Convention for the Protection of the Mediterranean Sea against Pollution and to the Protocol for the Prevention of Pollution by Dumping from Ships and Aircrafts (Barcelona Convention).

362 As already mentioned, the EU has acceded to the Barcelona Offshore Protocol following Council's Decision 2013/5/EU on 17 December 2012.

363 OSPAR, article 20(2).

364 *Ibid.*

365 E Hey, T Ijlstra, A Nollkaemper (1993) '1992 Paris Convention for the Protection of the Marine Environment of the North-East Atlantic: A Critical Analysis', *The International Journal of Marine and Coastal Law*, 38.

366 V Frank, *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (Brill, 2007) 174.

367 Communication from the Commission to the Council and the European Parliament on the removal and disposal of disused offshore oil and gas installations, COM (98) 049 final, and Summary of the 2106th Council Meeting on the Environment, 16-17 June 1998, where the Council endorsed the Commission's communication and encouraged the adoption of the OSPAR decision on the disposal of disused offshore installations.

368 See OSPAR Offshore Industry Committee Meetings, Summary Records, available online at <https://www.ospar.org/work-areas/oic>.

the EU and any other regional economic integration organisation, which becomes a party to the agreement, can only exercise the rights and fulfil the responsibilities in matters within their competence. In a similar fashion to the OSPAR regime, the EU participates in the HELCOM with speaking and voting rights on subjects falling within its exclusive competence.³⁶⁹ In that case, Member States are not entitled to exercise such rights, to prevent granting double votes to the EU and its Member States. The provision aimed to avoid conferring a comparative advantage on the EU and its Member States in relation to the other contracting State Parties.³⁷⁰ As in the context of the OSPAR Commission, the role of the EU has not been very proactive concerning the regulation of offshore energy activities, given that it is a matter of shared competence. The EU Member States are free to speak and vote individually. However, the role of the EU appears to be more limited in the context of the Helsinki Convention for two reasons. First, the recommendations adopted by the HELCOM are not legally binding upon its parties, and the following-up and monitoring processes are rather weak. Second, all the recommendations by HELCOM are adopted unanimously, which means that Russia retains the power to veto any decisions, even if the EU Member States collectively support them.

Since the EU is also a party to the Mediterranean Offshore Protocol, the EU Commission has actively participated in the meetings of the recently created Offshore Oil and Gas Working Group.³⁷¹ However, the Barcelona Convention contains an almost identical provision to the ones under the OSPAR and Helsinki Conventions, stating that the EU can only exercise its voting rights when it obtains exclusive competence on behalf of its Member States.³⁷² Therefore, the considerations mentioned above regarding its limited role in regulating offshore energy activities apply *mutatis mutandis* in the context of the Mediterranean. Another limiting factor for the EU is, of course, that only a minority of the parties to the Barcelona Convention and the Offshore Protocol are members of the EU. Given that a three-quarters majority is required to adopt decisions on any amendment of the Mediterranean Offshore Protocol,³⁷³ the EU Member States cannot have a decisive influence in the decision-making process. Conversely, the almost parallel membership between the OSPAR and Helsinki Conventions and the EU appears to imply that the EU can play a more significant role in the standard-setting process within those regional sea frameworks than in the Mediterranean,³⁷⁴ at least through coordinating the votes of the EU Member States. Nonetheless, it has been posited that the EU Member States have coordinated their positions as instructed by the EU only under exceptional

369 In comparison with UNCLOS, the EU has not issued any declaration of competence with regard to the regional sea agreements, since there was no such requirement in any of them. Therefore, the division of competences remains rather an internal issue between the EU and its Member States.

370 Frank (2007) *supra* n. 366, 178.

371 See, for instance, reports on the First Offshore Protocol Working Group Meeting, available online at: <http://www.mepielan-ebulletin.gr/default.aspx?pid=18&CategoryId=10&ArticleId=146&Article=MEDITERRANEAN-SEA-%E2%80%93-First-Offshore-Protocol-Working-Group-Meeting>.

372 1995 Barcelona Convention, article 25.

373 *Ibid*, article 22(5).

374 M Gilek, B Hassler, and S Hentoft, 'Marine Environmental Governance in Europe: Problems and Opportunities' in M Gilek, and K Kern (eds) *Environmental Governance of the Baltic Sea* (Springer, 2015) 250.

circumstances, and, reportedly, such *ad hoc* coordination has happened solely within the OSPAR regime.³⁷⁵

3.1.2. The EU's role in regulating offshore energy activities in the Arctic

In contrast to its official status as a party to the above-mentioned regional sea conventions, the EU has not yet become a permanent observer of the Arctic Council formally,³⁷⁶ and, therefore, has not obtained a direct role in the cooperation arrangements thereunder.³⁷⁷ Nonetheless, pending its application,³⁷⁸ representatives of the EU have been participating at different meetings of the Arctic Council Working Groups as *ad hoc* observers.³⁷⁹ The EU may also influence decision-making within the Arctic Council because some of its members are concurrently members or observers of that body, offering the EU an opportunity to shape a coordinated approach to decision-making within the Arctic Council through those Member States.³⁸⁰ As far as its potential impact on decision-making in the Arctic region is concerned, it is noteworthy that the EU participates in other Arctic-specific cooperation arrangements, such as the Barents Euro-Arctic Council.³⁸¹

The EU's institutions have highlighted the importance of regulating economic activities in the Arctic waters for the EU on several occasions. For instance, the preamble to the Offshore Safety directive stresses the significance of applying high standards of safety to offshore oil and gas activities conducted in the Arctic waters since they are adjacent to the EU. Such activities in the Arctic Ocean could have a transboundary impact on marine waters within the jurisdiction of the EU Member States. This statement could be seen as an explicit acknowledgement of the intention of the EU to play a role in the cooperation arrangements in the Arctic marine region.³⁸² The Offshore Safety directive also underlines that the serious environmental concerns relating to the Arctic require “*special attention to ensure the environmental protection of the Arctic in relation to any offshore oil and gas operation, including exploration,*

375 Frank (2007) *supra* n. 366, 176-177, 179-180.

376 See website of the Arctic Council: <https://arctic-council.org/index.php/en/about-us/arctic-council/observers>. On a discussion relating to the role of the EU in the Arctic see also H Jessen (2016) ‘The EU’s Offshore Oil and Gas Directive (2013/30/EU) and Arctic Governance: Does the Activity of Third Parties Have Any Regulatory Impact?’, *OGEI*, 3.

377 The EU’s application to become a formal observer filed in 2013 has been deferred due to political differences among the Arctic States. Primarily, it is an expression of concerns that the EU could significantly influence meetings of the Arctic Council and its working groups. On the status of observers see the Arctic Council’s website, available online at: <https://arctic-council.org/index.php/en/about-us/arctic-council/observers>.

378 The application has been deferred until further notice, see for instance <https://barentsobserver.com/en/arctic/2015/05/eu-bid-become-arctic-council-observer-deferred-again-04-05>.

379 Rules of Procedure of the Arctic Council, article 37, see also chapter 6, sub-section 4.4.

380 Liu and Kirk (2015) *supra* n. 7, 278.

381 Opinion of the European Economic and Social Committee on ‘EU Arctic Policy to Address Globally Emerging Interests in the Region – A View of Civil Society’, 10 July 2013, para 2.4: “*One possible way to strengthen EU’s position is to become an observer entity and the Arctic EU Member States should take into account also EU views in the Council. The EU should also endeavour to strengthen cooperation in the Barents Euro-Arctic Council (and Barents Regional Council), because they play a key role in cross-border interaction amongst the 13 Member regions (in Norway, Sweden, Finland and Russia) of the resource-rich Barents region*”.

382 *Contra* Juste-Ruiz (2014) *supra* n. 269, where Juste-Ruiz claims that the reference to efforts to promote the protection of neighbouring Arctic waters is merely “platonic”.

taking into account the risk of major accidents and the need for effective response”.³⁸³ Indeed, in the context of the marine environment, dealing with transboundary risks from offshore energy operations sometimes requires environmental rules which transcend legal maritime boundaries.

On that account, the Offshore Safety directive encourages the EU Member States that are members of the Arctic Council

“to actively promote the highest standards with regard to environmental safety in this vulnerable and unique ecosystem, such as through the creation of international instruments on preventions, preparedness and response to Arctic marine oil pollution, and through building, inter alia, on the work of the Task Force established by the Arctic Council and the existing Arctic Council Offshore Oil and Gas Guidelines”.³⁸⁴

In such a way, the EU Member States that either are Members of the Arctic Council or merely participate as observers³⁸⁵ can de facto contribute to and influence the development of environmental and safety regulations in the Arctic following the example set by EU standards.³⁸⁶ Under the directive, Member States must coordinate among themselves measures related to areas outside of the EU, such as the Arctic, to prevent potential adverse effects of offshore oil and gas activities.³⁸⁷ Even though the EU has not been officially granted observer status at the Arctic Council, the Offshore Safety directive vests the EU Commission with the power to promote high safety standards for offshore oil and gas operations at the international level in relevant global and regional fora, explicitly mentioning those relating to the Arctic waters.³⁸⁸

Relevantly, in 2016 the EU Commission issued a document on the “Integrated European Union Policy for the Arctic”, which calls for international cooperation in response to the impacts of climate change on the Arctic’s fragile marine environment and for contributing to sustainable development, particularly in the European part of the Arctic.³⁸⁹ A year later, the EU Parliament in its Resolution on the Integrated EU Policy for the Arctic suggested “a ban on oil drilling in the icy Arctic waters of the EU and the EEA and for promotion by the EU of comparable precautionary standards in the Arctic Council and Arctic coastal States”.³⁹⁰ Similarly, the MSFD explicitly refers to the pressing environmental concerns in the Arctic waters which, as a neighbouring marine environment of particular importance for the EU, “need to be assessed by the

383 Offshore Safety directive, recital 52.

384 *Ibid*, recital 52.

385 So far, seven EU Member States have been granted observer status in the Arctic Council, see <https://arctic-council.org/index.php/en/about-us/arctic-council/observers>.

386 A Stepien, and T Koivurova, ‘The Making of a Coherent Arctic Policy for the European Union: Anxieties, Contradictions and Possible Future Pathways’ in A Stepien, T Koivurova, and P Kankaanpää (eds) *The Changing Arctic and the European Union* (Brill/Nijhoff, 2016) 36.

387 Offshore Safety directive, article 33(4).

388 *Ibid*, article 33(3).

389 Joint Communication to the European Parliament and Council: An Integrated European Union Policy for the Arctic (27 April 2016) JOIN (2016) 21 final, 2.

390 EU Parliament resolution of 16 March 2017 on integrated EU Policy for the Arctic, 2016/2228(INI), para 13. It is noteworthy that the initial proposal by the Parliament referred to “a future total ban on the extraction of Arctic oil and gas in order to achieve the goal of a low carbon economy”. However, that suggestion met with strong opposition by Norway, whose oil drilling activities in the Arctic would be directly affected. See <https://thebarentsobserver.com/en/industry-and-energy/2017/03/european-parliament-calls-for-ban-oil-arctic>.

Community institutions and may require action to ensure the environmental protection of the Arctic.³⁹¹ EU action for the protection of the Arctic Ocean is vital because three Member States, namely Denmark, Finland and Sweden have territories in the Arctic region, and two other Arctic States, Iceland, and Norway, are members of the EEA. In particular, Denmark is a unique case, since those parts of Denmark that are in the Arctic, namely Greenland and the Faroe Islands, are excluded from Denmark's participation in the EU.³⁹² Additionally, two of the three EU Member States, i.e., Sweden and Finland, do not have any Arctic Ocean coast. Therefore, in their case, EU legislation is not applicable *ratione loci* in the Arctic Ocean.³⁹³ In that respect, it seems that – at least *prima facie* – the EU can have only a marginal influence on the regulation of offshore energy activities in the Arctic because it has no coast in the Arctic Ocean.

Nonetheless, EU law rules can still influence and shape the regulation of Arctic offshore oil and gas activities. For example, EU secondary legislation could indirectly apply to part of the Arctic Ocean insofar as the relevant EU directives are applicable in Iceland and Norway, as members of the EEA. For instance, it has been indicated by the EU legislature that the Offshore Safety directive should be included in the EEA and, thus, should apply in Norway and Iceland.³⁹⁴ Given that offshore oil and gas activities in Norwegian waters account for approximately half of all such activities in Europe,³⁹⁵ Norway's practice with regard to the regulation of those activities is of great significance.³⁹⁶ Moreover, the potential of transboundary impacts of offshore oil and gas installations operating in the waters of neighbouring non-EU member States poses a considerable risk for the EU marine waters.³⁹⁷

However, the EEA States have not welcomed the viewpoint of the EU regarding the applicability of the Offshore Safety directive. For instance, Norway has vehemently opposed the implementation of the Offshore Safety directive in its marine waters. In Norway's view, the directive sets minimum standards that are considerably less stringent than its domestic rules, which are based on more than forty years of regulatory development and address local circumstances.³⁹⁸ Moreover, the EEA States have emphatically rejected the applicability of the directive, because its geographical scope of application would have repercussions for the regulation of

391 MSFD, recital 42.

392 See also D Langlet (2018) 'Planning from the Margin – The European Union's Potential Role in Spatial Planning for Managing Activities in the Marine Arctic', *International Journal of Marine and Coastal Law*, 366.

393 *Ibid.*

394 C Cinelli, 'Legal Status and Environmental Protection of the Arctic Sea Ice: European Perspectives', in E Conde, and S Inglesias Sanchez (eds) *Global Challenges in the Arctic Region: Sovereignty, Environment and Geopolitical Balance* (Routledge, 2017) 135.

395 With respect to offshore oil and gas activities, Norway is currently one of the leading countries in Europe with more than two hundred thousand tonnes of petroleum exploited each year, for relevant data see website of Norwegian petroleum, available at: <https://www.norskpjetroil.no/en/facts>.

396 Norway has played a key role in influencing the EU's Integrated Policy for the Arctic, see for instance its attempts to block the ban on Arctic offshore oil drilling, *supra* n. 390.

397 Volondati (2018) *supra* n. 234, 178.

398 C Pelaudeix, 'Governance of Offshore Hydrocarbon Activities in the Arctic and Energy Policies: a Comparative Approach in Norway, Canada and Greenland/Denmark' in C Pelaudeix, and E M Basse (eds) *Governance of Arctic Offshore Oil and Gas* (Routledge, 2018), see also PGNiG (2018) Comments on Evaluation of the Directive on Safety of Offshore Oil and Gas Operations.

offshore energy activities in their respective EEZ and the continental shelf.³⁹⁹ In their view, the EEA agreement only applies to the “territories of the EFTA States”,⁴⁰⁰ which they argue includes only land territory and the territorial seas. For the same reason, they are opposed to the applicability of the MSFD in their marine waters.⁴⁰¹

Even so, the directive might still have important implications for the regulation of offshore energy activities in the Arctic, insofar as it has some “extra-territorial” effects. As further discussed in chapter 8, the EU can indirectly catalyse action outside its Member States through harmonising the State practice across Europe, as well as influencing the operation of the EU-based offshore oil and gas companies, whose activities are expanding far beyond the EU marine waters.⁴⁰² The EU can promote enhanced cooperation, the application of best practices for the safety of offshore oil and gas activities as well as the exchange of scientific information.⁴⁰³ Also, the establishment of EU standards for preventing major accidents and limiting their consequences could serve as a model for the adoption of similar rules and standards through the Arctic Council.⁴⁰⁴ The EU does not aspire to oblige non-EU States to follow the detailed procedural obligations under the Offshore Safety directive.⁴⁰⁵ However, Arctic States might follow a comparable methodology and – perhaps implicitly – apply best practices formulated under the directive as part of their domestic regulations.⁴⁰⁶

Such region-specific development of standards seems much more appropriate to address the specific needs of the vulnerable Arctic environment, which a potentially globally binding instrument – as a result of substantial compromises among different global interests – would probably fail to consider.⁴⁰⁷ Best regulatory practices cannot always be universally applicable because the diverse regional needs necessitate tailor-made solutions.⁴⁰⁸ Thus, the scope of regional arrangements may be more appropriate than merely transplanting EU legislation, mainly when regional cooperation frameworks focus on an entire marine region, including non-EU States,

399 C Cinelli (2016) ‘Law of the Sea, the European Union Arctic Policy and Corporate Ocean Responsibility’, *Ocean Yearbook*, 252.

400 EEA Agreement, article 126.

401 Langlet (2018) *supra* n. 392, 369-370.

402 See chapter 8, sub-sections 3.1 and -3.2.

403 For instance, the EU has manifested its interest in funding research activities related to offshore oil and gas activities in the fragile Arctic Ocean, See Report prepared by the Joint Research Centre of the European Commission on Safety Aspects of Offshore Oil and Gas Operations in Arctic and Sub-Arctic, 2019, available online at: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC114560/jrc114560_jrc114560_arctic_and_sub-arctic_offshore_installations_safety_revised_by_ipo_final.pdf. According to the Opinion of the European Economic and Social Committee on ‘EU Arctic Policy to address Globally Emerging Interests in the Region’, of 10 July 2013, the EU had invested around 1.4 billion Euros to promote the sustainable development of the Arctic between 2007 and 2013.

404 Liu and Kirk (2015) *supra* n. 7, 277.

405 Offshore Safety directive, recital 38. Any such attempt to create binding duties for third States would of course not be allowed under article 34 of the VCLT.

406 Jessen (2016) *supra* n. 376.

407 N Liu (2015) ‘The European Union’s Potential Contribution to Enhanced Governance of Offshore Oil and Gas Operations in the Arctic’, *Review of European Community & International Environmental Law*, 230.

408 Offshore Safety directive, recital 52 which stresses the importance of the creation of international instruments on prevention, preparedness and response to Arctic marine oil pollution through building on the work of the Arctic Council and its specifically created Task Forces.

such as Russia and the US.⁴⁰⁹ For these reasons, the EU admits that only the Arctic Council can serve as the forum under which the Arctic States can formulate region-specific guidelines, adapt the international best practices to the Arctic needs or negotiate binding instruments.⁴¹⁰

3.2. The legal effects of mixed agreements in terms of their enforcement

The formal participation of the EU as a party in regional sea conventions has repercussions, which go beyond its role in influencing decision-making procedures. When the EU accedes to the regional sea agreements, these agreements are integrated in the EU legal order. As discussed in chapter 6, the examined regional agreements contain more elaborate, both in terms of stringency and specificity, obligations concerning offshore energy production activities compared with the global framework. However, regional treaty bodies lack robust enforcement mechanisms to ensure compliance and encourage States to discharge their obligations; that can compromise the effectiveness of the regulation of the offshore energy industry. In that respect, the EU institutions can improve compliance with those regional rules and standards by invoking the enforcement procedures available under EU law. In the case of the EU, the institutional framework supplementing its normative developments is significantly more robust than the one in regional sea conventions.

3.2.1. Regional sea agreements under the EU enforcement mechanisms

On several occasions, the ECJ has upheld its jurisdiction to interpret the provisions of mixed agreements regardless of whether they fall within the exclusive or shared competence of the EU. The ECJ has vehemently declared its power to have the final say about the interpretation of rules belonging to the EU legal order.⁴¹¹ On that account, the ECJ's interpretation of obligations under EU law instruments and regional sea conventions can have far-reaching practical consequences for the protection of the marine environment. Arguably, the ECJ has tended to interpret environmental obligations in a rather expansive way to reinforce their normative effects, functioning as a significant actor in the protection of the environment at the EU level.⁴¹²

International agreements concluded by the EU are binding on the EU institutions and the Member States.⁴¹³ In the *MOX Plant* case, the ECJ recognised that rules of mixed agreements (like the regional sea conventions to which the EU has acceded), which fall under the shared competence of the EU, form an integral part of the EU legal order and acquire the same characteristics of EU law.⁴¹⁴ For that reason, mixed agreements can have a significant normative impact both on secondary EU law and domestic law of the Member States.⁴¹⁵ Specifically, as part of EU law, the examined

409 K Kern, M Gilek, 'Governing Europe's Marine Environment: Key Topics and Challenges', in Gilek and Kern (2015) *supra* n. 374, 1.

410 Jenssen (2016) *supra* n. 376.

411 A Rosass, 'The European Court of Justice and Public International Law' in Wouters, Nollkaemper and de Wet (2008) *supra* n. 47, 75.

412 Truilhé and C Bouillard (2017) *supra* n. 337, 30.

413 TFEU, article 216(2).

414 ECJ, C-459/03, *MOX Plant*, Judgment of 30 May 2006, para 126.

415 C Tietje, 'The Status of International Law in the European Legal Order: The Case of International Treaties and Non-Binding International Instruments', in Wouters, Nollkaemper and de Wet (2008) *supra* n. 47, 68.

regional sea conventions acquire supremacy over the national law of Member States as well as over secondary EU law instruments.⁴¹⁶ They are subject to the jurisdiction of the ECJ, as far as their interpretation and application are concerned, to achieve a uniform interpretation and implementation and forestall future divergences among domestic courts. In particular, the ECJ has jurisdiction to issue preliminary rulings on the interpretation of mixed agreements.⁴¹⁷ Apart from the ECJ, domestic courts and public authorities of the Member States are under an EU law duty to interpret and apply domestic law in conformity with those international rules and standards which have been absorbed by the EU legal order.⁴¹⁸

The “Europeanisation” of regional sea conventions provides additional legal means to ensure their effective implementation and enforcement at the domestic level.⁴¹⁹ Being part of the EU legal order, regional sea agreements may also sometimes confer rights and duties on individuals (direct effect), which are enforceable before domestic courts without the need for implementation measures by States, if they fulfil the criteria established by the ECJ.⁴²⁰ The ECJ has had the chance to pronounce on the direct effect of article 6(3) of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources to the Barcelona Convention.⁴²¹ In that case, a syndicate of fishermen complained about the discharges from a hydroelectric facility, which were allegedly polluting a saltwater lake (*l'Étang de Berre*) by invoking article 6(3) of the Protocol before a French court.⁴²² The French *Cour de Cassation* requested a preliminary ruling from the ECJ on the question of whether the relevant provision of the Athens Protocol has a direct effect. In response, the ECJ ruled that the provision had laid down sufficiently clear and unconditional obligations regarding the discharge of certain substances.⁴²³ Relevantly, the ECJ upheld that “*the fact that the national authorities have discretion in issuing authorizations under the criteria set out in Annex II in no way diminishes the clear, precise and unconditional nature of the prohibition of discharges without prior authorization that results from article 6(3) of the Protocol*”.⁴²⁴ In the ECJ’s view, the recognition of the direct effect of the provision in question can only serve the purpose of the Protocol, which was

416 J Wouters, A Nollkaemper, E de Wet, ‘Introduction: The Europeanisation of International Law’ in Wouters, Nollkaemper and de Wet (2008) *supra* n. 47, 9. Primacy of international agreements concluded by the EU over EU secondary instruments means that such provisions must, to the extent possible, be interpreted consistently with those agreements, with reference to C-61/94, *Commission v Germany*, Judgment of 10 September 1996, para 52. With respect to national rules, primacy requires domestic law to be interpreted in conformity with the EU legal order in order to ensure the full effectiveness of EU law, with reference to C-397/01, *Pfeiffer*, Judgment of 5 October 2004, para 115.

417 de Sadeleer (2014) *supra* n. 17, 145.

418 Wouters, Nollkaemper and de Wet (2008) *supra* n. 416, 9.

419 E Morgera (2012) *supra* n. 20, 428.

420 The relevant provisions must be sufficiently precise, clear and not subject to any subsequent measures of implementation, see C-12/86, *Demirel*, Judgment of 30 September 1987, para 14.

421 ECJ, C-213/03 *Syndicat Professionnel Coordination des Pêcheurs de l’Étang de Berre et de la région*, Judgment of 15 July 2004.

422 According to the applicants, the facility was operating without an authorisation as required under article 6(3) of the Athens Protocol to the Barcelona Convention.

423 *Ibid*, para 41.

424 *Ibid*, para 42. A similar conclusion could be applied with regard to the Offshore Protocol to the Barcelona Convention, which clearly and unconditionally prohibits certain discharges from offshore oil and gas installation without prior authorisation by States.

intended to prevent pollution resulting from the failure of public authorities to act.⁴²⁵ The object and purpose of the Protocol were interpreted as restraining the discretion of the EU Member States in deciding upon the authorisation of potentially harmful discharges.⁴²⁶ As a result, individuals successfully relied on provisions of the Athens Protocol to the Barcelona Convention before a national court to enforce against France international obligations found thereunder.⁴²⁷

Arguably, the same consideration applies to the relevant decisions of the MoP established by the Barcelona Convention.⁴²⁸ It has been posited that the ECJ usually seeks to interpret and apply EU law in conformity with international standards, even when they stem from, strictly speaking, non-binding international instruments.⁴²⁹ For instance, the ECJ has considered the impact of non-binding recommendations by the Joint Committee of the Convention on a Common Transit Procedure for the interpretation of its provisions before domestic courts.⁴³⁰ By recognising that regional sea agreements confer justiciable rights on individuals, the ECJ has opened the door to an effective means of ensuring implementation and compliance with the relevant regional environmental obligations.⁴³¹ Even though there have been no awards of compensation to individuals as a result of breaches of “Europeanised” international treaties, the failure of EU Member States to take measures to implement them might lead to those States incurring liability under EU law, provided that the conditions for such state liability as developed by the ECJ, such as the damage to the claimants, are also met.⁴³² Moreover, insofar as the provisions of the regional sea conventions, to which the EU is a party, are considered to have a direct effect, they can be invoked as benchmarks against which the legality of EU measures and secondary legislation

425 *Ibid*, para 45.

426 R Pavoni, ‘Controversial Aspects of the Interaction between International and Eu law in Environmental Matters: Direct Effect and Member States’ Unilateral Measures’, in E Morgera (ed) *The External Environmental Policy of the European Union- EU and International Law Perspectives*, (Cambridge University Press, 2012) 352-353.

427 S Marsden (2011) ‘Invoking Direct Application of International Treaties by the European Court of Justice: Implications for Environmental Law in the European Union’, *The International and Comparative Law Quarterly*, 748.

428 N Lavranos (2005) ‘Concurrence of Jurisdiction between the ECJ and other International Courts and Tribunals’, *European Environmental Law Review*, 221.

429 Tietje (2008) *supra* n. 415, 68. For instance, the ECJ, interpreting Security Council Resolutions which are not binding upon the EU, upheld that it must “take due account of the terms and objectives of the resolution concerned and of the relevant obligations under the Charter of the United Nations” and consider their “wording and purpose”; see ECJ, C-402/05, *Kadi* case, Judgment of 9 March 2008, para 296. Insofar as such instruments create obligations for EU Member States, there is an obligation to interpret EU law in the light of these duties due to the principle of sincere cooperation under article 4(3) of the TEU. In the same vein, J van Rossem (2009) ‘Interaction between EU Law and International Law in the Light of the Intertanko and Kadi: The Dilemma of Norms Binding the Member States but not the Community’, *Netherlands Yearbook of International Law*, 208.

430 Specifically, the ECJ ruled that “[a]lthough the recommendations of the Joint Committee cannot confer upon individuals rights which they may enforce before national courts, the latter are nevertheless obliged to take them into consideration in order to resolve disputes submitted to them, especially when, as in this case, they are of relevance in interpreting the provisions of the Convention”, C-188/91. *Deutsche Shell AG*, Judgment of 21 January 1993, para 18.

431 de Sadeleer (2014) *supra* n. 17, 146, C Redgwell, ‘National Implementation’ in D Bodansky, J Brunnée, and E Hey (eds) *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2007) 928.

432 ECJ, C-6/90 and 9/90 *Frankovich*, Judgment of 19 November 1991, referred to in Wouters, Nollkaemper and de Wet (2008) *supra* n. 416, 10.

can be evaluated.⁴³³ It appears that the ECJ has seen the conferral of justiciable rights to individuals as a crucial requirement for the direct effect of mixed agreements.⁴³⁴ However, it is noticeable that in the *Biotech case* it ruled that “[e]ven if the CBD contains provisions which do not have direct effect, in the sense that they do not create rights which individuals can rely on directly before the courts, the fact does not preclude review by the courts of compliance with the obligations incumbent on the Community as a party to that agreement”.⁴³⁵

The implementation of the Europeanised regional sea conventions can also be reinforced through EU enforcement proceedings against the Member States. Such proceedings can be initiated when States either have not taken measures to transpose these agreements in their domestic law or have failed to comply with them. Arguably, this is the strongest EU enforcement tool, given the potential of imposing monetary sanctions on EU Member States. If Member States fail to implement EU law, they may be subject to enforcement proceedings in the ECJ at the request of another Member State or the Commission.⁴³⁶ For example, following proceedings commenced by the EU Commission, France was condemned by the ECJ for failing to implement the Athens Protocol to the Barcelona Convention.⁴³⁷ The ECJ ruled that article 218 of TFEU required France to comply with the obligations under articles 4(1) and 8 of the Barcelona Convention, as well as articles 6(1) and 6(3) of the Athens Protocol, as amended.⁴³⁸ Despite the arguments invoked by the Commission and France relating to the legal nature of the obligations under the Athens Protocol, which perceived them as obligations of result and obligations of conduct, respectively, the ECJ ruled that they created a duty to take all necessary measures to achieve the rigorous reduction of pollution.⁴³⁹ The ECJ rejected the arguments raised by France as to its lack of jurisdiction, upholding that the Protocol fell under shared competence and related to a field that is largely covered by EU legislation.⁴⁴⁰

433 C-401/12, 402/12 and 403/12, *Vereniging Milieudefensie*, where the ECJ found that article 9(3) of the Aarhus Convention does not contain any unconditional and sufficiently precise obligations capable of directly regulating the legal position of individuals, since that provision is subject to the adoption of a subsequent measure. It therefore upheld that the provision lacks direct effect and cannot be a valid ground for annulment of relevant EU Regulations. It is noteworthy that in that case the Court of Justice of the EU did not refer to the need to interpret EU law consistently with the objectives laid down in the Aarhus Convention.

434 B Bonafe, ‘Direct Effect of International Agreements in the EU Legal Order: Does it Depend on the Existence of an international Dispute Settlement Mechanism?’, in Cannizzaro, Palchetti and Wessel (2011) *supra* n. 84, 229-230.

435 ECJ, C-377/98, *Netherlands v European Parliament and Council*, Judgment of 9 October 2001, para 54 with reference to its reasoning in the *Racke* case, where the ECJ had not examined the direct effect of customary international rules before using them as a yardstick to assess the legality of EU law secondary legislation.

436 TFEU, articles 258-259.

437 ECJ, C-239/03 *Commission v France*, Judgment 7 October 2004.

438 *Ibid*, para 68.

439 *Ibid*, paras 68-71. Although the ECJ accepted that France had made a considerable effort to reduce pollution, it concluded that “no rigorous reduction” had taken place, and, therefore, the relevant obligations had been violated.

440 *Ibid*, para 31. The ECJ noted that the fact that the EU legislation did not cover specific discharges of fresh water and alluvia into the marine environment was not capable of calling into question the fact that environmental protection is a field largely covered by EU law. That could be relevant in respect to the regulation of operational pollution from offshore oil and gas activities, which are not yet regulated by specific EU instruments.

Importantly, the ECJ ruled that concerning mixed agreements, which create rights and duties in a field covered by EU law, there is a strong EU interest in ensuring compliance with them by both the EU and its Member States.⁴⁴¹ Therefore, the ECJ enhanced the enforcement of the Barcelona Convention and its Protocol by allowing both the EU Commission and individuals to pursue, in the courts, compliance by France with its duties thereunder.⁴⁴² Interestingly, in the *Etang de Berre* case, the ECJ relied upon the direct applicability of the rules under the Athens Protocol (clear and unconditional terms) without examining whether the pertinent rules attributed justiciable rights to individuals.⁴⁴³ The importance of the judgment extends beyond the Barcelona Convention. It covers rules under the examined regional sea conventions because it can operate as a precedent that reinforces the responsibility of Member States for breaches of mixed agreements in the internal legal order of the EU.⁴⁴⁴ The ECJ used the direct effect as a remedy against the failure of domestic authorities to protect the environment.⁴⁴⁵ Thus, the EU participates in the examined regional sea conventions not only in its capacity as a party, which can influence the decision-making processes, but also as a guardian of the consistent implementation of these agreements.⁴⁴⁶ Subsequently, failure of a Member State to comply with a judgment by the ECJ may further result in the imposition of additional penalties. In particular, another compliance mechanism under EU law is the sanction of financial penalties under article 260 of the TFEU, which has applied in cases concerning the protection of the marine environment.⁴⁴⁷

In the judgments mentioned above, the ECJ has demonstrated its strong determination to accept the direct effect of Europeanised regional sea conventions for the benefit of the marine environment and individuals.⁴⁴⁸ Thus, it appears that EU dispute settlement mechanisms can significantly contribute to the effective implementation of regional sea conventions and strengthen their potential in promoting environmental protection against offshore energy activities. Not only does the case-law of the ECJ support the adherence of Member States to their marine environmental obligations, but it also assists in their development through their uniform interpretation and application at the EU level. However, the role of infringement proceedings in safeguarding the enforcement of regional sea

441 *Ibid.*, para 29.

442 A Hilderling, A Keessen, and H van Rijswijk (2009) 'Tackling Pollution of the Mediterranean Sea from Land-Based Sources by an Integrated Ecosystem Approach and the Use of the Combined International and European Legal Regimes', *Utrecht Law Review*, 82.

443 In the *Biotech Patents* case, the ECJ declared that the creation of individual rights and the review by the courts of EU compliance with its international obligations are two distinct matters, see C-377/98, *Biotech Patents*, Judgment of 9 October 2001, para 54. That view is consistent with the reasoning of the ECJ in the *Intertanko* case, signalling its unwillingness to expand the legal effects of mixed agreements in reviewing EU law.

444 P Kuijper (2005) 'Case C-239/03 Commission v French Republic', *Common Market Law Review*, 1491. See also C-182/89 *Commission v France*, which related to the correct implementation of the CITES by France.

445 *Etang de Berre*, para 45.

446 A Stöfen-O'Brien, *The International and European Legal Regime Regulating Marine Litter in the EU* (Nomos Verlagsgesellschaft, 2015) 379.

447 ECJ, C-278/01, *Commission v Spain*, Judgment of 25 November 2003, Spain was fined 625.000 euros per year for each per cent of inland waters that did not comply with the requirements of the EU Directives on Bathing Water Quality.

448 S Marsden (2011) *supra* n. 427, 756.

conventions should be regarded with some caution. It should be kept in mind that, in practice, infringement proceedings are rarely brought by the EU Commission against the Member States, mostly because of their political nature.⁴⁴⁹ Perhaps that partly explains why so far the EU Commission has not commenced infringement proceedings against the Member States in a consistent manner to prevent violations of provisions of mixed agreements.⁴⁵⁰ Of course, another reason could be that the Commission is not mandated to systematically monitor compliance of the EU Member States with their obligations under such treaties.⁴⁵¹

3.2.2. *The Mediterranean Offshore Protocol as a mixed agreement: enhancing its enforceability in the EU Member States*

The above conclusions on the effects of the EU's participation in the enforcement of mixed agreements could be essential in the case of the Mediterranean Offshore Protocol. As discussed in chapter 6, in reaction to the Macondo accident, the EU has acceded to the Offshore Protocol to the Barcelona Convention. Consequently, the Protocol has been integrated into the EU *acquis*, becoming binding both upon the EU institutions and the Member States, even though six EU Member States, which are parties to the overarching Barcelona Convention, have not yet ratified the Protocol.⁴⁵² In other words, even though these Member States have not consented to be bound by the Protocol, they bear obligations stemming from EU law. Since the EU became a party, Member States are under a duty to take all the necessary measures to enable the EU to fulfil its obligations under the Mediterranean Offshore Protocol. The failure by the Member States to take appropriate steps would result in the EU's breach of the Protocol. The EU would be internationally responsible towards the other parties of the Protocol for the failure of its Member States. At the same time, however, the Member States would be responsible under EU law because provisions under mixed agreements are a source of EU law obligations for them.⁴⁵³

Alongside these internal matters of EU Member States' responsibility,⁴⁵⁴ the EU's accession to the Mediterranean Offshore Protocol had been expected to act as a catalyst for its widespread ratification, at least by encouraging the EU Member States to ratify it.⁴⁵⁵ At the same time, the decision of the EU to accede to the Mediterranean

449 R Long (2014) *supra* n. 266, 268, P Kuijper (2008) 'Customary International Law, Decisions of International Organizations and Other Techniques for Ensuring Respect for International Legal Rules in European Community Law' in Wouters, Nollkaemper and de Wet (eds) *supra* n. 47, 102-103.

450 Kuijper (2008) *supra* n. 449, 103.

451 Kramer (2008) *supra* n. 29, 299-301, E Paasivirta, and P Kuijper (2005) 'Does One Size Fit All? The European Community and the Responsibility of International Organizations', *Netherlands Yearbook of International Law*, 198-199.

452 Greece, Italy, Malta, Spain, Slovenia and France have not yet ratified the Mediterranean Offshore Protocol, see UNEP website: <https://web.unep.org/unepmap/6-offshore-protocol>.

453 E Neframi, 'Mixed Agreements as a Source of European Union Law', in Cannizzaro, Palchetti and Wessel (2011) *supra* n. 84, 348.

454 On a discussion about the shared responsibility of the EU and its Member States, see A Nollkaemper, 'Joint Responsibility between the EU and Member States for Non-Performance of Obligations under Multilateral Environmental Agreements', in Morgera (2012) *supra* n. 426, 304-346.

455 EU Council Decision of 17 December 2012 on the accession of the European Union to the Protocol for the Protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil, recital 13 invited the Member States which are parties to the Barcelona Convention and have not yet done so, to take the necessary steps to finalise the procedures to ratify or accede to the Offshore Protocol.

Offshore Protocol and enhance the safety regulation of offshore oil and gas activities through the Offshore Safety directive demonstrates its will to refrain from a race to the bottom approach in the competition against third States to attract foreign investments. Arguably, such an attitude could have served to stimulate non-EU states, which are parties to the Barcelona Convention, also to ratify the Mediterranean Offshore Protocol.⁴⁵⁶ Unfortunately, the accession of the EU to the Offshore Protocol has not achieved such a result in terms of ratifications by either the EU Member States or non-EU States bordering the Mediterranean.⁴⁵⁷ Following the EU initiative, only Croatia has ratified it.⁴⁵⁸

Arguably, after the integration of the Protocol into the EU legal order, its obligations are not only incumbent upon the EU, but also upon its Member States, irrespective of their participation in the Protocol.⁴⁵⁹ Such an interpretation would mean that the Member States bordering the Mediterranean are obliged to transpose the provisions of the Mediterranean Offshore Protocol into their domestic law even when they have not ratified it. Theoretically, it would not be necessary for these EU Member States to ratify the Protocol formally. However, such a take on the legal effects of the EU's accession to the Protocol seems to contradict the *pacta tertiis* principle. That is because the EU lacks the exclusive competence to enter into mixed agreements representing its Member States. It has, instead, become a party to the instrument under a shared competence. The bindingness of the Mediterranean Offshore Protocol's provisions as part of EU law does not necessarily mean that the Member States, which have not ratified it, are directly bound by it. Any duties for them stem from EU law. The ECJ has relevantly ruled that "*in ensuring compliance with commitments arising from an agreement concluded by the Community institutions, the Member States fulfil, within the Community system, an obligation in relation to the community, which has assumed responsibility for the due performance of the agreement*".⁴⁶⁰

However, since mixed agreements are binding both on the EU institutions and its Member States, the EU law principle of sincere cooperation⁴⁶¹ applies to the international obligations undertaken by the EU, which means that Member States are obliged to facilitate the achievement of the EU's international commitments.⁴⁶² The failure of Member States to ensure such compliance consists of a violation

456 Schiano di Pepe (2014) *supra* n. 274, 386.

457 L Schiano di Pepe (2014) *supra* n. 284, 309-310, Ros (2014) *supra* n. 334, 38-39.

458 Croatia was the 7th State to ratify the Offshore Protocol on 8 February 2018, see UNEP website: <https://web.unep.org/unepmap/6-offshore-protocol>. However, the fact that only Croatia has ratified the Mediterranean Offshore Protocol over the eight years since the EU's accession might indicate that EU Member States do not feel obliged to ratify it since the Protocol already forms part of EU law.

459 N Ros, 'Problems of Marine Pollution Resulting from Offshore Activities According to International and European Law', in Caligiuri (2015) *supra* n. 85, J Juste-Ruiz (2014) *supra* n. 269, Frank (2007) *supra* n. 351, 139.

460 ECJ, C-239/03, Judgment of 7 October 2004, para 26.

461 TEU, article 4(3) provides that "*The Member States shall take any appropriate measure, general or particular, to ensure fulfilment of the obligations arising out of the Treaties or resulting from the acts of the institutions of the Union*". According to the same article, Member States must also facilitate the achievement of the EU's tasks and refrain from any measure which could jeopardize the attainment of the EU's objectives.

462 Paasivirta (2015) *supra* n. 54, 1065-1066.

of their duties under EU law.⁴⁶³ The duty of Member States to facilitate the EU in respecting its international obligations is significant⁴⁶⁴ for the latter to avoid incurring international responsibility for their violation. In the case of mixed agreements, concerning which the EU has shared competence with its Member States, both are simultaneously responsible under international law for any violation of their rules. The accession to the Offshore Protocol was an act by the EU to avoid incurring international responsibility for the lack – at that time – of any specific EU provisions on the prevention and control of major accidental pollution arising from offshore oil and gas activities in the Mediterranean.⁴⁶⁵ For instance, under the conditions of article 340 of the TFEU, individuals could make a claim for EU liability, insofar as they could prove certain, specific and quantifiable damage.⁴⁶⁶ Among the objectives of the EU’s environmental policy, the EU has to promote measures at the international level to deal with regional environmental problems, such as pollution stemming from offshore oil and gas activities.⁴⁶⁷ Therefore, it was deemed appropriate for the EU to take all necessary action in support of the safety of offshore oil and gas activities for the protection of the marine environment in the Mediterranean.⁴⁶⁸ In that respect, the accession also aimed to reinforce the EU’s image as a leading actor in international ocean governance, in particular with regard to the protection of the seas from offshore oil and gas operations.⁴⁶⁹

The crux of the problem is whether the Mediterranean Offshore Protocol can have direct effect and, consequently, enable individuals to invoke its rules in judicial proceedings against the Member States that have not ratified it. The ECJ appears to have made the direct effect of international agreements concluded by the EU dependent on their precise and unconditional nature. Moreover, in the abovementioned 2004 Judgment, the ECJ stressed that the provisions of the amended Protocol on land-based source pollution would have a direct effect, following its entry into force. It did not, thus, require all relevant Member States to be parties to it to recognise the direct effect of the Athens Protocol. Thus, it is arguable that even though six EU Member States have not ratified the Mediterranean Offshore Protocol, some of its provisions

463 Langlet and Mahmoudi (2016) *supra* n. 11, 128.

464 The EU Council Decision on the EU’s accession to the Offshore Protocol states that the obligation of Member States to cooperate with the EU “flows from the requirement of unity in the international representation of the Union”. That requirement of unity is interpreted by the Council as creating a duty on Member States to ratify or accede to the Protocol, see decision 2013/5/EU, recital 13.

465 See Council Decision 2013/5/EU, recital 10. In a similar spirit, Council decision 77/585/EC on the accession of the European Community to the Barcelona Convention mentioned that “it appears necessary for the Community to conclude this Convention... in order to attain, in the course of the operation of the common market, one of the objectives of the Community in the field of protection of the environment”, preamble. Similarly, the Council decision on the accession to the 1995 amendments to the Barcelona Convention mentions that the EU’s accession will help attain the environmental objectives under EU treaties, see recital 7.

466 C-104/89 & C-37/90, *Mulder*. However, in practice it would be extremely difficult to prove causality between the EU’s inaction and any environmental damage, which would also need to be specific to the applicants.

467 EU Council Conclusions on Safety of Offshore Oil and Gas Activities, where it was stressed that the EU must continue to play a prominent role in striving for the highest safety standards in the framework of international initiatives and regional cooperation, such as in the Mediterranean.

468 EU Commission Proposal for Council Decision, COM (2011) 690 final, recital 12, EU Council Decision 2013/5/EU, recital 10.

469 Schiano di Pepe (2014) *supra* n. 274, 385.

have acquired direct effect, following its entry into force.⁴⁷⁰ Therefore, individuals in the Member States, which have not ratified the Protocol, can invoke the responsibility of these States before domestic courts for a breach of EU law which has integrated the Mediterranean Offshore Protocol.⁴⁷¹ In addition, the Commission could initiate infringement proceedings against the Member State for a violation of EU law.⁴⁷²

3.3. The EU's marine environmental legislation as a catalyst for regional cooperation and normative harmonisation concerning offshore energy activities

The EU Member States and the EU in their capacity as parties to the regional sea conventions have an essential influence on the latter conventions' implementation. The EU Member States, which are parties to more than one regional sea conventions, can foster better cooperation among those agreements. Specifically, Finland, Germany, Sweden and Denmark are all parties to both the OSPAR and Helsinki Conventions, while France and Spain are parties to both the Barcelona and the OSPAR Conventions. For all these States, it can be expected that their adherence to environmental standards in one marine region can be influential for adopting and implementing similar measures in the other, insofar as they are adjusted to that region's specific needs.⁴⁷³

Moreover, the EU has boosted cooperation among regional sea agreements applicable to the Mediterranean, the Baltic Sea, and the North-East Atlantic, so as to share best practices in monitoring and assessment frameworks in Europe and facilitate the comparison of the extent to which good environmental status is achieved. In that respect, the EU has catalysed coordination and scientific knowledge exchange between marine regions.⁴⁷⁴ The EU's regional approach can assist States that lag behind in terms of environmental standards to learn from the developed EU Member States. Its approach towards enhancing regional cooperation can also promote the implementation of stricter standards in non-EU States.⁴⁷⁵ To that end, the production and sharing of scientific data can shape a common understanding concerning the marine environmental challenges. Such scientific information serves as an invaluable input for decision making in both the EU and the non-EU Member States across Europe.⁴⁷⁶

470 See *contra* Neframi (2011) *supra* n. 453, 348-349, where Neframi argues that even though mixed agreements created EU law obligations for the Member States, "their direct effect and, generally, their implementation falls under the Member States' sphere of competence".

471 Gianelli (2011) *supra* n. 84, 109.

472 F Mayer, 'European Law as Door Opener for Public International Law?' in *Droit International et Diversité des Cultures Juridiques – International Law and Diversity of Legal Cultures* (Pedonne, 2008) 241-255.

473 E De Santo, 'The Marine Strategy Framework Directive as a Catalyst for Maritime Spatial Planning: Internal Dimensions and Institutional Tensions', in Gilek and Kern (2015) *supra* n. 374, 102.

474 See for example, the SEAS-ERA research project, which brings together domestic authorities and marine research institutes bordering regional seas surrounding the EU, more information available on its website: <http://www.seas-era.eu/np4/2/11.html>.

475 *Ibid*, 115.

476 M Gilek, M Karlsson, O Udovyk, S Linke (2015) 'Science and Policy in the Government of Europe's Marine Environment: The Impact of Europeanization, Regionalization and the Ecosystem Approach to Management' in Gilek and Kern (eds) *supra* n. 374, 148-149.

3.3.1. *The role of the MSFD in fostering cooperation under the regional sea conventions*

The MSFD offers an example of how the EU secondary legislation can strengthen cooperation with regional treaty bodies and promote consistency between the regional sea agreements and EU rules. The ecosystem-based approach adopted by the directive requires coordinated action and measures sometimes applicable beyond the strict territorial confines of a single State's jurisdiction.⁴⁷⁷ On that account, the application of the ecosystem-based approach necessitates regional cooperation, not only among the EU Member States but also with the non-EU Member States. The MSFD has a sophisticated dual relationship with regional sea conventions, treating them as a means of its implementation and, at the same time, being itself an EU measure in furtherance of their rules and objectives. The regional sea agreements function as management units for the application of the MSFD. Specifically, the directive requires the EU Member States, which share a marine region or sub-region, to cooperate in ensuring that necessary measures to achieve the objectives of the directive are coordinated across the marine region or sub-region concerned.⁴⁷⁸ Such cooperation is essential when individual action by each Member State is not sufficient due to the potential transboundary impacts of offshore activities.⁴⁷⁹ Therefore, even though the EU Member States must individually adopt measures, they must endeavour to follow a common regional approach in preparing and implementing these measures.⁴⁸⁰

The MSFD seeks to contribute to fulfilling the environmental obligations under the regional sea conventions, to which the EU is a party alongside its Member States, in order to achieve the good environmental status of EU waters.⁴⁸¹ The MSFD creates a mechanism of regular evaluation of the efforts of the regional sea agreements, bringing the relevant binding and non-binding measures adopted by their treaty bodies under the scrutiny of the European Commission. For instance, the EU Commission evaluates the regional coherence of the measures adopted under these agreements. Based on its evaluation, the EU Commission can offer guidance to regional treaty bodies on how to improve regional coordination of environmental measures for the MSFD.⁴⁸² Similarly, the EU Commission has the competence to determine the coherence of the environmental assessments and monitoring carried out by those treaty bodies.⁴⁸³ Therefore, the EU reinforces compliance control by assessing the measures as well as the scientific assessments carried out by regional sea conventions and their consistent implementation by the Member States. In that way, the MSFD creates an ongoing dialogue between the EU Commission and the institutions under regional sea conventions on the adequateness of the protective measures developed under those conventions.

477 Gutierrez Castillo and Garcia Blesa (2012) *supra* n. 265, 38.

478 MSFD, article 6.

479 *Ibid*, recital 43.

480 *Ibid*, article 5(2).

481 E Hey (2009) 'Multi-Dimensional Public Governance Arrangements for the Protection of the Transboundary Aquatic Environment in the European Union: The Changing Interplay between European and Public International Law', *International Organizations Law Review*, 200.

482 MSFD, article 16.

483 *Ibid*, article 12.

Efforts under the MSFD to prevent, reduce and control pollution from offshore energy activities are undertaken in close cooperation with regional treaty bodies. In terms of substance, the MSFD does not add much to the elaborate provisions, series of binding measures, and non-binding recommendations under the regional sea conventions. However, the MSFD has added legal value in terms both of creating procedural requirements for the implementation of duties under regional sea conventions and of improving their compliance systems. Most importantly, the MSFD has served as a mechanism for the integration in EU law of international obligations having an impact on the protection of the marine environment. Its requirement to integrate all the relevant environmental duties reflects the duty of Member States to exercise due diligence.⁴⁸⁴ As discussed in chapter 3, the standard of due diligence can function as an integrating mechanism, connecting all the relevant primary obligations of States to protect and preserve the marine environment. The standard of care, which States need to exercise, is shaped by the interaction of the primary rules, whose cumulative requirements restrict States' broad margin of discretion in adopting necessary measures for the protection of the marine environment. Similarly, under the MSFD Member States have to integrate their duties under the regional sea conventions, and any other relevant global and regional instruments in a single programme of measures focused on the needs of the respective region.

To achieve the good environmental status of seas at the regional level, Member States need not only to abide by the obligations under the regional sea conventions but also to adhere to several recommendations produced by the treaty bodies to these conventions.⁴⁸⁵ The measures recommended in those non-binding instruments must also be integrated into the measures required by the MSFD.⁴⁸⁶ The ECJ has ruled that recommendations by treaty bodies, established by a mixed agreement for its furtherance and implementation, are directly linked to that agreement. Therefore, in its view, such recommendations also form part of the EU legal order.⁴⁸⁷ For instance, there are numerous recommendations under both regional sea agreements and regional nature conservation agreements on the prevention of negative impacts of marine renewable energy generation on migratory species populations.⁴⁸⁸ These recommended standards become legally relevant for the interpretation of EU obligations of Member States, as they form part of EU law.⁴⁸⁹ Consequently,

484 See chapter 3, section 3 on due diligence as an integrating tool for primary obligations.

485 ECJ, C-188/91, *Shell*, Judgment of 21 January 1993, paras 18-19. The ECJ upheld that even when recommendation by treaty bodies cannot create rights for individuals and therefore they lack direct effect (they cannot be invoked before domestic courts to challenge measures for the implementation of the relevant international obligations), they still form part of the EU legal order, when the EU is a party to the agreements, under which they have been issued. Since they become part and parcel of the EU legal order, they can be used as interpretative tools for the relevant international obligations, and therefore must be taken into consideration when domestic courts resolve disputes submitted to them.

486 Trouwborst and Dotinga (2011) *supra* n. 180, 141.

487 ECJ, C-192/89, Judgment of 20 September 1990, para 10, C-188/91, Judgment of 21 January 1993, para 17.

488 See chapter 6, sub-section 3.3.

489 ECJ, C-239/03, *supra* n. 460 with accompanying text, where the ECJ upheld that the Athens Protocol on Land-based Pollution has direct effect as part of EU law, even though the EU had not adopted any implementation measures.

non-binding recommendations by the treaty bodies are supported by the persuasive supervision authority of the EU Commission and the ECJ.⁴⁹⁰

Another significant contribution of the MSFD to the regulation of offshore energy production activities is that it enhances regional cooperation concerning the establishment of area-based measures, such as MPAs. The MSFD requires the Member States to cooperate and coordinate in their designation and adoption of protective measures applicable to those MPAs through the regional treaty bodies. The MSFD also provides a mechanism for addressing regional sea treaty bodies for them to consider the adoption of measures for the protection of protected areas from activities, such as offshore energy production, which are likely to have a significant impact on the marine environment.⁴⁹¹ It is an acknowledgement that, in some cases, the protection of the marine environment is not the sole responsibility of the Member States individually but rests at the same time with the regional sea conventions, which can effectively develop measures applicable at the regional level. In addition, the MSFD also provides the EU Member States with an extra motivation to fulfil their existing obligations under regional sea conventions and to carry out the recommended actions proposed by the relevant treaty bodies.⁴⁹² Therefore, while the achievement of good environmental status at the regional level depends to a large extent on the implementation of the substantive obligations of Member States under regional sea conventions, the MSFD requires the Member States to do more than that.

Although the MSFD acknowledges that the challenges faced across the marine regions differ and the necessary measures to achieve the good environmental status vary accordingly,⁴⁹³ it emphasises the need to maintain coherence and consistency of actions taken at the EU level. One of the aims of the MSFD is to promote further coherence in the environmental measures among the regional sea agreements, in particular between OSPAR and HELCOM and between OSPAR and the Barcelona Convention, to foster a consistent level of ambition across the EU while taking into account the regional specificities. That requires the alignment of the work programmes of regional sea conventions where that is deemed feasible and practical, through the sharing of information on work plans and mutual adjustments. For instance, the OSPAR, Helsinki and the Barcelona Convention systems have attempted to promote further cooperation on common good environmental status indicators to increase cross-regional coherence.⁴⁹⁴ Particular efforts have been made to establish practical arrangements for cooperation between the regional sea agreements in the field of managing underwater noise.⁴⁹⁵

490 Hey (2009) *supra* n. 481, 209.

491 MSFD, article 13(5).

492 A Trouwborst (2011) 'Managing Marine Litter: Exploring the Evolving Role of International and European Law in Confronting a Persistent Environmental Problem', *Merkourios Utrecht Journal of International and European Law*, 17.

493 MSFD, recital 10.

494 OSPAR Commission, ICG-MSFD Work Plan 2017-2020, 10.

495 Report from the Commission to the European Parliament and the Council assessing Member States' programmes of measures under the Marine Strategy Framework Directive, 31 July 2018, COM (2018) 562 final, 12-13.

3.3.2. *The role of the Offshore Safety and the MSP directives in promoting regional cooperation*

The need to strengthen the coordination of the implementation of EU rules through regional sea conventions is also highlighted in the Offshore Safety directive, which mentions that cooperation with third countries in the marine regions around the EU must be a matter of priority.⁴⁹⁶ Even though the Offshore Safety directive does not establish how such cooperation should take place, the EU has made considerable attempts to achieve the joint application of the relevant duties under UNCLOS and the regional sea conventions. On that account, the EU has acceded to the regional sea agreements, *inter alia*, to secure their consistent application across Europe. In the context of the Mediterranean, the EU has called upon the Member States to boost their co-operation, by encouraging the remaining Member States to ratify the Offshore Protocol to the Barcelona Convention.⁴⁹⁷ In the same vein, the EU Commission bears a duty to facilitate the exchange of information between its Member States and neighbouring third countries to promote more consistent preventive measures, and regional emergency response plans to control accidental pollution.⁴⁹⁸

The MSP directive also plays a significant role as a springboard for normative interactions between the EU law and regional sea conventions. Echoing the realisation that the problems of the oceans are closely interrelated,⁴⁹⁹ the MSP directive perceives marine space as an ecological unity which transcends maritime borders. In practice, that necessitates inter-State cooperation, especially among neighbouring States. The coordination of MSP at the regional level is of utmost importance because it allows the Member States to collectively identify the most suitable locations for offshore energy production installations considering the cumulative effects of other human activities in the same marine area. Transboundary cooperation is advanced as a necessary element of MSP, not only to avoid conflicts between uses competing for maritime space but also for the sake of implementing an ecosystem-based approach.⁵⁰⁰ States must form some understanding that marine areas bordering on each other cannot be allocated to uses completely excluding each other, such as, for example, offshore oil and gas exploitation activities next to nature and species conservation areas.

In comparison with the MSFD, the MSP directive contains a relatively modest duty of cooperation to ensure that national plans are coherent in each marine region.⁵⁰¹ Cooperation among the Member States requires establishing a monitoring

496 Offshore Safety directive, recital 50.

497 Nonetheless, it is noteworthy that the participation of the EU in the Offshore Protocol has not brought about the expected results, as so far only Croatia has ratified the Protocol during the nine years since the EU's accession to it.

498 Offshore Safety Directive, article 33(2).

499 UNCLOS, preamble.

500 F M Platjouw (2018) 'Marine Spatial Planning in the North Sea – Are National Policies and Legal Structures Compatible Enough? The Case of Norway and the Netherlands', *International Journal of Marine and Coastal Law*, 36.

501 The proposal for a directive on MSP initially submitted by the EU Commission included much stronger obligations concerning regional cooperation, as it explicitly required Member States to identify the transboundary effects of MSP and integrated coastal management strategies on the marine environment of third countries in the same region, see Proposal for a directive of the European Parliament and of the Council establishing a framework for maritime spatial planning and integrated coastal management, COM (2013) 122 final, articles 4(3), 6(2)(c), 12 and 13. Nonetheless, following strong opposition by Member States, these provisions were considerably

and reporting system. For the same reason, national plans need to be communicated to the other potentially affected Member States.⁵⁰² However, the MSP directive imposes a lenient *ex post facto* obligation, which does not affect the planning process because it does not require any cooperation in the drafting and implementation of the MSPs at the regional level.⁵⁰³ In light of the lack of EU forms of cooperation to achieve the goals of the MSP directive, the institutional framework under regional sea conventions, and in particular their specialised working groups, such as the HELCOM-VASAB,⁵⁰⁴ have played a significant role in implementing the normative requirements of the directive.⁵⁰⁵

3.3.3. *The varying impact of the EU directives on regional cooperation across European seas*

Nonetheless, the impact of EU law is not identical in all maritime regions around Europe. The EU's influence in catalysing common State practice is much more substantial in the case of the OSPAR and Helsinki Conventions, where the majority of States bordering the marine regions covered by the regional sea conventions are members of the EU than in the Mediterranean.⁵⁰⁶ Relevantly, the report by the EU Commission in 2017 on the implementation of the MSFD noted that coherence in the implementation of the relevant obligations under the MSFD varies widely across the EU. While in the North-East Atlantic and the Baltic Sea Member States have shown the highest level of coherence, coherence was at its lowest in the Mediterranean.⁵⁰⁷ That is because the Member States bordering the North-East Atlantic and the Baltic Sea have established common descriptors of the environmental status and follow up on their implementation through regional monitoring programmes. In that sense, the Mediterranean lags behind in terms of regional efforts to consistently monitor environmental descriptors,⁵⁰⁸ in particular, those related to the introduction of energy and noise to the marine environment.⁵⁰⁹

watered down during the legislative procedure that led to the MSP directive, see also A Zervaki (2016) 'The Legalization of Maritime Spatial Planning in the European Union and Its Implications for Maritime Governance', *Ocean Yearbook*, 45.

502 MSP directive, article 14(1).

503 N Soininen, 'Marine Spatial Planning in the European Union' in D Hassan, T Kuokkanen, and N Soininen (eds) *Transboundary Marine Spatial Planning and International Law* (Taylor and Francis, 2015) 195.

504 VASAB (Visions and Strategies around the Baltic Sea) is intergovernmental multilateral cooperation among 11 countries in the Baltic Sea region on the development of maritime spatial planning, guided by the conference of Ministers responsible for MSP, see www.vasab.org.

505 Soininen (2015) *supra* n. 503, 194.

506 Eight of the nine States Parties to the Helsinki Convention are EU Member States and eleven out of fourteen States Parties in the case of the OSPAR Convention are EU Member States.

507 Report from the Commission to the European Parliament and the Council assessing Member States' Monitoring Programmes under the MSFD, COM (2017) 03 final, 12-13. Similar remarks were made in the first assessment report, see Report from the Commission to the Council and the European Parliament, The first Phase of Implementation of the Marine Strategy Framework Directive, 20 February 2014, COM (2014) 97 final, 7.

508 In the context of the Mediterranean, the Quality Status Report for 2017 was the first GES descriptor based regional assessment, see https://www.medqsr.org/sites/default/files/inline-files/2017MedQSR_Online_0.pdf.

509 Report from the Commission (2017) *supra* n. 507, 13.

Another factor contributing to the varying degree of regional cooperation in marine regions surrounding Europe is the degree of institutionalisation and the culture of interstate cooperation which differs significantly between the North and the South. Thus, the efforts of the EU to harmonise normative developments may not always bear the same results across different regions.⁵¹⁰ For instance, regional cooperation on MSP is far more advanced under the OSPAR and Helsinki Conventions, because the marine areas they cover are surrounded mostly by the EU Member States, except for Norway and Russia. The situation is different when it comes to the Mediterranean, where the culture of cooperation among States bordering the region is not at the same level.⁵¹¹ In addition, some coastal Mediterranean States have not yet ratified UNCLOS, and this too might aggravate their divergent perspectives on both the duty of regional cooperation and their rights and obligations in areas within their jurisdiction.⁵¹²

3.4. The other side of the coin: the normative impact of regional sea conventions on the EU legal framework

Regional sea agreements have also recognised the importance of their normative and institutional framework in facilitating the coordinated and coherent implementation of the relevant EU instruments in their respective marine regions. They have explicitly acknowledged that measures adopted by their parties in the application of their rules aim simultaneously to achieve the objectives of the relevant EU legislation. For instance, regional sea conventions facilitate the implementation of the MSFD through their environmental strategies.⁵¹³ Hence, the OSPAR Strategy for the Protection of the Marine Environment of the North-East Atlantic mentions that the OSPAR Commission took on a commitment to ensure maximum synergy between the OSPAR Convention and the relevant EU legislation wherever possible.⁵¹⁴ In 2010, the OSPAR Commission issued a Regional Implementation Framework for the MSFD, which lays down a clear timetable for EU Member States to conduct assessments and adopt measures following the EU directive.⁵¹⁵ Consequently, the well-organised institutional mechanisms operating in the North-East Atlantic under the OSPAR framework have become agents for the concurrent implementation of the EU directive.

510 Kern and Gilek (2015) *supra* n. 409, 1-2.

511 The Mediterranean is bordered by a mix of States, including eight EU Member States, nine non-EU Member States, and five potential candidates for EU accession.

512 Israel, Syria, Libya, and Turkey have not ratified UNCLOS, see available information on the status of ratification of the Convention online: www.un.org/depts/los/reference_files/chronological_lists_of_ratifications.htm.

513 For instance, the Baltic Sea Action Plan aims for the achievement of good environmental status by 2021, requiring the alignment of HELCOM's activities to synergistically implement its duties under the Helsinki Convention and the EU MSFD, see HELCOM Copenhagen Ministerial Declaration, 3 October 2013, 4.

514 Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010-2020, OSPAR Agreement 2010-3, recital 3.

515 OSPAR Commission (2010) OSPAR Regional Implementation Framework for the EU Marine Strategy Framework Directive, MSFD Road Map, 3. Similarly, the HELCOM also adopted a roadmap for the implementation of the MSFD in 2011, see A Coordination Platform for the Implementation of the EU Marine Strategy Framework Directive in the Baltic Sea Region.

3.4.1. Adding normative content to the relevant duties under the EU directives

The EU, as a party to the OSPAR, the Helsinki, and the Barcelona Conventions, as well as the Barcelona Convention's Offshore Protocol, has integrated their rules concerning the regulation of offshore oil and gas activities into EU law. The rules and standards substantiated under these regional agreements can supplement and fill in the gaps identified in the EU Offshore Safety directive and the other "satellite" EU instruments discussed above. The normative interactions between EU law and the regional sea agreements appear to enhance the legal framework for the protection of the marine environment in relation to offshore energy production across Europe. For instance, such a complementary function of the regional sea agreements is particularly vital concerning regional rules and standards on prevention of operational pollution⁵¹⁶ since the Offshore Safety directive does not address this matter. At present, the prevention of different forms of operational pollution is treated in a fragmented manner in various EU legal instruments, which are not specific to offshore oil and gas operations and fail to cover all the operational discharges.

Most of the examined regional sea conventions also contain elaborate rules on the requirement to conduct EIAs, as well as continuously monitor the offshore oil and gas activities throughout their life cycle, which are absent from the Offshore Safety directive.⁵¹⁷ The integration of these regional rules at the EU level may result in a complex geometry of obligations of varying normativity, as rules and standards are more or less detailed and comprehensive, depending on the marine region.⁵¹⁸ For instance, the analysis in chapter 6 has illustrated that normative developments with direct implications for offshore oil and gas activities in the OSPAR and Barcelona Conventions have been much more advanced than the ones within the Helsinki Convention. That lack of uniformity does not necessarily create problems, as long as the combination of region-specific rules covers the needs in each maritime area.

The OSPAR, Helsinki, and Barcelona Conventions have developed a series of measures on the prevention of pollution from offshore oil and gas activities, which also support measures required under the MSFD towards achieving the good environmental status in their respective marine regions.⁵¹⁹ The Member States must, as far as possible, build upon the existing norms developed under the regional sea conventions.⁵²⁰ To that end, Member States have also integrated non-binding recommendations by regional treaty bodies into their domestic legal order in complying with their duties under the MSFD. For instance, as part of its MSFD strategy to combat the introduction of energy and underwater noise, the Netherlands has concluded agreements with the offshore industry regarding the application of the voluntary OSPAR recommendations on the reduction of the effects of lighting

516 See chapter 6, sub-section 3.1. on rules regarding operational pollution in the examined regional sea conventions.

517 The EU Offshore Safety directive does not require the assessment of the status of the marine environment nor the assessment of the cumulative impacts of offshore oil and gas activities. However, as was stressed above, the MSFD has integrated and encouraged such assessments through the regional sea conventions. On the relevance of the EIA directive, see discussion *supra* sub-section 2.1.1.

518 Truilhé and Bouillard (2017) *supra* n. 337, 23.

519 OSPAR Commission (2015) Existing OSPAR measures in support of MSFD programmes of measures – OSPAR Acquis, Sea-based sources offshore oil and gas industry, 23-26.

520 MSFD, recital 27.

on offshore platforms.⁵²¹ In terms of marine environmental protection from offshore energy activities, such a result of the normative interaction between EU law and norms produced through regional sea arrangements is rather commendable.⁵²²

Regional sea conventions and their institutional frameworks have also played a cardinal role in coordinating the implementation of MSFD.⁵²³ For instance, the OSPAR Commission has engaged actively with the EU MSFD Common Implementation Strategy and the various working groups that deliver the strategy.⁵²⁴ Those of its parties that are also members of the EU have agreed that the OSPAR Commission should be the leading platform through which they coordinate their work to implement the EU MSFD in the North-East Atlantic.⁵²⁵ The OSPAR Commission has facilitated the implementation of the MSFD by contributing to the further elaboration of the elements of good environmental status under the MSFD.⁵²⁶ For instance, the OSPAR Commission has primarily assisted the implementation of the MSFD through improving regional coherence among its parties based on identified common indicators for the good environmental status of the region.⁵²⁷ In addition, the OSPAR Commission has participated in the review of the EU Commission's decision on the criteria underlying MSFD descriptors, ensuring that regional work is adequately considered in the formulation of further EU level guidance.⁵²⁸ Thus, the OSPAR Commission has supported the EU Member States in the review of their GES determination and has improved the monitoring of activities undertaken to reach the goals set by the MSFD.

Similarly, in the context of the Helsinki Convention, the Parties have designated HELCOM as the coordinating platform for the regional implementation of the EU MSFD in the Baltic Sea.⁵²⁹ HELCOM has also been assigned a prominent role in promoting MSP in the region, together with other relevant stakeholders. Moreover, the role of HELCOM is of crucial importance in achieving the objectives of the EU Strategy for the Baltic Sea region.⁵³⁰ The EU Commission has stressed that in a case

521 Marine Strategy for the Dutch part of the North Sea 2012-2020 Part 3, MSFD programme of measures, Appendix 5 to the National Water Plan 2016-2021, December 2015, 12.

522 ECJ, C-188/91, *Shell*, para 17, where the ECJ ruled that measures emanating from treaty bodies to international agreements, which have been entrusted with the responsibility for the implementation of the agreements, are directly linked to the agreement and, thus, form part of the EU legal order.

523 Hey (2009) *supra* n. 481, 208.

524 OSPAR Commission, Initial OSPAR Contribution to the EU-MSFD Common Implementation Strategy work programme for 2014 and beyond, available online at: https://www.ospar.org/site/assets/files/33143/initial_ospar_contrib_eu-cis_november_2013.pdf.

525 North-East Atlantic Environmental Strategy, Agreement 2010-3, 2.

526 OSPAR Commission (2010) OSPAR Regional Implementation Framework for the EU Marine Strategy Framework Directive – MSFD Road Map, which sets out coordination activities for the period 2010-2020.

527 For instance, OSPAR agreement 2013 which specifies which indicators are to be addressed in the OSPAR region. The OSPAR Commission has developed an improved set of indicators on the main pressures and ecosystem components, building on the qualitative descriptors for GES of the MSFD, as well as advice manuals, see OSPAR MSFD Advice Manual and Background Document on Good Environmental Status – Descriptor 11: Energy and Underwater Noise.

528 OSPAR Commission, Regional Plan to Improve Adequacy and Coherence of MSFD Implementation 2014-2018, 10 December 2014, 4.

529 HELCOM Ministerial Declaration on the Implementation of the HELCOM Baltic Sea Action Plan, 20 May 2010.

530 The EU Strategy operationalises HELCOM and the Baltic Sea Action Plan as an institutional basis for the implementation of the MSFD, thus initiating interactions between the Helsinki Convention

where the EU does not provide a certain standard, Member States should use region-specific common indicators developed by the relevant regional sea conventions in their monitoring programmes.⁵³¹ For instance, the HELCOM's zero discharge policy, which requires enhanced protection of the Baltic marine environment against operational pollution from offshore oil and gas activities, goes beyond the EU requirements in terms of stringency. That policy recommendation should apply at the EU level to achieve the objective of ensuring clear water in the sea under the EU Strategy for the Baltic.

3.4.2. *Borrowing their institutional capacity to address accidental pollution at EU level*

Besides adding normative content to the EU law instruments, regional sea conventions can also contribute through their institutional capacity in responding to accidental pollution from offshore oil and gas accidents. Their contribution in addressing severe pollution becomes especially crucial if transboundary pollution necessitates the coordination of action between the Member States and neighbouring non-EU Member States, which are parties to the same regional sea convention. For instance, in the Mediterranean, that would mean the involvement of the sophisticated system of the REMPEC in emergency preparedness and response. Such a contribution would be of the utmost importance since the EU has failed to create an equivalent exclusive EU agency, and the EMSA's role is limited to the cases where the Member States or the EU Commission request its assistance.⁵³² In the event of a major accident in the Mediterranean, the EU Member States must inform the potentially affected States and the EU Commission. At the same time, as parties to the Mediterranean Offshore Protocol, they need to inform the REMPEC, which is responsible for communicating the emergency to the other Mediterranean States.⁵³³ Then, there is potential for synergies between the REMPEC and the EMSA,⁵³⁴ especially since the mandate of the latter agency has been expanded to cover offshore oil and gas installations.⁵³⁵ Nonetheless, the Offshore Safety directive does not contain any mention of the potential institutional interactions between these agencies. The absence of explicit provisions to create the necessary institutional links with the regional sea conventions results in a certain superfluity between those conventions and the already existing EU legal instruments.⁵³⁶ The inclusion of explicit provisions could prevent unnecessary duplication of efforts at a time when good coordination is critical given that an ongoing major accident can spell disaster at sea.⁵³⁷

and the EU legal framework, see also, S Soderstrom, K Kern, and B Hassler 'Marine Governance in the Baltic Sea: Current Trends of Europeanization and Regionalization' in Gilek and Kern *supra* n. 374, 174. According to the strategy, Member States are encouraged to make every effort to meet the targets and indicators set in the updated 2013 HELCOM Baltic Sea Action Plan, see Commission Staff Working Document, European Union Strategy for the Baltic Sea Region, Action Plan, SWD (2017) 118 final, 20 March 2017, 38.

531 Report from the Commission (2014) *supra* n. 528, 8.

532 *Supra* sub-section 2.3.2.

533 Offshore Protocol, article 10(1)(c).

534 Schneider (2014) *supra* n. 319, 292.

535 *Supra* sub-section 2.3.2.

536 Volondat (2018) *supra* n. 234, 190.

537 Schneider (2014) *supra* n. 319, 291.

3.4.3. Inspiring the development of EU standards

Moreover, normative developments under regional sea conventions can serve as a source of valuable information and inspiration for EU measures. Arguably, the 2007 Baltic Sea Action Plan has had a crucial influence on the development of the MSFD with regard to the latter's objective, the use of the ecosystem-based approach, and the scientific and technological knowledge basis.⁵³⁸ Similarly, the Offshore Safety directive has adopted the goal-oriented approach, which has traditionally been favoured by specific parties to the OSPAR Convention.⁵³⁹ The EU considered that a goal-oriented approach to regulation allows flexibility in choosing the best technology to meet safety and environmental standards in the offshore sector. Essentially, the Offshore Safety directive aimed to capture the best practices as developed in the OSPAR framework and to ensure that these also apply to the industry in other parts of the EU.⁵⁴⁰ It is arguably an example of legal transplantation⁵⁴¹ since it primarily intended to transfer best practices developed in the North Sea region to the nascent industry in other EU regions. Another example of normative cross-fertilisation can be seen in the recent EU Guidance Document on BAT in the offshore energy industry, which explicitly refers to the relevant BAT under the OSPAR and Barcelona Conventions. In light of the EU participation in those regional agreements, the document acknowledges that information developed under those regional agreements is a source of valuable data for developing and identifying BAT at the EU level.⁵⁴²

However, 'legal transplants' can be dangerous when they do not take into account the region-specific needs of different marine areas. On that account, institutional interactions can play a significant role in the normative cross-fertilisation between regional regimes and the EU. For instance, the legal transfer of the goal-oriented model of the regulation of the safety of offshore oil and gas activities has been coupled with an institutional arrangement, which can be perceived as a "significant transfusion of regulatory expertise".⁵⁴³ Specifically, the EU Offshore Oil and Gas Authorities Group is of paramount importance for the exchange of information and best practices among competent domestic authorities, as well as representatives of the industry and the treaty bodies to the regional sea conventions.⁵⁴⁴ The OSPAR Commission has frequently participated as an observer in the meetings of the EU Offshore Authorities Group.⁵⁴⁵ *Inter alia*, the Group is mandated to give opinions and assist the EU Commission in identifying priorities for the preparation of

538 Soderstrom, Kern and Hassler (2015) *supra* n. 530, 171, with reference to B Wenzel (2011) *Environmental Governance and Institutional Interaction in the Baltic Sea Region: Effective Governance System or Institutional Entanglement?*, Master's Thesis submitted at Philipps University Marburg, 36.

539 EU Commission Proposal for a Regulation, 4, C Pelaudeix (2015) 'Governance of Arctic Offshore Oil & Gas Activities: Multilevel Governance & Legal Pluralism at Stake', *Arctic Yearbook*, 10.

540 Gordon (2014) *supra* n. 32, 169.

541 *Ibid.*, 169.

542 EU BAT Guidance Document, 19. In some instances, the Guidance Document makes direct references to BAT developed under the OSPAR Convention instead of seeking to identify EU BAT separately. For instance, the Guidance Document explicitly refers to the OSPAR Harmonised Mandatory Control System as the most widely adopted system in place to assess the potential impact of planned offshore chemical discharges in the marine environment around the EU, *ibid.*, 137.

543 *Ibid.*

544 See *supra* sub-section 2.3.2.

545 See info on the website of the EU Offshore Authorities Group <https://euoag.jrc.ec.europa.eu/node/160>.

guidance documents, standards, and best practices.⁵⁴⁶ Within that context, the active participation of the OSPAR Commission can facilitate the exchange of information between the regional sea convention and the EU on a range of issues associated with the regulation of offshore oil and gas activities.

3.4.4. *Producing scientific data to support science-driven decision-making at the EU level*

The conduct of continuous environmental assessments is another significant contribution of the regional sea conventions, given that it would not be feasible to formulate sound regulation without an awareness of the risks specific to offshore oil and gas activities in different maritime areas. The EU Commission has already highlighted the critical role of regional sea conventions with regard to monitoring the environmental impacts of offshore oil and gas activities and collecting relevant scientific data, which can catalyse further normative developments at the EU level.⁵⁴⁷ The MSFD calls upon the Member States to consider the assessments carried out under the regional sea conventions to implement their duties under the directive.⁵⁴⁸ In addition, regional sea conventions have contributed significantly to collecting data for mapping offshore energy activities and preparing thematic assessments on environmental pressures by those activities.⁵⁴⁹ Those environmental assessments feed in to the EU Marine Knowledge 2020 initiative, which has been developed under the IMP to improve law-making both within the EU and its Member States by providing broader access to quality-checked and rapidly available scientific data about the seas around Europe.⁵⁵⁰

The production of coordinated scientific data is not only contributing to better implementation of the MSFD but is also a pre-requisite for formulating and implementing MSP.⁵⁵¹ Regional sea conventions have served as an efficient platform for encouraging a regional MSP approach by facilitating the necessary cross-border cooperation through their institutional arrangements. As far as regional coordination of MSP is concerned, it appears that HELCOM has been the most proactive regional body.⁵⁵² In cooperation with the VASAB,⁵⁵³ HELCOM has elaborated MSP principles, which, *inter alia*, promote the application of the ecosystem-based approach⁵⁵⁴ as an overarching principle for MSP at the regional level to achieve a good environmental

546 *Ibid*, article 2(3)(a).

547 EU Commission Proposal for a Regulation of the European Parliament and of the Council on safety of offshore oil and gas prospection, exploration and production activities, COM/2011/0688 final, 3 September 2011, see also Commission Staff Working Document, Accompanying the document Report from the Commission to the European Parliament and the Council assessing Member States' programmes of measures under the Marine Strategy Framework Directive, COM (2018) 562 final, descriptor 11, underwater noise & energy.

548 MSFD, article 8(2).

549 See chapter 6, section 4.

550 COM (2010) 461 final 8 September 2010.

551 Soininen (2015) *supra* n. 503, 194.

552 Maes and Cliquet (2008) *supra* n. 228, 97. See HELCOM (2007) Recommendation 28E/9 on 'Development of Broad-Scale Marine Spatial Planning Principles in the Baltic Sea Area'.

553 *Supra* n. 233 with accompanying text.

554 See also, HELCOM-VASAB 'Guideline for the implementation of ecosystem-based approach in Maritime Spatial Planning (MSP) in the Baltic Sea Area.

status of the Baltic Sea.⁵⁵⁵ The joint working group has drafted a regional road map to implement the MSP directive at the regional level by 2021.⁵⁵⁶ It has also enabled regional dialogue as well as the development and exchange of data related to MSP among the Baltic Sea States as called for by the MSP directive.⁵⁵⁷ Even though recommendations under the HELCOM framework are not binding, they might have a significant impact on the interpretation of the relevant MSP directive obligations.⁵⁵⁸

Arguably, the OSPAR Convention has not played an equally direct role in MSP implementation at the regional level in the North-East Atlantic.⁵⁵⁹ Nonetheless, the OSPAR regime has contributed to the development of region-specific, tailor-made principles for maritime spatial planning. It has issued guidance about the ecosystem-based approach through impact assessment of offshore energy activities.⁵⁶⁰ The OSPAR Commission has also created a working group on MSP (ICG-MSP), whose mandate emphasises the exchange of best practices and experiences among OSPAR Parties. Importantly, information exchange has focused on the effects of wind farms as well as the co-location of such marine renewable energy installations and their cumulative effects on the marine environment and other uses of the seas.⁵⁶¹

Interim conclusions

At the EU level, the regulation of offshore oil and gas activities had traditionally been considered a prerogative of the EU Member States. However, this approach has gradually changed, asserting the EU's shared competence in the regulation of the offshore energy sector. That progressive assertion of the EU's competence in the sector is reflected in the fragmented regulation of offshore energy production activities under EU law. Although general EU environmental directives applied to certain aspects of offshore energy production, many essential issues were falling between the cracks and, thus, were not being addressed adequately. The ocean-specific legislative instruments under the IMP marked a significant milestone for the protection of the marine environment under EU law. Among them, the most essential is the Offshore Safety directive, which imposes strong (mostly procedural) obligations on the two main actors involved in the offshore energy field, namely States and the offshore energy industry. However, despite the significance of the Offshore Safety directive as

555 Baltic Sea Broad-Scale Maritime Spatial Planning (MSP) Principles, adopted by HELCOM HOD 32-2010 and the 54th Meeting of VASAB CSPD/BSR, principle 2. It is noticeable that the EU MSP directive gives the ecosystem-based approach an important role as well.

556 H Backer, 'Marine Spatial Planning in the Baltic Sea' in Hassan, Kuokkanen and Soinen (2015) *supra* n. 503, 141.

557 J Zaucha (2014) 'The Key to Governing the Fragile Baltic Sea: Maritime Spatial Planning in the Baltic Sea and the Way Forward', VASAB Secretariat, 110.

558 N Soinen, T Kuokkanen, D Hassan, 'Comparative and Forward-looking Conclusions on Transboundary MSP', in Hassan, Kuokkanen and Soinen (2015) *supra* n. 503, 222.

559 *Contra* P Drankier (2012) 'Embedding Maritime Spatial Planning in National Legal Frameworks', *Journal of Environmental Policy and Planning*, 15, arguing that "cautious efforts are being undertaken to stimulate the debate on regional strategic MSP".

560 M Marques et al (2019) 'The Definition and Application of MSP by the OSPAR Convention taking into consideration the relationship between EU and non-EU Countries', EU Project Grant No: EASME/EMFF/2015/1.2.1.3/03/SI2.742089, see also OSPAR Environmental Strategy, Agreement 2010-03, 11.

561 OSPAR Commission (2014) Summary Record, EIHA 14/10/1-E, Annex 17.

an EU instrument explicitly devoted to the safety of offshore oil and gas activities, EU law remains virtually silent on the environmental regulation of marine renewables.

Nevertheless, the relevance of EU law instruments for the regulation of offshore energy production cannot be evaluated individually; they do not operate in isolation. Therefore, they need to be assessed as embedded in their normative context. The normative interactions between EU law and regional sea conventions illustrate how the latter agreements have been operationalised as a means to implement EU law. Several Member States have implemented their EU environmental law duties by adopting measures and conducting assessments under the respective regional sea agreements. The adoption of such measures was of the utmost importance in the absence of specific EU law instruments, as in the case of the regulation of operational discharges from offshore energy production activities. Regional sea conventions play a crucial role in adapting EU law standards to local needs and conditions,⁵⁶² as well as assessing the environmental effects of offshore energy production activities in their respective marine areas. Seemingly, EU law has created a framework for normative interactions between EU directives and regional sea agreements, where the latter strengthen the content of obligations of EU Member States concerning the regulation of offshore energy production activities. For instance, the EU Offshore Safety directive appears to be a relatively modest instrument compared with the examined rules and standards elaborated under regional sea conventions.

From the above discussion, it equally follows that the EU instruments have significantly contributed to the further development and enhancement of the environmental protection standards concerning offshore energy production activities under the selected regional sea conventions. The EU's robust legal framework has the potential to transform the sometimes weak and vague regional commitments into clear and enforceable targets.⁵⁶³ EU instruments, such as the MSFD, the MSP directive and the Offshore Safety directive, appear to have contributed to the regional regimes in terms of both their substantive and procedural obligations. The EU instruments can also catalyse cross-regional interactions and promote a level of normative coherence in the implementation of regional sea agreements at the EU level. As discussed in the context of the Mediterranean Offshore Protocol, the "Europeanisation" of regional sea conventions can be a "door opener" for their rules in the legal order of the Member States that have not formally ratified them. Their integration into the EU legal order can grant them a "hierarchical boost" in the sense that they can benefit from the doctrine of the supremacy of EU law over the Member States' Constitutions.⁵⁶⁴ In that way, their normative interactions with regional sea conventions can shape the level of marine environmental protection in relation to offshore energy production activities across Europe.

Another significant effect of normative interactions between the EU and regional sea conventions is the integration of the rules and standards produced under the

562 See above discussion on the role of the regional sea bodies in building upon the EU standards, such as the descriptors of good environmental status, and adapting them to the regional needs of their respective area, *supra* sub-section 3.3.

563 An example highlighted in the chapter has been the contribution of the EU MSFD and its eleven environmental quality descriptors in substantiating the content of the ecosystem-based approach in the Barcelona Convention.

564 K Ziegler (2016) *supra* n. 51, 45, A Gianelli (2011) *supra* n. 84, 110.

regional sea conventions into the EU legal order. That is because their incorporation in the EU legal system places them under the enhanced EU compliance and enforcement system, which often is missing in marine environmental agreements. The added value of the EU as a regional organisation with shared competence on the protection of the marine environment can be found in its elaborate mechanisms of control and compliance. The regional sea conventions may avail themselves of the robust compliance mechanisms of EU law, such as monitoring, enforcement, and infringement proceedings. These mechanisms can fill the compliance gaps in regional sea conventions when EU members form the majority of their contracting parties (as in the case of OSPAR and the Helsinki Convention). The case-law of the ECJ has clarified the role of both domestic courts and the judicial system of the EU in interpreting and implementing the duties under mixed agreements, such as the examined regional sea conventions. The ECJ has also stressed the legal relevance of the “secondary” norms produced by regional treaty bodies, such as non-binding guidelines and recommendations, by ruling that they need to be taken into account when interpreting the relevant provisions of their respective agreements.

Consequently, the regional legal framework applicable to offshore oil and gas activities in the marine waters of the EU Member States is an amalgam of rules and standards. Those regional rules and standards stem from various sources. They are characterised by varying normativity, ranging from binding obligations to recommendations and guidelines which should be considered during the decision-making process by domestic authorities licensing offshore energy production activities. The composite nature of the regional legal framework does not necessarily mean that it leads to legal uncertainties or unnecessary duplication of efforts. The offshore energy industry in Europe should not be afraid of the exaggerated repercussions of fragmentation.⁵⁶⁵ Instead, normative interactions between the regional sea conventions and the EU legal instruments can shape an enhanced legal framework for the protection of the marine environment against risks from offshore energy activities.

565 A Peters (2017) ‘The Refinement of International Law: From Fragmentation to Regime Interaction and Politicization’, *International Journal of Constitutional Law*, 672-674.

CHAPTER 8

Regional rules without borders? The potential “extraterritoriality” of regional environmental rules and standards for offshore energy production

Introduction

The formulation of regional environmental rules and standards for offshore energy production activities has been instrumental in implementing the duty of cooperation under UNCLOS.¹ In that respect, normative developments at the regional level have been filling in the normative gaps left by the scarcity of specific international rules at the global level. Going beyond the often vague environmental obligations of conduct established by globally applicable agreements and customary international law, regional agreements have offered in-depth prescriptive guidance on the operation of offshore energy activities in an environmentally sustainable manner. On that account, regional rules and standards play an indisputable role in identifying the standard of diligence that States must exercise concerning the regulation of offshore energy production in the respective marine regions.

Regional cooperation arrangements are crucial for the regulation of offshore energy production activities because of their potential to provide specific environmental standards, which are tailor-made to accommodate the particular needs of different marine regions. Besides the diverse ecological and geographical features of marine regions, the economic and technical capacity of States are also factors affecting the required standard of environmental protection. The economic, political and ecological context within which regional agreements are promulgated influences the level of commitment, as well as the width of regulatory discretion which they grant coastal States in their implementation. However, even within a single region, the required standard of care might not be uniform, as rules and standards may not apply in precisely the same manner across the board.² As illustrated in chapter 6, many of the regional rules and standards consider the ecological sensitivity of specific marine areas and demand an enhanced standard of diligence for their protection.³

Nonetheless, the protection of the marine environment from offshore energy activities is by no means an exclusively regional issue. The offshore energy industry is operating on a global scale, and many regions around the world face common environmental regulation challenges. However, not all energy-producing marine regions are subject to normatively specific rules and standards to regulate these activities.⁴ Theoretically, the absence of such standards might have significant environmental repercussions. Given the interconnectedness of seas and oceans, the success of a regional agreement in achieving its environmental objectives depends considerably on the consistent efforts in the other areas of the world to equally

1 See articles 197 and 208(5) of UNCLOS.

2 OSPAR Convention, article 24 on regionalisation.

3 See chapter 6, section 3.

4 C Redgwell (2014) 'Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Sector', *International Journal of Marine and Coastal Law*, 603.

protect and preserve the marine environment.⁵ In light of the above, it is crucial to examine whether the studied regional rules and standards can offer solutions, which may be applicable in other marine regions, even though they were created to protect a specific geographical area. In particular, it is necessary to assess the legal relevance of these region-specific rules and standards for other marine areas, for which there are no specific rules on the environmental regulation of offshore energy production activities. Insofar as these regional agreements could inform the interpretation of the duty to protect the marine environment in the context of offshore energy production under UNCLOS, they could also shape the required standard of care at the global level. Therefore, it is equally important to examine if, and under which conditions, regional rules and standards can interact with international rules and, in that way, inform and enrich the interpretation and implementation of the duty to protect the marine environment under UNCLOS.

This chapter examines both the potential of common rules and standards under regional agreements to operate as transposable models for similar normative developments in other regions and their capacity in informing the interpretation and implementation of UNCLOS, thereby assessing their potential “extraterritoriality”. To that end, it first touches upon examples of normative cross-fertilisation among different regions both during the law-making and the implementation processes. Such cross-fertilisation has taken various forms, such as instances of institutional support and exchange of best practices, as well as the potential transposability of regionally identified BET and BAP. Then, the chapter examines the potential of regional rules to be considered as a means for the interpretation and implementation of globally applicable rules. Specifically, it explores their capacity in informing the interpretation and implementation of the duty to protect and preserve the marine environment under UNCLOS and, thus, offer globally applicable solutions. In that respect, it examines if and under which conditions regional norms qualify as international rules, standards, recommended procedures and practices, serving as benchmarks for the assessment of compliance by other States under article 208(3) of UNCLOS, or as subsequent agreements and practice under article 31(3)(a) and (b) of the VCLT. The last section of the chapter explores the potential of EU law to provide standards applicable outside the EU, focusing on the example of the EU Offshore Safety directive. After considering the potential “extra-territorial” effects of the Offshore Safety directive, it briefly discusses the directive’s role for the interpretation and implementation of UNCLOS.

1. Normative cross-fertilisation between regional agreements

From the comparative analysis of the selected instruments in chapter 6, it follows that there is a substantial degree of uniformity among them concerning the management of various aspects of operational and accidental pollution from offshore oil and gas installations. For instance, similar rules and regulations apply in these regions for the gradual reduction of wastes, oil and oily mixtures, drilling muds and cuttings. Some of these standards implement the provisions of MARPOL 73/78, which apply

5 A Zervaki (2016) ‘The Legalization of Maritime Spatial Planning in the European Union and Its Implications for Maritime Governance’, *Ocean Yearbook*, 40-41.

to discharges from offshore installations.⁶ Other rules, formulated initially to address specific needs in one marine region, have been transplanted in other maritime areas. Take, for example, the discharge limits of oil in produced water and other oily water effluents resulting from offshore drilling activities, developed through recommendations of the OSPAR Commission, which have also been adopted as applicable standards under the Conventions for the Baltic and the Mediterranean Seas.⁷

1.1. Examples of specific references to rules and standards under other regional agreements

While the normative cross-fertilisation between different regional agreements is not always explicit, there have been instances where the adoption of standards has occurred referring explicitly to already developed norms in a different region. In some cases, the promulgation of shared rules and standards across marine regions is partly explained by the overlap in their parties.⁸ For example, a 2001 report by HELCOM concluded that the OSPAR Commission had issued several decisions and recommendations in the same field, and some are even identical or almost identical to the recommendations by HELCOM with slight differences in the strictness of limit values.⁹ Specifically, concerning HELCOM recommendation 18/2 on offshore activities, the report mentioned that – at that time – the OSPAR Commission had adopted three different decisions and two recommendations, which covered partly different aspects.¹⁰ The report found that OSPAR decisions and recommendations are usually more specific and contain standards that could be integrated into the revision of HELCOM recommendations. However, it highlighted that the distinctive characteristics of the Baltic Sea and the need for more stringent measures due to its designation as Particularly Sensitive Sea should also be considered when transplanting these standards.¹¹ Any legal transplant of rules and technical standards adopted in the OSPAR region should take into account that the situation in HELCOM parties differs significantly. Given their divergence, an identical understanding of specific matters, such as the content of BAT and BEP for each region, could be hard to reach. Therefore, the report does not aim to transfer applicable standards and unify the recommendations unquestioningly but instead attempts to harmonise their substantive requirements and their relevant reporting obligations, since they impose overlapping duties on some of the parties to the OSPAR and Helsinki Conventions.

The normative relevance of the OSPAR standards beyond the territorial scope of application of the OSPAR Convention has similarly been acknowledged in the relevant instruments developed under the auspices of the Arctic Council.¹²

6 On the relevant standards under the Helsinki Convention, see chapter 6, sub-sections 3.1.2 and 3.2.2.

7 S Vinogradov, and J Wagner, 'International Legal Regime for the Protection of the Marine Environment against Operational Pollution from Offshore Petroleum Activities' in Z Gao (ed) *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998)138.

8 See chapter 7, sub-section 3.3.

9 HELCOM (2001) Harmonization of HELCOM Recommendations with EU Directives and OSPAR Decisions and Recommendations, Final Report, March 2001.

10 *Ibid*, 194.

11 *Ibid*, 15.

12 B Baker, 'The Developing Regional Regime for the Marine Arctic' in E Molenaar, A Oude Elferink, D Rothwell (eds) *The Law of the Sea and the Polar Regions: Interactions between Global and Regional*

For instance, the 2009 Arctic Offshore Oil and Gas Guidelines contain several references to standards established by the OSPAR Commission on a range of matters concerning the regulation of offshore oil and gas activities. These standards can serve as best practices for the Arctic, subject to their adaptation to the unique environmental conditions of the Arctic Ocean.¹³ The 2014 Guidelines on Systems Safety Management and Safety Culture also refer to OSPAR Recommendation 2003/5 on the promotion of environmental management systems by the offshore industry as relevant international standards to guide domestic regulators.¹⁴ The influence on the regulation of offshore oil and gas activities could perhaps have been anticipated, given the fact that part of the Arctic Ocean falls under the scope of the OSPAR Convention.

However, many of the Arctic-specific instruments underline that the extreme conditions of the region demand specific rules.¹⁵ International best practices are valuable, but they are only appropriate when they are sufficient to address the Arctic challenges.¹⁶ For that reason, the OSPAR parties have undertaken to assess the suitability of existing measures to manage oil and gas activities in Arctic Waters (Region I of the OSPAR) and, where necessary, offer to contribute to the work on offshore oil and gas activities conducted by the Arctic Council and its working groups.¹⁷ Relevantly, the OSPAR Commission committed to keep under review and, where necessary, develop programmes and measures in respect of all the phases of offshore activities in the Arctic Waters following the provisions of the OSPAR Convention and the findings in the 2010 Quality Status Report. Moreover, vice versa, the OSPAR parties that are also members of the Arctic Council are required to ensure that programmes and measures adopted thereunder which are relevant to the implementation of the Offshore Industry Strategy are compatible with the applicable rules of the OSPAR Convention.¹⁸

The developments under the Mediterranean Offshore Protocol offer another illustrative example of normative cross-fertilisation between regional agreements. In furtherance of the obligation to substantiate international rules, standards and recommended practices under article 23 of the Mediterranean Offshore Protocol, the REMPEC has conducted an in-depth analysis of existing recognised international best practices and regulations relevant to the implementation of the Protocol.¹⁹ The study aims to take stock of the international best practices found in global, regional and national legal instruments, as well as multilateral financial institution guidelines and offshore oil and gas industry standards and guidelines, to create custom-built

Regimes (Brill, 2013) 53-54, J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 224.

13 References to the OSPAR Convention and its standards are made with regard to environmental monitoring of offshore oil and gas activities, decommissioning and the use and discharge of chemicals and BAT and BEP, see Arctic Offshore Oil and Gas Guidelines (2009) 24, 35, 49, 78-79.

14 Arctic Offshore Oil and Gas Guidelines (2014) Appendix D, 59-60.

15 See, for instance, 2015 Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic, preamble. The requirement for stricter and specific standards in the Arctic is in line with the due diligence standard, which requires a higher level of care in riskier situations.

16 *Ibid*, para 2.2.b.

17 OSPAR Offshore Oil and Gas Industry Strategy, S. 4.2.(i).

18 *Ibid*.

19 REMPEC/WG.34/19, 4 December 2013.

equivalent norms for the Mediterranean Offshore Protocol's implementation.²⁰ The REMPEC study refers explicitly to the OSPAR and the Kuwait Conventions and the relevant decisions and recommendations thereunder as a valuable source of best practices at the regional level.²¹ It recommends that several of the OSPAR recommendations and decisions be adapted to develop common standards under the Mediterranean Offshore Protocol.²² These best practices have been integrated into the 2019 Mediterranean guidelines on the conduct of EIAs for offshore activities, the disposal of harmful substances emanating from offshore oil and gas activities, and the establishment of restrictions and conditions for such activities in SPAs.²³ As in the case of the Arctic, the decisions and recommendations established by treaty bodies in other regions serve as a source of inspiration for drafting appropriate applicable standards in the Mediterranean. The need to adapt the standards established in other regions to the regional specificities is even more substantial in the context of the Mediterranean Offshore Protocol because many of its parties are developing countries. It would seem problematic to try to enforce the strictest standards applicable in the North Sea to countries surrounding the Mediterranean Sea, which might lack sufficient capacity to implement and ensure their enforcement by operators. Merely transposing standards that were formulated in a different context might make compliance with them somewhat challenging. The principle of common but differentiated responsibilities, which features prominently in the Barcelona Convention and its Offshore Protocol, also requires the adaptation of standards to regional specificities in the Mediterranean.²⁴

Another interesting observation is that normative cross-fertilisation frequently occurs among regional sea agreements concluded within the UNEP RSP, as cooperation among these agreements takes place regularly. The main strength of the RSP has been the assimilation of expertise in dealing with problems that are frequently common across various marine regions. According to Sands, the UNEP offered them the “*strategic advantage of inter-regional transfers of experience*” in the sense that the UNEP RSP has developed a “*remarkable institutional memory*”.²⁵ That partly explains the apparent similarities in the structure and language among various conventions under the UNEP RSP. In some cases, provisions introduced in one regional sea agreement have been repeated in other subsequently adopted

20 *Ibid*, Introduction and Methodology, 1.

21 *Ibid*, 2.

22 Normative developments under the OSPAR Convention could be used, *inter alia*, to develop common standards for the Mediterranean with respect to different sources of operational pollution such as waste and harmful or noxious substances, oil and oily mixtures, drilling fluids and cuttings, as well as for monitoring and measures to protect specially protected areas.

23 See chapter 6, sub-section 4.3. The draft guidelines on the measures for SPAs refer to OSPAR Guidance regarding the reduction of lights emission from offshore installations, while the draft common standards for discharges mention recommendation 2000/1 on discharges of produced water and the common standards on EIA mention recommendation 2000/2 on harmonized mandatory control systems. The first two of these draft guidelines were adopted by the MoP in December 2019.

24 See chapter 6, sub-section 3.1.3. on the discussion of the rules of the Mediterranean Offshore Protocol.

25 P Sand ‘The Rise of Regional Agreements for Marine Environmental Protection’ in FAO (ed) *The Law and the Sea: Essays in Memory of Jean Carroz* (FAO, 1987) 230.

agreements.²⁶ For example, the recent Malabo Protocol to the Abidjan Convention on Environmental Norms and Standards for Offshore Oil and Gas Exploration and Exploitation Activities has included *verbatim* the definition of BAT and BEP under the Mediterranean Offshore Protocol.²⁷ It seems reasonable that the parties to the Abidjan Convention preferred the inclusion of a prescription of the BAT and BEP that allows them broader discretion in determining which are economically appropriate techniques given their level of development. Likewise, the majority of its provisions have taken after the relevant obligations under the Mediterranean Offshore Protocol.

1.2. The role of institutional interactions in the exchange of best practices

Remarkably, the Malabo Protocol to the Abidjan Convention has also been influenced by the OSPAR Convention, as reflected in their identical formulation of the precautionary principle.²⁸ The normative influence of the OSPAR Convention on the development of the Malabo Protocol to the Abidjan Convention is probably explained in light of the assistance provided by the OSPAR Commission to the Abidjan parties during the negotiations for the Malabo Protocol.²⁹ Experts from the OSPAR OIC participated in meetings of the parties to the Abidjan Convention to facilitate the negotiations and the adoption of the Malabo Protocol.³⁰ As this example indicates, normative cross-fertilisation between different regional agreements is often the result of (mostly informal) institutional interactions between the treaty bodies to these agreements.

Similarly, the OSPAR Commission has played a proactive role in disseminating its expertise on the environmental regulation of offshore oil and gas activities in the Arctic. Since 2017, the OSPAR Commission has participated as an observer at the meetings of the Arctic Council.³¹ International observers might influence the dynamics in the Arctic Council and steer the interest in some projects regarding offshore oil and gas activities.³² According to the Rules of Procedure of the Arctic Council, observers can propose projects through an Arctic State or permanent participant, can contribute financially, and obtain some participation rights during the meetings.³³ From the side of the Arctic Council, the AMAP working group participates as an intergovernmental observer at the OSPAR meetings. While the PAME and CAFF working groups are not observers, they are considered relevant

26 See the example offered in T Treves, 'Regional Approaches to the Protection of the Marine Environment' in M Nordquist, J Norton Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Martinus Nijhoff, 2003) 145-146.

27 Malabo Protocol, article 4(1).

28 *Ibid*, article 4(2)(a).

29 See relevant information on OSPAR website: <https://www.ospar.org/about/international-cooperation/abidjan-convention>.

30 *Ibid*, see also report on Workshop held by the Abidjan Convention in 2018, available online at: [http://epaoilandgas.org/wp-content/uploads/2016/12/Annual%20Reports/ABIDJAN%20CONVENTION%20-%20report.docx%20\(1\).pdf](http://epaoilandgas.org/wp-content/uploads/2016/12/Annual%20Reports/ABIDJAN%20CONVENTION%20-%20report.docx%20(1).pdf).

31 See Arctic Council website news, available at: <https://arctic-council.org/index.php/en/our-work/2/8-news-and-events/463-observer-ospar>.

32 E A Barry-Pheby (2014) 'International Law and Governance of the Arctic's Offshore Oil Industry: Inert or Alerted?', *Oil, Gas and Energy Law Intelligence*, 13.

33 See Arctic Council Rules of Procedure 1998 as amended in 2013, para 38 which states that "*Observers, at the discretion of the Chair, make statements, submit relevant documents and provide views on the issue under discussion. Observers may also submit written statements at Ministerial meetings*".

to OSPAR's offshore oil and gas initiatives and the Joint Assessment Monitoring Programme, respectively.³⁴

The 2013 Arctic Ocean Review Report encouraged interactions with relevant global and regional treaty bodies on offshore oil and gas issues that address discharges, oil spill preparedness and response, and environmental monitoring.³⁵ Such interactions could result in coordinating information exchange on reporting, monitoring, assessment, and other requirements under relevant entities, encouraging the inclusion of science and traditional knowledge, while keeping abreast of Arctic-specific developments pertinent to the international instruments.³⁶ In the context of the OSPAR Convention, the 2010 Environmental Strategy has promoted cooperation with the Arctic Council to address environmental issues in region 1 of OSPAR, which covers some of the Arctic Ocean waters.³⁷

The two-way exchange of information between the institutions of the two regions supports the argument developed above that some OSPAR norms relating to offshore oil and gas could serve as models for the development of equivalent standards for the whole Arctic Ocean. For instance, article 21 of the MOSPA explicitly mentions that in developing and modifying the operational guidelines for the implementation of the agreement, the Arctic States must seek input from relevant stakeholders, among other, the working groups and observers to the Arctic Council.³⁸ Also, the EPPR has stressed the importance of cooperating and consulting with other organisations that have participated in specific oil spill response activities for obtaining their experience and expertise.³⁹ In that respect, the EPPR could work with and consult the OSPAR Commission and the REMPEC and consider their knowledge in revising the Operational Guidelines to the MOSPA. Another identified venue for cooperation between the OSPAR Commission and the Arctic Council is through the Joint Assessment Monitoring Programme (JAMP), which requires States to cooperate in carrying out monitoring programmes. The JAMP applies to many sectors, including the offshore industry, where contracting parties assess impacts such as underwater noise from offshore oil and gas activity and develop, as appropriate, guidance for mitigation measures.⁴⁰ These assessments can contribute to the work of the Arctic Council in the offshore oil and gas sector by identifying priorities for action for the protection of the marine environment. In this way, the Arctic Council working groups and the OSPAR Commission can complement each other by sharing their expertise, environmental data, and identified BAT and BEP.⁴¹

Similarly, institutional interactions can lead to the exchange of best practices between the OSPAR and the Barcelona Conventions, as they both enjoy observer status at each other's meeting. Representatives of the OSPAR Commission have actively participated in the meetings of the newly created Offshore Oil and Gas Group

34 B Baker (2014) 'Offshore Oil and Gas Development in the Arctic: What the Arctic Council and International Law Can and Cannot Do', *American Society of International Law Proceedings*, 278.

35 Arctic Ocean Review, Final Report, May 2013, 64-65.

36 Arctic Ocean Review Final Report, Chapter 9 Recommendations, para 16.

37 OSPAR 2010 Environmental Strategy, 6th Section on Offshore Oil and Gas, para 5.1.

38 MOSPA, article 2.

39 EPPR, Working Group Meeting, Final Report, 3-4 June 2013.

40 OSPAR 2010 Environmental Strategy, 4.2.h.

41 Deputy Secretary at OSPAR, Charlotte Mogensen, Arctic Council website: <https://arctic-council.org/index.php/en/our-work/2/8-news-and-events/463-observer-ospar>.

under the Mediterranean Offshore Protocol. In that context, they have encouraged cooperation between the two Conventions to share knowledge on existing standards in the North-East Atlantic, which might also be relevant for addressing similar challenges relating to offshore energy production activities in the Mediterranean.⁴²

1.3. The potential applicability of identified BEP and BAT across different regions

A distinctive way of normative cross-fertilisation could be achieved through the application of identified BAT and BEP across different marine regions. For example, the 2009 Arctic Offshore Oil and Gas Guidelines, which encourage Arctic States to apply BAT and BEP, incorporate the relevant definition under the OSPAR Convention. The Guidelines have incorporated the relevant Annex of the OSPAR Convention, which enumerates the relevant criteria to be taken into consideration by States in determining BAT and BEP in each sector.⁴³ That incorporation of the OSPAR's definitions could justify applying BEP and BAT identified under the OSPAR Convention to the rest of the Arctic Ocean. Even though the Arctic Offshore Oil and Gas Guidelines are not legally binding, they are a valuable source of international best practices. Such best practices could be adhered to by the Arctic States to enable them to duly implement their duty under UNCLOS to prevent pollution from offshore oil and gas activities. BAT and BEP are in that respect a useful tool in identifying the duty of care, which needs to be exercised by States in the context of offshore energy production.

The provisions of the OSPAR Convention on the identification of BAT and BEP were arguably influenced by the Helsinki Convention and the HELCOM relevant recommendations.⁴⁴ The definition of BAT provided for under Appendix I of the OSPAR Convention is almost identical to that of Annex II of the Helsinki Convention. Likewise, the criteria for the determination of BAT and BEP bear strong resemblance. As was already stressed, one crucial difference is that the Helsinki Convention explicitly enumerates the precautionary principle among the criteria, which, however, seems to have little added legal value, since the application of the principle has become mandatory under both Conventions. The treaty bodies of the Conventions have also referred to each other's instruments for guidance in adopting a harmonised approach to BAT and BEP determination. The above mentioned 2001 HELCOM report attested to this cross-fertilisation, mentioning explicitly that BAT in the HELCOM recommendations should be reconsidered due to developments in the industry and other regional instruments. To that end, the HELCOM report refers to the decisions of the OSPAR Commission, including a BAT list, which should be evaluated for updating the relevant HELCOM BAT lists.⁴⁵

However, despite the importance of applying determined BAT and BEP in other regions to identify the standard of due diligence required by States, certain factors limit the potential of those dynamic standards to be transposed across different regions. For instance, even though the determination of BAT should have as a reference point the best technology regardless of geographical confines, the indeterminate factors that need to be considered cumulatively make any objective

42 Report of the 1st Offshore Working Group Meeting, UNEP(DEPI)/MED WG.384/4, 4 July 2013, 4-5.

43 PAME (2009) Arctic Offshore Oil and Gas Guidelines, Annex B.

44 K Makuch, and R Pereira, *Environmental and Energy Law* (John Wiley & Sons, 2012) 2.3.4.

45 HELCOM, Report on Harmonization (2001) *supra* n. 9, 23.

identification of its content impossible. These factors are subject to constant change, as they depend on technological and scientific advances. Thus, the content of BAT and BEP evolves but can also vary across States in the same marine region.

The economic feasibility of the technology or practices is an essential consideration, which grants States broad discretion in determining what qualifies as BAT and BEP.⁴⁶ In light of the different economic and technical capacities of States in different regions, what qualifies as BAT in the OSPAR region might not be equally feasible in the Mediterranean or off the coasts of West Africa. That argument seems all the more valid given the differentiated formulation of the BAT and BEP under the Mediterranean Offshore Protocol as well as the newly adopted Malabo Protocol to the Abidjan Convention, which emphasise that technology should be economically appropriate to be considered available. Even if BAT and BEP were to be objectively identified by treaty bodies, like the OSPAR Commission or HELCOM, that would not necessarily make them immediately transposable in different regions. As a result, it would be difficult to simply transplant BAT and BEP, which have been identified in the context of a technologically and economically advanced region, across marine areas with a different level of development.

Nonetheless, BAT and BEP applied in a particular marine region can be relied upon by other States as evidence that they have implemented the highest acceptable standard of care. Thus, it can serve as proof that States have exercised due diligence in protecting and preserving the marine environment.⁴⁷ In the dispute between Côte d'Ivoire and Ghana, Ghana argued that it had used "*international best practices to minimize the risks of harm to the marine environment*".⁴⁸ Ghana relied on such best practices to prove that it had taken sufficient measures to protect the marine environment from pollution caused by offshore oil and gas exploitation activities under article 208 of UNCLOS. Russia's practice concerning the application of the Espoo Convention for transboundary projects in the Baltic Sea offers another relevant example of the use of best practices as proof of environmentally diligent conduct. In particular, Russia has agreed to apply the Espoo Convention, as far as the trans-Baltic pipeline is concerned, as proof of implementation of the highest applicable standard for the conduct of transboundary EIAs. Even though Russia does not have an obligation to abide by the Espoo standards since it has not ratified the Espoo Convention, its voluntary compliance could act as proof that it has taken the procedural measures that are necessary for the protection of the marine environment.

2. Regional rules and standards as a means for the interpretation and implementation of UNCLOS

This section examines whether regionally developed rules, standards and recommended practices and procedures can also have an extraterritorial normative impact, in the sense of functioning as benchmarks for assessing the conduct of States in other regions. That would be particularly important for coastal States in

46 See chapter 6, sub-section 3.1.

47 See chapter 3, sub-section 3.3., examples relating to *MOX Plant Case* and *Pulp Mills case*.

48 *Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (2015)*, Written Statement of Ghana on the Request for Provisional Measures, 23 March 2015, para 83. These best practices consisted, *inter alia*, of ISO system standards, the World Bank's IFC Performance Standards, as well as requirements under the MARPOL Convention.

many marine areas, such as the Wider Caribbean, the Black Sea, and East Asian Seas, which have not yet developed specific rules and standards on the regulation of offshore oil and gas activities. The hypothesis is that, under certain conditions, common rules and standards across several regional sea agreements can serve as a means for the interpretation and implementation of UNCLOS and, thus, offer solutions applicable beyond their territorial scope of application. In that respect, this part explores whether regional normative developments can qualify as “international rules, standards and recommended practices and procedures” in the meaning of article 208(3) of UNCLOS, before assessing their capacity to function as subsequent agreements or practice for the interpretation of the Convention under article 31(3) (a) and (b) of the VCLT.

2.1. Regional normative developments as international rules, standards and recommended practices and procedures for article 208(3) UNCLOS

As discussed, UNCLOS requires the subsequent articulation of more specific rules and technical standards⁴⁹ for the implementation of its obligation to prevent pollution from seabed activities under its article 208. While the use of the term “rules” unambiguously refers to binding norms, “standards” should be understood “as having an extra legal meaning of a level of quality or achievement”, since they can be contained both in legally binding agreements (including Annexes) and non-binding instruments.⁵⁰ Such an argument seems to be reinforced by the reference to “recommended practices and procedures” in article 208(3) of UNCLOS. It seems clear that recommended practices are not binding upon States, but rather consist of best practices to prevent marine pollution.⁵¹ Articles 208(5) and 197 of UNCLOS serve as the springboard for the development of such regional rules, standards, recommended practices and procedures. Indeed, these rules and standards have to be developed primarily through diplomatic conferences or competent international organisations,⁵² recognising that no particular universal or regional organisation has the exclusive competence for their adoption.⁵³ The formulation of region-specific rules

49 R Barnes, ‘The Continuing Vitality of UNCLOS’ in J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a Living Treaty* (British Institute of International and Comparative Law, 2016).

50 B Vukas (1980) ‘Generally Accepted International Rules and Standards’, in 23rd Annual Conference of the Law of the Sea Institute, 603, see *contra* A Boyle (1985) ‘Marine Pollution under the Law of the Sea Convention’, *American Journal of International Law*, 357: “states should be allowed the freedom to make collective recommendations without their becoming instantly and directly a form of binding obligation”.

51 W van Reenen (1981) ‘Rules of Reference in the New Convention on the Law of the Sea, in Particular in Connection with Pollution of the Sea by Oil from Tankers’, *Netherlands Yearbook of International Law*, 8.

52 DOALOS has presented a non-exhaustive list of likely competent international organizations in 1996, stressing that some organizations may become competent in the future. In particular, in respect of article 208 UNCLOS the list contained the IAEA, IHO, ILO, IMO, IOC, UNEP and UNIDO. See K Morton (2016) ‘The Arctic Ocean: Can the Arctic Council be A Competent International Organization?’, *Ocean Yearbook*, 286-288.

53 Compare with the use of singular “competent organization” in article 211 relating to pollution from ships, which indicates the exclusive competence of the IMO at the global level for setting such rules and standards, see G Walker, *Definitions for the Law of the Sea: Terms Not Defined by the 1982 Convention* (Martinus Nijhoff, 2011) 138.

is not only encouraged but is mandatory, when appropriate, to address “*characteristic regional features*”.⁵⁴

An argument *a contrario* for the requirement to adopt regional rules in the case of seabed activities can also be advanced since UNCLOS does not establish any legal basis for the formulation of regional standards when it comes to pollution from vessels. In the case of vessel source pollution, it was clear that international rules and standards need to be developed at the global level to prevent differentiated standards across regions, which would impact navigation. In contrast, regional sea agreements and their treaty bodies are entitled to create international rules, standards and recommended practices and procedures for their parties in the context of offshore energy activities.⁵⁵ The Mediterranean Offshore Protocol and the recently adopted Malabo Protocol to the Abidjan Convention, echoing the relevant provisions of UNCLOS, explicitly require their parties to formulate such international rules and standards to give precise content to their provisions.⁵⁶ As already discussed, these regional rules and standards are substantiated, considering international best practices from States in other regions as well as the offshore industry and adapting them to the needs of the receiving region.

In the implementation of the relevant duty under article 208(5) of UNCLOS, regional treaty bodies have promulgated binding rules as well as non-binding standards and practices. Thus, they provide a paradigmatic example of subsequent practice with regard to the implementation of the above obligation under UNCLOS.⁵⁷ Moreover, the creation of region-specific guidelines to assist domestic regulators and the offshore industry can also be perceived as the implementation of the obligation under article 208(4) of UNCLOS, which requires States to endeavour to harmonise their policies at the appropriate regional level. Treaty bodies under regional sea conventions aim to develop a shared understanding among States bordering a marine region to avoid a mosaic-like legal framework.⁵⁸ The duty to harmonise the relevant policies is even more critical when it comes to enclosed or semi-enclosed seas, such as the Mediterranean or the Baltic Seas.⁵⁹ Article 123 of UNCLOS reiterates that duty to endeavour to harmonise the implementation of rules on the protection of the marine environment in such marine areas.

The question is whether these international rules and standards developed under regional agreements are generally applicable or “international” in the meaning of article 208(3) of UNCLOS, which explicitly requires that domestic measures must be

54 UNCLOS, article 197.

55 U Jenisch ‘The Development of Environmental Standards for the Baltic Sea’ in P Ehlers, E Mann-Borgese, and R Wolfrum (eds) *Marine Issues* (Kluwer Law International, 2002) 64, W H v Heinegg, ‘The Development of Environmental Standards for the North-East Atlantic, Including the North Sea’ in P Ehlers, E Mann-Borgese, R Wolfrum (eds) *Marine Issues* (Kluwer Law International, 2002), 152-153.

56 Mediterranean Offshore Protocol, article 23(1)(b), Malabo Protocol, article 25(1)(b).

57 A Proelss (ed) *United Nations Convention on the Law of the Sea: A Commentary* (Hart/ Nomos, 2017)1399.

58 For instance, see the 2014 Arctic Offshore Oil and Gas Guidelines, Introduction, 3, and see the Draft Common Standards and Guidance on the Disposal of Oil and Oily Mixtures in the Mediterranean which spell out that their objective is the harmonization of regional practices in the Mediterranean, Note by the Secretariat, para 3.

59 Proelss (2017) *supra* n. 57, 1397.

“no less effective” than the international rules and standards.⁶⁰ The implementation of article 208(3) of UNCLOS presupposes the existence of international rules and standards against which the reasonableness of domestic legislation can be evaluated. Therefore, there is a necessary connection between the duties under article 208(3) and 208(5) of UNCLOS, as the latter is a precondition for the implementation of the former. It is noteworthy that UNCLOS explicitly obliges States to consider recommended regional standards in adopting domestic measures under its article 119.⁶¹ Thus, it does not seem to exclude the potential of regional norms to provide the minimum standard for the content of domestic regulations. However, as discussed in chapter 3, international rules and standards are required to be generally accepted.⁶² In other words, these rules and standards only become international by way of their widespread acceptance by, at the least, a representative number of specially affected States.⁶³ Arguably, common rules found across different regional arrangements could be considered to be generally accepted as long as there is consistent and widespread State practice.⁶⁴ Given the scarcity of elaborate globally applicable rules,⁶⁵ regional normative developments can play an influential role in catalysing consistent State practice with regard to pollution prevention from seabed activities⁶⁶ and, in that way, fill the gaps in the implementation of UNCLOS in the offshore energy sector.⁶⁷

Arguably, the adoption of similar rules and standards in many regional conventions, especially when that coincides with their reference in global instruments, both binding and non-binding, may be relevant for these rules to become part of

60 The relevant provision of the ISNT/Part III referred to the “*generally accepted international rules, standards, recommended practices and procedures*” (emphasis added), see M Nordquist, N Grandy, S Rosenne, and A Yankov (eds) *United Nations Convention on the Law of the Sea 1982: A Commentary*, Volume IV (Brill/Martinus Nijhoff, 1991) 142.

61 UNCLOS, article 119(1)(a) reads as follows: “*In determining the allowable catch and establishing other conservation measures for the living resources in the high seas, States shall (a) take measures ... taking into account ... any generally recommended international minimum standards, whether subregional, regional or global*”.

62 See chapter 3, sub-section 3.4., see also *South China Sea* award, paras 1081-1083, which relied on the fact that the COLREGS comprises one of the most widely adopted multilateral conventions in force to conclude that its regulations are generally accepted for the purpose of the rule of reference under article 94 of UNCLOS. In that way it seems to rely on the number of ratifications (156 Contracting Parties) of the convention by the representative States, given that they represent 98 percent of world shipping tonnage.

63 B Oxman (2001) ‘The Duty to Respect Generally Accepted International Standards’, *New York University Journal of International Law and Policy*, 133.

64 Harrison (2017) *supra* n. 12, 225, ILA (2000) Committee on Coastal State Jurisdiction Relating to Marine Pollution, Final Report, 160, where it is argued that “*when the initiation by a limited number of States is supported by sufficient state practice indicating acceptance of these rules and standards, there seems to be no reason why rules with a regional origin cannot in principle become generally accepted*”, A Boyle (2005) ‘Further Development of the Law of the Sea Convention: Mechanisms for Change’, *International Law and Comparative Law Quarterly*, 569.

65 See, for instance, the relevant provisions of MARPOL Annexes as far as discharges from offshore installations are concerned, as well as the OPRC with respect to prevention of and response to accidental pollution caused by offshore oil and gas installations.

66 It is noteworthy that, by contrast, article 210(5) of UNCLOS only refers to global rules and standards in the case of dumping regulations. It is argued that, with respect to dumping, the minimum international standard is only set by global rules and standards, and therefore, regional rules and standards as well as recommended practices and procedures do not need to be considered when adopting national legislation, see Proelss (2017) *supra* n. 57, 1418.

67 Redgwell (2014) *supra* n. 4, 611-612.

customary international law.⁶⁸ Under article 208(3) of UNCLOS, the referred norms do not need to have acquired customary status.⁶⁹ If these norms are generally applied across different regions, there is no need for *opinio juris*. States do not need to apply them out of a sense of “ought”. In other words, what matters is whether they catalyse consistent State practice even though regional rules and standards do not bind States in other marine regions. However, the task of identifying consistent State practice becomes a rather daunting task in the case of offshore energy production activities due to the absence of a competent global organisation, such as the IMO, where States exchange their views and make relevant statements. Moreover, States might implicitly incorporate these regional rules and standards in their domestic legislation, making it difficult to assess whether these national rules are based on common regional rules and standards. Therefore, information about such State practice is not usually publicly available.

Perhaps the strong protest by scholars against the acceptance that regional norms can be considered international under the rule of reference⁷⁰ is based on the premise that a regional initiative by a few States cannot justify such normative output becoming binding upon third States through the rule of reference. Indeed, the practice of a few States cannot make globally applicable international law. However, that argument is grounded on the preconception that each rule of reference under UNCLOS makes international rules and standards binding upon States, which have not formally adhered to them. From a strictly legal point of view, the rule of reference in article 208(3) of UNCLOS does not question the relevance of the consent of States to be bound by international rules. The provision does not make international rules and standards legally binding upon States, which have not agreed to be bound by them.⁷¹ Therefore, there is no conflict with the *pacta tertiis* rule. Instead, it creates a duty to adopt domestic rules which are at least as equivalently effective as the referred international rules and standards.⁷² These international rules become the yardstick by which to evaluate the level of diligence, which States need to exercise in the regulation of offshore activities. In the words of Barnes, the rule of reference requires “*what might be called parallelism: the adoption of equivalent rules*”.⁷³ Therefore, even if it is accepted that regionally developed international rules and standards qualify as international standards for article 208(3) of UNCLOS, these standards do not become strictly speaking legally binding upon third States.⁷⁴ However, they have legal effects on third States, and they are in that sense legally relevant since they function

68 T Treves, ‘Regional Approaches to the Protection of the Marine Environment’ in M Nordquist, J Norton Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Martinus Nijhoff, 2003) 149.

69 See also chapter 3, sub-section 3.3.

70 ILA (2000) *supra* n. 64, 160, which contests the possibility of a small group of States creating rules that are binding upon a larger group of States.

71 However, the *South China Sea* award seems to imply that generally accepted rules and standards create binding duties on States, since state conduct which does not comply with them could be considered as a violation of such rules and standards as well as a violation of UNCLOS. It seems, though, relevant that both Parties to the dispute are Parties to the COLREGS, which was pronounced as a generally accepted standard for the purpose of article 94 of UNCLOS. See *South China Sea* award, para 1083.

72 Proelss (2017) *supra* n. 57, 1397.

73 Barnes (2016) *supra* n. 49, 20.

74 *Contra* Harrison (2017) *supra* n. 12, 225.

as benchmarks for assessing their conduct in complying with the duty to protect and preserve the marine environment in the context of seabed activities.

That argument does not necessarily contradict the pronouncement of the arbitral tribunal in the *South China Sea* Arbitration concerning the rule of reference under article 94 of UNCLOS.⁷⁵ According to the arbitral tribunal, article 94 of UNCLOS incorporates the regulations of COLREGS as generally accepted. For that reason, it upheld that COLREGS was applicable in the dispute, even though the Philippines had not been a party to it before 2013.⁷⁶ However, that incorporation of COLREGS by reference takes place because article 94 of UNCLOS explicitly requires States “to conform to generally accepted international regulations, procedures and practices and take any steps which may be necessary to secure their observation”. Article 94 of UNCLOS clarifies that States are bound to conform with the generally accepted regulations, procedures and practices, even when they have not formally adhered to them.⁷⁷ It is noteworthy that article 94 of UNCLOS does not refer to standards nor to recommended practices and procedures, which can connote non-binding instruments. Therefore, it does not create a duty for States to conform with such non-binding instruments. By contrast, article 208(3) of UNCLOS only requires that domestic regulation is at least as effective as the international rules, standards, and recommended practices and procedures. Thus, it is posited that the reasoning of the tribunal in the *South China Sea* award reinforces the author’s argument that the content of international rules and standards under article 208(3) of UNCLOS does not become, strictly speaking, legally binding upon States, which have not formally agreed to be bound by them.

Moreover, the fact that these international rules and standards set an international minimum standard against which domestic rules must be evaluated does not breach the *pacta tertiis* rule. That is because the adherence of States to UNCLOS is an expression of their consent to be bound by such an evolving standard of due diligence.⁷⁸ This observation raises a question regarding the limits of the expressed consent of States adhering to UNCLOS. The suggestion that parties to UNCLOS are bound by an evolving minimum standard is not far-fetched if one considers that due diligence is an inherently flexible standard. UNCLOS does not prescribe the content of domestic measures and regulations for offshore activities. In addition, the extent of the restriction of coastal States’ regulatory discretion must be understood, taking into account, that in the EEZ and the continental shelf, they only enjoy sovereign rights.⁷⁹ Consequently, the discretion of coastal States is justifiably more limited than in the case of pollution from land-based sources.⁸⁰ States still enjoy discretion in implementing their duty to formulate domestic regulation,⁸¹ which must merely be equivalent to international standards. The provision seems to focus on the result of those measures and not their content. Moreover, in choosing the

75 See *South China Sea* Arbitration, paras 1081-1083.

76 *Ibid*, para 1082.

77 Van Reenen (1981) *supra* n. 51, 15.

78 ILA (2000) *supra* n. 64, 57.

79 UNCLOS, article 77.

80 According to article 207 of UNCLOS, States must only take into account the international rules and standards, reflecting the greater authority they have in adopting domestic legislation in areas where they exercise sovereignty and not merely sovereign rights.

81 UNCLOS, article 208(1).

equivalent measures, States are allowed to take into account regional specificities and their economic and technical capacity.

The example of the recent State practice in the Mediterranean with regard to the development of international rules and standards could serve as an example of how the rule of reference can operate in practice.⁸² As discussed, State parties to the Offshore Protocol have undertaken to develop international rules and standards applicable in the Mediterranean by adapting the international best practices from other regions and the offshore industry to their specific needs and capacities. These standards purport to be “no less effective” than the best practices, but without unquestioningly transplanting other regional standards, for instance, the more developed standards under the OSPAR system or the “zero-discharges” policy for parts of the Baltic Sea. These international rules and standards are not, strictly speaking, binding in the Mediterranean, but serve as a yardstick because they indicate a way in which parties to the Mediterranean Offshore Protocol can implement their duty to prevent pollution from offshore oil and gas activities. Such a reading of the provision could resonate better with States in regions which have traditionally underlined the significance of State consent and have shown a specific “allergy” to undertaking new binding commitments.

As discussed in chapter 6, the environmental rules and standards for offshore oil and gas activities across different regions might not be uniform, but still have significant commonalities.⁸³ Looking into the regional instruments examined, one could deduce best practices to be adopted by States in other regions.⁸⁴ Arguably, specific rules and standards appear to be generally applicable by States in representative regions for offshore oil and gas activities and, thus, set a minimum international standard for their operation. *Inter alia*, many regional agreements converge concerning their requirement for prior authorisation of offshore oil and gas extraction by the competent regulatory authority, which presupposes the conduct of an EIA. Such prior authorisation also has to ensure that the operators apply BET and BAP to limit potential discharges and protect the marine environment.⁸⁵ The conditions and requirements of the authorisations have to aim at the reduction of operational discharges which, as a minimum standard, must follow the relevant Annexes of the MARPOL Convention.⁸⁶ States are also obliged to apply the precautionary principle in adopting protective measures and to take especially into account the protection of sensitive marine areas. Those areas might necessitate the adoption of stricter measures, even if the operators comply with BAT and BEP. Moreover, as far as the prevention of and response to accidental pollution are concerned, the relevant rules of the OPRC can be perceived as offering the minimum standards to be complied with by States. States and operators of offshore oil and gas

82 As mentioned, article 23 of the Mediterranean Offshore Protocol contains a duty for its parties to substantiate specific standards and guidelines for the implementation of its obligations, which is similar to article 208(5) UNCLOS.

83 Redgwell (2014) *supra* n. 4, 611-612.

84 See also the comparative analysis of relevant state practice contained in the REMPEC study on countries surrounding the Mediterranean, *supra* n. 19, 113-141.

85 See also J Harrison (2017) *supra* n. 12, 225.

86 As discussed, both the Helsinki Convention and the Offshore Protocol to the Barcelona Convention regulate such discharges by reference to the Annexes to MARPOL.

installations must formulate contingency plans and conduct exercises to ensure their capacity to respond to accidental pollution immediately.

In any case, even though the rules and standards under regional sea agreements do not directly apply to third States, they can contribute to the synthesis of the existing amalgam of international best practices for offshore energy production. Such best practices can be incorporated into domestic regulations and, therefore, catalyse consistent State practice in several ways.⁸⁷ In that respect, States often draw upon such international best practices to develop their domestic regulation.⁸⁸ For instance, the 2015 rules of USA on exploratory drilling on its Arctic Outer Continental Shelf have expressly referred to the relevant guidelines of the Arctic Council.⁸⁹ Additionally, several regional instruments refer to best practices as dynamic standards to add content to their environmental obligations concerning offshore energy activities.⁹⁰ In that fashion, they draw upon rules and standards, which apply in other regions facing similar environmental challenges.⁹¹ Consequently, regional rules and standards have some “extraterritorial” legal relevance. Also, insofar as these rules and standards reflect a pattern in regional treaties, which is followed across different regions involving both developed and developing States, they hold considerable potential to guide the interpretation and implementation of the relevant duties under UNCLOS.⁹²

2.2. Regional normative developments as subsequent agreements/practice for the interpretation and implementation of UNCLOS

This sub-section examines whether regional rules on offshore oil and gas production activities could qualify as subsequent agreements or practice for the interpretation and, consequently, the implementation of the relevant duties under UNCLOS. Arguably, in the case of major multilateral treaties, such as UNCLOS, developing consensus among the parties for an agreement on their interpretation is a difficult task.⁹³ Regional sea agreements refer to UNCLOS in their preamble⁹⁴ and, to some extent, aim to implement its obligations at the regional level. In that respect, regional agreements have been a means of implementing the provisions of Part XII of UNCLOS even before the Convention entered into force in 1994.⁹⁵ However, that does not necessarily mean that their parties intended them to serve as interpretive agreements of UNCLOS. Thus, it would be difficult to argue that they are subsequent

87 M Nordquist, and A Fausser, ‘Offshore Drilling in the Outer Continental Shelf: International Best Practices and Safety Standards in the Wake of the Deepwater Horizon Explosion and Oil Spill’, in M Lodge, M Nordquist (eds) *Peaceful Order in the World’s Oceans* (Brill, 2014) 143-144.

88 H Jessen, ‘Joint Approaches and Best Practices – An Integrated and Coherent EU Arctic Policy in Support of Articles 208 and 214 UNCLOS’, in N Liu, A Kirk, and T Henriksen (eds) *The European Union and the Arctic* (Brill, 2017) 357-358.

89 US Department of the Interior, Bureau of Safety and Environmental Enforcement, Bureau of Ocean Energy Management (2015) ‘Oil and Gas and Sulphur Operations on the Outer Continental Shelf—Requirements’.

90 See, for instance the several references to best practices in the EU 2013/30 Directive, discussed in chapter 7, sub-section 2.3.2., see also Jessen (2017) *supra* n. 88, 352.

91 Nordquist and Fausser (2014) *supra* n. 87, 141-142.

92 Boyle (2005) *supra* n. 64, 569, Harrison (2017) *supra* n. 12, 225.

93 S D Murphy, ‘The Relevance of Subsequent Agreement and Subsequent Practice for the Interpretation of Treaties’, in G Nolte (ed) *Treaties and Subsequent Practice* (Oxford University Press, 2013) 85.

94 For instance, see OSPAR, preamble, 1995 Barcelona Convention, preamble.

95 Boyle (2005) *supra* n. 64, 575-576.

agreements for the interpretation of UNCLOS according to the meaning of article 31(3)(a) of the VCLT.

By contrast, they could be considered as a form of subsequent practice of some of the parties to UNCLOS, which could provide evidence of the agreement among them regarding its interpretation. The drafting history of article 31(3)(b) of the VCLT can assist in clarifying its requirements. Specifically, the wording of the provision changed from referring to the agreement “of all parties” to the agreement “of the parties”. That change might indicate that it is not necessary for all parties to a multilateral agreement to actively engage in a subsequent practice regarding its implementation.⁹⁶ Subsequent practice can take various forms. That is important given the fact that regional treaty-based rules on the regulation of offshore oil and gas activities are usually substantiated through non-binding decisions and resolutions by treaty bodies. As discussed in chapter 6, such instruments might not qualify *per se* as subsequent practice according to the meaning of article 31(3)(b) of the VCLT, but they are still legally relevant in catalysing State practice.

If we consider the rules under each regional sea agreement individually, these rules cannot provide sufficient evidence of widespread State practice regarding the interpretation of prevention obligations under global treaties. For instance, the State practice in the North-Sea cannot influence the interpretation of UNCLOS, except for the North-Sea States. Indeed, the role of the subsequent practice of some States in specific regions for the interpretation of UNCLOS shall be taken with caution. One needs to be careful not to impose through interpretation rules and standards that are well developed and supported in one region on states beyond that region, without their consent.⁹⁷ As stressed by the ITLOS in the *MOX Plant* case, one needs to duly consider, *inter alia*, differences in the respective contexts, objects and purposes, subsequent practice of the parties and *travaux préparatoires* even when interpreting similar provisions of different treaties.⁹⁸

Nonetheless, convergence among multiple regional agreements may indicate representative State practice, which can inform the interpretation of the environmental obligations under UNCLOS.⁹⁹ Subsequent practice does not necessarily need to consist of joint conduct. Instead, parallel conduct by parties may suffice if it articulates a sufficiently common understanding regarding the interpretation of the treaty.¹⁰⁰ In this way, parallel regional rules on the protection of the marine environment against pollution from offshore energy activities could be considered as subsequent practice if they illustrate the shared understanding of a representative number of parties to UNCLOS regarding its interpretation. One of the mechanisms for updating the normative content of UNCLOS is its interpretation in the light of the subsequent

96 S Raffaeiner (2016) ‘Organ Practice in the Whaling Case: Consensus and Dissent between Subsequent Practice, Other Practice and a Duty to Give Due Regard’, *European Journal of International Law*, 1052.

97 J Harrison (2019) ‘The Protection of Species, Ecosystems and Biodiversity under UNCLOS in Light of the South China Sea Arbitration: An Emergent Duty of Marine Ecosystem Restoration?’, *Edinburgh School of Law Research Paper No 2019/20*, 9.

98 See ITLOS, *MOX Plant* Case, Provisional Measures Order, 3 December 2001, para 5.1.

99 Harrison (2017) *supra* n. 12, 225.

100 ILC Draft conclusions on subsequent agreements and subsequent practice in relation to the interpretation of treaties (2018), *Yearbook of the International Law Commission*, vol II, Part Two. Commentary on draft conclusion 6.

practice of its parties.¹⁰¹ In the context of the dynamic treaty regime established by UNCLOS, its general environmental obligations can gain normative content “through regime interaction fueled by subsequent practice”.¹⁰² The Convention leaves room for the consideration of subsequent normative developments to ensure the continued fulfilment of its object and purpose. Using subsequent practice as a means of evolutionary interpretation of UNCLOS safeguards its resilience.¹⁰³ In that respect, the more elaborate provisions of some regional agreements could specify the standard of care in the interpretation of “all the appropriate measures” that States must take to prevent pollution from offshore energy production activities. In other words, they can serve as benchmarks by which to assess the reasonableness of domestic measures implementing the relevant duty to protect the marine environment under UNCLOS.

However, the examined regional agreements might not reflect the practice of all the parties to UNCLOS. One could argue that they account for only a glimpse of State practice around Europe concerning the environmental regulation of offshore energy production activities. Given the fact that only a few regional agreements contain specific rules on the prevention of pollution from offshore oil and gas activities, recourse should be had to the relevant State conduct in regulating these activities at the domestic level. Such a cautious approach appears to be advocated by the ILC in its 2018 draft conclusions on subsequent agreements and practice for treaty interpretation. As underlined in the ILC’s draft conclusions, agreements or practice between less than all parties to a treaty regarding the interpretation or the application of that treaty are not to be considered as an authentic means of interpretation under article 31(3)(a) and (b) of the VCLT. Instead, in the ILC’s view, such practice should be received as a form of practice under article 32 of the VCLT.¹⁰⁴ In that respect, even if regional agreements do not meet the requirement of concordant, common and consistent State practice in the application of UNCLOS,¹⁰⁵ they could still be considered as “other subsequent practice” under article 32 of the VCLT. In particular, subsequent practice in the application of a treaty, which establishes the agreement of only one or more parties to an agreement may function as supplementary means of interpretation.¹⁰⁶ The ILC has made it clear that State practice, which is not in the application of a treaty, can also be a possible means of interpretation.¹⁰⁷ In such a case, the conduct of States can assist in assessing relevant subsequent practice in the application of a treaty.¹⁰⁸ In light of the above conclusions of the ILC, even if one does not accept that the examined regional instruments consist of sufficient State practice for the interpretation and implementation of UNCLOS, their relevance is

101 C Redgwell (2019) “Treaty Evolution, Adaptation and Change: Is the LOSC “Enough” to Address Climate Change Impacts on the Marine Environment?”, *International Journal of Marine and Coastal Law*, 9.

102 I Buga, *Modification of Treaties by Subsequent Practice* (Oxford University Press, 2018) 337.

103 Subsequent agreements and subsequent practice can be utilised as means for finding a flexible approach to treaty interpretation and implementation, which at the same time is rational and predictable, see G Nolte (2020) ‘Introductory Note to the Special Issue of ICLR on the Outcome of the ILC Work on Subsequent Agreements and Subsequent Practice in Relation to the Interpretation of Treaties’, *International Community Law Review*, 6.

104 ILC Draft Conclusions (2018) *supra* n. 100.

105 *Ibid*, with reference to the WTO Appellate Body Report, *Japan – Alcoholic Beverages II*, section E, para 16.

106 *Ibid*, commentary to draft conclusion 4.

107 *Ibid*, commentary to draft conclusion 2, 21.

108 *Ibid*, draft conclusion 5(2) on “Conduct as subsequent practice”.

not diminished.¹⁰⁹ They are still legally relevant in clarifying the content of the duty to protect and preserve the marine environment in the context of offshore energy production activities under UNCLOS.¹¹⁰

However, the reasoning of the arbitral tribunal in the *South China Sea Arbitration* seems to question such a strict interpretation of article 31(3)(a) and (b) of the VCLT. As already mentioned, the final wording of the article does not mention agreements or practice “of all the parties”, but instead refers to subsequent agreements or practice “of the parties” to the interpreted convention. If article 31(3) (a) and (b) of the VCLT required subsequent agreements or practice to be adhered to or followed by all the parties to a quasi-universal convention, such as UNCLOS then, accordingly, article 31(3)(c) of the VCLT should be interpreted as only covering rules of international law to which all the parties to UNCLOS have adhered. Instead, the arbitral tribunal relied on the “nearly universal adherence” of states to CITES, even though it is not binding on all parties to UNCLOS, to justify using it as normative context for the interpretation of the Convention.¹¹¹ That widespread participation in CITES was sufficient proof that it belongs to “*the general corpus of international law that informs the content of article 192 and 194(5)*” of UNCLOS.¹¹² The reasoning of the tribunal appears to suggest some flexibility in identifying the rules, which can inform the interpretation of the environmental duties under UNCLOS.¹¹³ In light of that argument, subsequent agreements or practice for the interpretation of UNCLOS do not need to be attributed to all the parties of the Convention, but nearly all of them. In that case, participation from a cross-section of States from around the world can be significant for accepting the relevance of subsequent practice or agreements in the interpretation of UNCLOS.¹¹⁴ Similarly, Boyle argues that an agreement lacking the support of all parties to UNCLOS may still provide some interpretative guidance. However, its “persuasive force” as a basis for the interpretation of UNCLOS “will be necessarily weaker the fewer parties there are”.¹¹⁵

Arguably, best environmental practices can also be considered as “other subsequent practice” of the parties concerning the interpretation of UNCLOS.¹¹⁶ Even though they cannot be deemed as consistent State practice due to their inherent flexibility and fluidity, their normative value as a supplementary means of interpretation stems from their potential to catalyse State conduct in the application of UNCLOS.¹¹⁷ Similarly, guidelines and standards developed by the offshore

109 M Fitzmaurice (2020) ‘Subsequent Agreements and Subsequent Practice: Some Reflections on the International Law Commission’s Draft Conclusions’, *International Community Law Review*, 19.

110 N Matz-Lück, and E Van Doorn (2017) ‘Due Diligence Obligations and the Protection of the Marine Environment’, *L’Observateur Des Nations Unies*, 169-187.

111 *South China Sea Arbitration*, para 942.

112 *Ibid.*

113 Harrison (2019) *supra* n. 97, 8.

114 *Ibid.*, 9, who refers to the example of the CMS, which has a much lower participation and cannot be considered as a treaty of nearly universal adherence. However, the CMS was relied upon by the WTO Appellate Body in the *US- Shrimp* case for the interpretation of the GATT, even though the respondent was not a party to it.

115 Boyle (2005) *supra* n. 64, 571.

116 L Boisson de Chazournes (2013) ‘Subsequent Practice, Practices, and “Family Resemblance”: Towards Embedding Subsequent Practice in its Operative Milieu – A Multi-Actor Perspective’, *IRPA Working Paper GAL Series No 1/2013*, 13-14.

117 See discussion on the relevance of the industry standards, chapter 3, sub-section 3.4.3.

industry can influence the conduct of States, depending on their capacity to offer guidance in the implementation of the relevant obligation to exercise due diligence in protecting the marine environment from offshore activities. For that reason, even though the standard-setting activity of the offshore industry cannot qualify as “subsequent practice” in the meaning of article 31(3)(b) VCLT, the pattern of State practice catalysed by them can be considered, at the very least, as other subsequent practice for the means of interpretation under article 32 VCLT.

In its 2018 draft conclusions on subsequent agreements and practice concerning the interpretation of treaties, the ILC has also expressed the view that conduct by non-State actors does not constitute subsequent practice under articles 31 and 32 of the VCLT.¹¹⁸ However, “other conduct”, including that of non-State actors, may be relevant when assessing the subsequent practice of parties to a treaty.¹¹⁹ In that respect, the ILC recognised that the conduct of non-State actors might be legally relevant for treaty interpretation.¹²⁰ Such “other conduct” includes “*different forms of conduct or statements of non-State actors*”.¹²¹ Specifically, the conduct or statements of non-State actors can be used for the identification of subsequent State practice and the determination of its legal value.¹²² The commentary by the ILC reinforces the argument that the conduct of such actors can reflect or initiate the relevant subsequent practice of the parties to a treaty.¹²³ The ILC stresses that the reflection or initiation of subsequent practice is to be distinguished from the practice of the parties to the treaty.¹²⁴ Indeed, non-State actors, such as the offshore industry, also pursue their own goals which might not always coincide with those of States. Therefore, despite their potential contribution of valuable information relating to the subsequent practice of States, the conduct of non-State actors must be critically evaluated.¹²⁵

3. The potential extraterritorial effects of EU standards for the environmental regulation of offshore energy production activities

While EU environmental rules apply directly only within the EU,¹²⁶ they might also have an “extraterritorial” potential to influence solutions to global environmental problems. The EU’s approach of leading by example may provide a basis for similar normative developments in other regions or even at the global level. In 2016, the European Commission highlighted that “*the EU is well placed to shape international ocean governance on the basis of its experience in developing sustainable ocean*

118 ILC Draft conclusions (2018) *supra* n. 100, commentary on conclusion 5, 39.

119 *Ibid*, draft conclusion 5(2).

120 G Nolte, ‘The International Law Commission and Community Interests’ in E Benvenisti, and G Nolte (eds) *Community Interests Across International Law* (Oxford University Press, 2019) 107.

121 ILC, Draft conclusions (2018) *supra* n. 100, 40.

122 *Ibid*.

123 See also R Gardiner, *Treaty Interpretation* (Oxford University Press, 2008) 270.

124 *Supra* n. 100. See also ILC Conclusions regarding the identification of customary international law (2018) conclusion 4 “3. *Conduct of other actors is not practice that contributes to the formation, or expression, of rules of customary international law, but may be relevant when assessing the practice referred to in paragraphs 1 and 2*”. Paragraphs 1 and 2 refer to the practice of States and international organisations.

125 *Ibid*, 41.

126 TFEU article 191(4) refers only to policy and legislation applicable in “*the regions of the Union*”.

management".¹²⁷ As seen in the example of the Arctic, EU normative developments might bear positive influence in other regions of the world.¹²⁸ The exchange of best practices in the offshore energy industry can result in "exporting" EU standards outside Europe. In that respect, the TFEU provides that environmental legislation must further contribute to the promotion of "*measures at the international level to deal with regional or worldwide environmental problems*".¹²⁹ To that end, the same provision stresses that "*within their respective spheres of competence, the European Union and the Member States shall cooperate with third countries and with the competent international organizations*". Therefore, it highlights the potential for normative cross-fertilisation through institutional interactions with other competent organisations.

3.1. The potential "extraterritorial" effects of the Offshore Safety directive

In the implementation of these primary environmental obligations, the Offshore Safety directive has assigned to the EU Commission the power to promote high safety standards for offshore oil and gas operations at the international level through relevant global and regional fora.¹³⁰ Also, the preamble of the Offshore Safety directive mentions that responsible operators of offshore energy activities are reasonably expected to conduct their activities worldwide following best practices and standards.¹³¹ Being aware that EU-based companies are conducting increasingly more activities outside the EU, the Commission had considered creating an obligation on those companies to mandatorily implement the same environmental and safety standards for all their operations around the world.¹³² Nonetheless, the directive could not impose such far-reaching extra-territorial obligations on operators conducting activities outside EU marine waters. The EU's influence is limited as activities are moving away from maritime waters under the jurisdiction of Member States.

Still, the Offshore Safety directive appears to have some "extra-EU" legal effects. Specifically, the directive creates legal obligations of regulatory cooperation in the case of transboundary accidents, which might affect marine areas outside the EU. Also, it attempts to regulate the safety of offshore oil and gas activities conducted outside the EU by EU-based companies.¹³³ For instance, big oil companies, such as Shell and BP, which are registered in the EU Member States, can be requested to report major accidents occurring during their operations outside EU waters. Even though the industry does not have an obligation to apply the same safety requirements when offshore energy projects take place outside the EU, the directive attempts to create a form of indirect control of their activities outside EU marine waters. To that end, Member States have a due diligence obligation to ensure that

127 Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: International Ocean Governance: An Agenda for the Future of our Oceans, JOIN (2016), 49 final, 4.

128 See chapter 7, sub-section 3.1.2.

129 TFEU, article 191(1).

130 Offshore Safety directive, article 33(3).

131 *Ibid*, recital 37.

132 Communication from the Commission to the European Parliament and the Council, 'Facing the Challenge of the Safety of Offshore Oil and Gas Activities', COM (2010) 560 final, 14.

133 EU-based companies are multinational companies registered in the territory of an EU Member State.

corporate major accident prevention policy also includes any active or inactive installations outside the EU.¹³⁴ The directive also provides that the Member States must require companies registered in their territory and conducting, either themselves or through subsidiaries, operations outside the EU as licence holders or operators, to report to those Member States the circumstances of any major accident in which those companies have been involved.¹³⁵ Such information must then be disseminated through the EU's institutional framework. In particular, through the EU Offshore Oil and Gas Authorities Group, Member States are required to exchange information relating to “*the functioning of the measures for risk management, major accident prevention, verification of compliance and emergency response relating to offshore oil and gas operations within the Union, as well as outside of the Union where appropriate*”.¹³⁶

It appears that this indirectly “extraterritorial” obligation fell short of the initially ambitious goal of the Commission to establish a global system of common targets or benchmarks of safety in offshore oil and gas production.¹³⁷ The EU is aware that it cannot function as a self-proclaimed global regulator of offshore oil and gas activities. For that reason, the EU Commission has merely stated that it would be desirable for operators registered in the territory of a Member State to apply the major accident prevention policy when operating outside the EU.¹³⁸ The EU acknowledges that the Member States cannot enforce the application of the same safety standards by EU-based companies when they work outside the EU.¹³⁹ On that account, the directive imposes a moderate duty on the EU Member States to ensure that operators and owners also include their offshore oil and gas production and non-production installations outside EU marine waters in their corporate major accident prevention policy documents.

The lack of a stringent extraterritorial duty seemingly results in a paradoxical situation. EU-based companies are not obliged to implement identical safety standards outside EU marine waters. However, an accident in waters outside the EU could have severe repercussions not only for third States but also for the neighbouring EU Member States.¹⁴⁰ Still, those provisions create a valuable process of accountability for the operations of EU-based offshore companies outside the EU.¹⁴¹ Also, those Member States which participate in other relevant regional fora, are

134 Offshore safety directive, article 19(8).

135 *Ibid*, article 20(1).

136 *Ibid*, article 27(2).

137 Commission Communication (2010) *supra* n. 132, 13.

138 *Ibid*.

139 Offshore safety directive, recital 38.

140 However, the domestic law applicable in marine waters outside the EU can create different duties for the operation of offshore oil and gas activities. Therefore, a duty of EU based companies to apply the same standards could create complexities in coordinating the potentially different requirements under the EU and the domestic rules of non-EU States, see also H Jessen (2016) *The EU's Offshore Oil and Gas Directive (2013/30/EU) and Arctic Governance: Does the Activity of Third Parties Have Any Regulatory Impact?*, OGEL.

141 However, see N Dobson, and S Trevisanut (2018) ‘Climate Change and Energy in the Arctic – The Role of the European Union’, *International Journal of Marine and Coastal Law*, 401, where the authors claim that the resulting provisions of the operative part of the directive constitute rather a lost chance for the EU to stress the importance of corporate social responsibility for the protection of the environment.

encouraged to actively promote the highest standards of environmental protection, for instance, by developing international instruments in the field of prevention of, preparedness for and response to pollution from offshore oil and gas activities.

Concerning potential transboundary impacts of offshore oil and gas accidents beyond EU marine waters, Member States' duties seem to be even more limited. For instance, EU Member States are only required to provide information concerning those activities which may cause transboundary impacts on third States, on a reciprocal basis.¹⁴² Such reciprocity does not appear, though, to be required in the event of a major accident, in the case of which Member States are required to notify third States which might be affected without delay and “*shall continuously provide information relevant for effective emergency response*”.¹⁴³ Also, non-EU States may be invited, on a reciprocal basis, to participate in exercises to test emergency mechanisms.¹⁴⁴

Relevantly, the EU Commission is mandated to promote cooperation with third States which undertake offshore oil and gas activities in the same regions as the Member States, including the exchange of information among them to advance preventive measures and regional emergency response plans.¹⁴⁵ In particular, the Commission is vested with the power to “*promote high safety standards for offshore oil and gas operations at the international level in relevant global and regional fora, including those relating to the Arctic waters*”.¹⁴⁶ As well as the Commission, EMSA could also play an active role in enhancing the “extraterritorial” reach of the Offshore Safety directive, by conducting inspections to offshore oil and gas installations outside EU marine waters operated by EU companies.¹⁴⁷ However, contrary to the more ambitious vision of the European Parliament,¹⁴⁸ EMSA's role is limited to assisting the Member States with the preparation and execution of external emergency response plans, especially when there are transboundary impacts within and beyond offshore waters of Member States.¹⁴⁹

3.2. The normative impact of the Offshore Safety directive on the implementation of UNCLOS concerning offshore energy production activities

Even though the potential “extraterritorial” impact of the Offshore Safety directive is much more restrained in practice than originally envisioned by the EU Commission,¹⁵⁰ its provisions can still be influential for the implementation of the

142 Offshore Safety directive, article 31(3).

143 *Ibid*, article 31(6), see also Dobson and Trevisanut (2018) *supra* n.141, 399.

144 Offshore Safety directive, article 31(5).

145 *Ibid*, article 33(2).

146 *Ibid*, article 33(3).

147 N Liu (2015) ‘The European Union's Potential Contribution to Enhanced Governance of Offshore Oil and Gas Operations in the Arctic’, *Review of European, Comparative and International Environmental Law*, 228.

148 E Truilhé, and C Bouillard (2017) ‘Quel encadrement juridique pour les activités pétrolières offshore en droit de l' Union européenne?’ in C Oliveira (ed) *Meio Ambiente Marinho e Direito*, Volume II, available online at : <https://hal.archives-ouvertes.fr/hal-01829840/document>, 21.

149 Offshore Safety directive, article 10(2)(c).

150 Commission Communication (2010) *supra* n. 132, 7, the EU encourages observance of the highest possible environmental standards and presses for the introduction of binding international standards, building inter alia on the guidelines of the Arctic Council and relevant international agreements.

relevant duties under UNCLOS. Arguably, they can influence the global regulation of offshore energy activities, through contributing to the creation of international rules, standards and recommended practices and procedures for the application of article 208(3) of UNCLOS.¹⁵¹ The directive supports the view that international standards are needed to ensure the safety of offshore oil and gas activities since they can assist in establishing generally applicable performance requirements and mainstreaming best practices around the world.¹⁵² Arguably, the EU has served as an important source for the development of marine environmental law throughout Europe.¹⁵³ Its role has also been significant for other marine regions which have been keeping up with the best practices developed in the EU regarding the regulation of offshore energy activities.¹⁵⁴ The EU Offshore Safety directive has been a considerable addition to the international amalgam of generally accepted practices for the safety of offshore oil and gas activities.¹⁵⁵ In that respect, the Council of the EU has called upon the Commission and the Member States to intensify their efforts to improve cooperation, including stepping up synergies with regional strategies in the sharing of best practices.¹⁵⁶

In particular, the implementation of the Offshore Safety directive at the national level across the EU Member States can serve as an example of stimulating the development of corporate ocean responsibility rules in the field of marine environmental protection against offshore oil and gas activities.¹⁵⁷ For instance, a recent study on the reformation of Brazil's offshore oil and gas safety regulatory framework specifically took into account the UK, Norway, and the US as possible normative models.¹⁵⁸ Similarly, scholars have argued that best practices dictated by the EU's Offshore Safety directive could provide valuable lessons for the reformation of the fragmented and inefficient legal framework in China.¹⁵⁹ In their view, the EU rules addressing the offshore industry offer an illustrative example of how China should deal with the corporate responsibility of offshore operators to prevent major accidents.¹⁶⁰

The duty of the EU and its Member States to establish regional rules, standards and recommended practices and procedures under article 208(5) of UNCLOS might also be read in the sense of a duty to create rules on corporate ocean responsibility.¹⁶¹ To the extent that these corporate ocean responsibility rules, which directly address

151 C Cinelli (2016) 'Law of the Sea, The European Union Arctic Policy and Corporate Ocean Responsibility', *Ocean Yearbook*, 265.

152 H Jessen (2017) *supra* n. 88, 352.

153 R Long (2012) 'The EU and the Law of the Sea Convention at the Age of 30', *International Journal of Marine and Coastal Law*, 721.

154 , Jessen (2016) *supra* n. 140.

155 *Ibid.*, where Jessen argues that such a development has advanced the patchwork of internationally accepted best practices towards becoming a real legal framework.

156 EU Council Conclusions of 24 March 2017, 'International Governance: An Agenda for the Future of Our Oceans', 7348/1/17, para 8.

157 Cinelli (2016) *supra* n. 151, 264.

158 P Mendes, J Hall, S Matos, and B Silvestre (2014) 'Reforming Brazil's Offshore Oil and Gas Safety Regulatory Framework: Lessons from Norway, the United Kingdom and the United States', *Energy Policy*, 443-453.

159 Y Yang (2018) 'Preventing Major Offshore Oil Spill Accidents in China: Lessons from the EU Offshore Safety Directive', *China Oceans Law Review*, 125-152.

160 *Ibid.*, 149-150.

161 C Cinelli (2016) *supra* n. 151, 265.

the conduct of the industry, can qualify as international standards or recommended practices and procedures, they can become a binding benchmark to be respected by States around the world through the application of article 208(3) of UNCLOS.¹⁶² The development of best practices at the EU level could contribute towards the advancement of generally accepted standards for the safety of offshore oil and gas activities globally. Currently, there is a patchwork of national and international (both binding and non-binding) best practices and guidelines relating to such activities.¹⁶³ The coordination of international and advanced domestic standards, such as the ones formulated by Norway, could lead to shaping better international safety standards and consequently mitigating environmental risks more efficiently. Such coordination of standards could eventually lead to a “race to the top” of international best practices on offshore oil and gas operations.¹⁶⁴

3.3. Further EU legislative acts with implications for the regulation of offshore energy production outside the EU

Another noteworthy attempt of the EU to positively influence the widespread implementation of more elaborate environmental and safety rules relating to offshore energy activities in third States, has been its accession to relevant regional sea conventions and, in particular, the Offshore Protocol to the Barcelona Convention in late 2012. The EU’s accession could be perceived as demonstrating its willingness to avoid a race to the bottom in relevant environmental standards to attract foreign investments in the offshore industry, and this could encourage third States in the Mediterranean also to ratify and implement the Offshore Protocol. In light of these developments, it appears that the EU could stand at the forefront of the evolution of marine environmental law with regard to the regulation of offshore oil and gas activities. The normative developments in the EU concerning the safety of offshore oil and gas operations may have a substantial spillover effect extending beyond the EU marine waters and encouraging similar law-making initiatives in other regions of the world.¹⁶⁵

Indeed, the EU accession to the regional sea conventions and the Offshore Protocol could function as the first step in an attempt to harmonise applicable standards to offshore oil and gas operations in marine regions around Europe. Therefore, its participation in those agreements could reinforce its influence on the international plane so as eventually to export its model of securing the safety of such activities.¹⁶⁶ Arguably, if the EU demonstrated that it enforces more stringent standards to protect the Arctic Ocean from the activities of EU-based companies than the standards applied by the Arctic coastal States, it would increase its legitimacy

162 A Bonfanti, and F Romanin-Jacur (2014) ‘Energy from the Sea and the Protection of the Marine Environment: Treaty-Based Regimes and Ocean Corporate Social Responsibility’, *International Marine and Coastal Law*, 637, Cinelli (2016) *supra* n. 151, 264-265.

163 Jessen (2016) *supra* n. 140, 25.

164 *Ibid.*, 30.

165 S Vinogradov (2013) ‘The Impact of Deepwater Horizon: The Evolving International Regime for Offshore Accidental Pollution Prevention, Preparedness and Response’, *Ocean Development and International Law*, 352.

166 M Bourrel (2013) L’Union Européenne Adhère au Protocole sur les Activités Offshore en Méditerranée, *Droit de l’environnement*, 113.

to influence environmental standards in the fragile Arctic environment.¹⁶⁷ Also, as was discussed above, coordinated action across different regions could lead to multilateral developments¹⁶⁸ or could result in representing subsequent State practice to be taken into account when interpreting global instruments, like UNCLOS. In this way, the EU can play a crucial role in promoting the exchange of information and the circulation of generally accepted international practices in the safety of offshore oil and gas activities within and beyond EU borders in fulfilment of its obligations under article 208(4) and 208(5) of UNCLOS.¹⁶⁹

At first glance, the objectives of promoting marine environmental protection and safeguarding the economic competitiveness of the internal EU energy market might appear to be conflicting. However, the EU's attempts to ensure global coherence in order gradually to improve environmental standards in the offshore energy industry may serve both of these competing interests simultaneously. The momentum created by EU legislative actions in the field of offshore oil and gas activities created high expectations for new multilateral developments at the global level. However, six years after the adoption of the Offshore Safety directive, there are no signs of such law-making processes on the horizon. Despite the EU's commendable attempts, Member States do not wish to restrict their prerogatives with regard to the regulation of offshore energy production activities. It is equally deplorable that big EU-based companies conducting activities in marine areas outside the EU appear not to want to implement the same safety and environmental standards when they operate abroad,¹⁷⁰ as part of their corporate responsibility.

Interim conclusions

From the above analysis, it follows that regional rules and standards have a considerable capacity in acting as transposable environmental standards in other marine regions both at the law-making and the implementation phases. As the examples of normative cross-fertilisation between the examined regional agreements indicate, the legal transplantation of rules and standards from different regions must be conducted with caution, considering the regional specificities and needs of the receiving body of law. Marine regions can draw upon best practices from normatively advanced regions and adapt them accordingly to fit into their legal framework. More importantly, common regional rules and standards on the environmental regulation of offshore energy production found across a cross-section of representative marine regions can, under certain conditions, serve as international minimum standards

167 K Offerdal (2011) 'The EU in the Arctic: In Pursuit of Legitimacy and Influence', *International Journal*, 872. It is argued that such a strategy would help showcase the EU leadership in promoting international cooperation in the Arctic, see Ecologic Institute (2010) 'EU Arctic Footprint and Policy Assessment: Final Report', available online at: https://arctic-footprint.eu/sites/default/files/AFFPA_Final_Report.pdf, 2.

168 EU Parliament Resolution of 13 December 2011, para 23 where the Parliament "stresses the importance of regional initiatives as a first tier of multilateral action", see also F Schneider (2014) 'Le droit de l'Union européenne au défi de la sécurisation des activités pétrolières et gazières en mer', *Revue juridique de l'environnement*, 292.

169 Jessen (2016) *supra* n. 140, 28.

170 P Volondat, 'La Nouvel Encadrement Européen des Activités Pétrolières et Gazières Offshore' in P Chaumette (ed) *Wealth and Miseries of the Oceans: Conservation, Resources and Borders* (GOMILEX, 2018) 191.

under article 208(3) of UNCLOS. Thus, they can augment the standard of care required of States at the global level. Take, for example, the requirement of prior authorisation, the application of BAT and BEP and the limits regarding operational discharges, which are commonly found as rules applicable to offshore oil and gas activities under several relevant regional sea agreements. Even if those rules are not directly binding on States in different marine regions, they contribute towards the development of transposable best practices. States do not need to conform to their content but can use them to adopt equally effective rules and standards. Additionally, insofar as these regional rules catalyse consistent, widespread State practice, they might be used as a means for the interpretation of UNCLOS under article 31(3) (b) of the VCLT.

In addition, the EU legal framework applicable to offshore energy production might have specific “extraterritorial” legal impacts. Without undermining the potential role of the MSFD and the MSP directives, the Offshore Safety directive has so far been the only EU instrument with potential implications for the regulation of offshore energy activities outside the EU. Notwithstanding the several critiques regarding the lack of boldness of the Offshore Safety directive, its potential “extraterritorial” reach should be considered rather satisfactory in the context of the lack of political will to adopt a global agreement for the establishment of internationally applicable standards.¹⁷¹ It can function as a “diplomatic tool” to further promote highest safety standards globally, and in sharing best regulatory practices and reinforcing cooperation with the non-EU Member States, in particular with the ones bordering the ecologically sensitive Arctic waters.¹⁷² Therefore, in the author’s view, in the absence of specific global rules, the importance of regional initiatives, which have served as an outstanding “legal laboratory” for rules and standards relating to offshore energy production, should not be overlooked.

171 N Liu, ‘Protection of the Marine Environment from Offshore Oil and Gas Activities’ in R Rayfuse (ed) *Research Handbook on International Marine Environmental Law* (Edward Elgar, 2015) 202.

172 Jessen (2016) *supra* n. 140, 17.

CHAPTER 9

Conclusion: shaping marine environmental protection standards for offshore energy production through normative interactions

Pulling the threads of the study together, the present chapter answers the overarching research question of how normative interactions between UNCLOS and other relevant international instruments can inform the interpretation and implementation of the duty to protect the marine environment in relation to offshore energy production. To that end, section 1 reiterates the role of UNCLOS as a dynamic international legal framework for the environmental regulation of offshore energy production. UNCLOS contains legal mechanisms which enable it to keep abreast of scientific, technological and legal developments. However, as the dynamism of UNCLOS largely depends on subsequent developments in international law, section 2 explores the “external” legal rules which govern intra-systemic normative interactions between UNCLOS and relevant global and regional environmental instruments, as well as the legal implications of such interactions on the implementation of the duty to protect the marine environment. In addition, the thesis submits that the environmental regulation of offshore energy production is equally influenced and shaped by other international obligations of States, such as the duty to protect foreign investments under IIAs. For that reason, section 3 discusses the legal basis for and the normative implications of inter-systemic normative interactions, namely interactions between investment and marine environmental law. Rounding off the discussion, the chapter reflects on whether the adoption of a new, globally applicable agreement on the regulation of offshore energy activities is necessary and feasible in order to address the current challenges or whether, instead, normative interactions between UNCLOS and global and regional instruments can lead the way forward.

1. Offshore energy production under the dynamic environmental framework of UNCLOS

The international regulation of all forms of offshore energy production is anchored to UNCLOS.¹ The Convention spells out jurisdictional rules and creates a dynamic environmental framework for offshore activities,² which is complemented by a wide range of specialised global and regional environmental instruments.³ The Convention

1 See chapter 2. See also, V Frank, *The European Community and Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations at the Regional Level* (Martinus Nijhoff, 2007) 24. For an analysis of the environmental framework of UNCLOS related to offshore energy production activities, see S Trevisanut, and N Giannopoulos (2018) ‘Investment Protection in Offshore Energy Production: Bright Sides of Regime Interaction’, *Journal of World Investment and Trade*, 809–813.

2 See chapter 2, sections 2 and 3.

3 See chapters 3, 6, and 7. See also Y Tanaka ‘Principles of International Marine Environmental Law’, in R Rayfuse (ed.) *Research Handbook on International Marine Environmental Law* (Edward Elgar, 2015) 34-35, S Trevisanut, ‘La Convention des Nations Unies sur le droit de la mer et le droit de l’environnement: développement intrasystémique et renvoi intersystémique’ in H Ruiz Fabri, and L Gradoni (eds) *La circulation des concepts juridiques: le droit international de l’environnement entre mondialisation et fragmentation* (Société de législation comparée, 2009), 397-426.

does not contain specific environmental standards concerning any offshore activities, because such detailed and technical standards can soon become outdated. However, UNCLOS includes legal mechanisms which aim to safeguard its ability to adapt to change. In that regard, UNCLOS imposes certain procedural duties on States which are carrying out or authorising such activities, including the requirement to conduct EIAs before the commencement of such activities and to continuously monitor their operation until the decommissioning phase.⁴ Additionally, the general obligation to protect and preserve the marine environment under UNCLOS is further specified by other provisions of its Part XII, such as the duty of States to use the best practicable means at States' disposal "*to prevent, reduce and control pollution of the marine environment arising from or in connection with seabed activities subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction*".⁵ That duty not only entails the adoption of laws and regulatory measures, but it also requires States to ensure that the activities of private actors engaging in such activities do not cause significant harm.⁶ Importantly, UNCLOS does not impose an obligation on States to achieve a specific result;⁷ most of its environmental obligations are duties of conduct.⁸ In other words, States are required to "*deploy adequate means to exercise best efforts, to do the utmost, to obtain this result*".⁹

1.1. The nature of the relevant environmental obligations under UNCLOS and its significance for updating their normative content

The obligation to protect the marine environment and prevent pollution from offshore energy production activities, as an obligation of conduct, requires States to show a specific standard of care by which their compliance is evaluated.¹⁰ "Due diligence" is a concept used to identify the content of obligations of conduct in international law, which usually lack substantive concreteness. As discussed in chapter 3, due diligence guarantees an amount of autonomy and flexibility in the implementation of obligations of conduct by States.¹¹ In particular, States must exercise due diligence in regulating activities which are potentially harmful to the marine environment.¹² Although UNCLOS does not explicitly mention the concept of "due diligence", both the tribunal in the *South China Sea* award and the Seabed Chamber of ITLOS in its

4 On the procedural aspects of the duty to protect and preserve the marine environment under UNCLOS, see chapter 2, section 2.2.3.

5 See article 194(3) of UNCLOS, which must be read in combination with the more specific article 208.

6 Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Advisory Opinion) [2011] ITLOS Rep 10 (Responsibilities and Obligations of States) paras 117–120.

7 See, however, the duty to communicate the results of EIAs under article 205 UNCLOS, as interpreted by the arbitral tribunal in the *South China Sea* Arbitration, para 991.

8 Seabed Chamber's Advisory Opinion, para 113.

9 *Ibid*, para 110, see also Advisory Opinion of SRFC, paras 125, 129.

10 N Matz-Lück, and E van Doorn (2018) 'Due Diligence Obligations and the Protection of the Marine Environment', *L'Observateur des Nations Unies*, 183, ILA Study Group on Due Diligence in International Law, Second Report, July 2016, Tim Stephens (Rapporteur) and Duncan French (Chair), 2.

11 See chapter 3, section 3.

12 *South China Sea* Arbitration, para 941.

advisory opinion read an obligation of exercising due diligence into article 192 of the Convention.¹³

The capacity of due diligence to accommodate change is intrinsically connected with its nature. Indeed, due diligence is a “*variable concept*”,¹⁴ allowing the duty to protect the marine environment to be adjusted in light of the particular risks posed by offshore energy production activities, with a higher standard required for riskier activities.¹⁵ In particular, the standard of due diligence can assist in overcoming regulatory gaps that result from the advancement of scientific knowledge concerning both the risks posed by offshore energy production activities and new approaches for environmental protection.¹⁶ States have to consider the contemporary level of technological and scientific progress,¹⁷ because developments in scientific awareness regarding the risks posed by specific activities may enhance the level of diligence required.¹⁸ For instance, parties to environmental agreements whose institutional machinery develops scientific data about the impacts of offshore energy production bear a duty to take those findings into account during their decision-making.¹⁹ The contribution of such treaty bodies to environmental agreements is especially significant when they recommend specific protective measures to prevent environmental harm by offshore energy production activities. In such a case, the pronouncements of these treaty bodies offer an essential input in shaping the conduct required of States, and can consequently curtail the discretion of States in identifying the necessary and appropriate environmental measures.²⁰ Besides, in light of the scientific and technological advancements, States are under an obligation to keep abreast of best environmental practices and technologies and revise their domestic regulations regularly because they may not be appropriate in perpetuity.²¹

However, due diligence also has an objective component, since it is informed and shaped by the primary environmental obligations of States.²² States need to be able, in some way, to ascertain that they are meeting their obligation to prevent harm to the marine environment for the sake of legal certainty and predictability. Due to its nature, the standard of due diligence can function as an integrative tool, bringing together the relevant environmental duties of States concerning the regulation of offshore energy production activities.²³ Therefore, determining the standard of diligence required to protect the marine environment according to UNCLOS

13 *South China Sea Arbitration*, paras 743, 744, 944, Seabed Chamber’s Advisory Opinion, paras 120, 129.

14 Seabed Chamber’s Advisory Opinion, para 117.

15 ILC, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, *Yearbook of the International Law Commission*, Vol II, Part II (2001) article 3(10).

16 Matz-Lück and van Doorn (2018) *supra* n. 10, 178.

17 ILC (2001) Draft Articles on Prevention with Commentaries, *supra* n. 15, 162.

18 L Chen (2016) ‘Realizing the Precautionary Principle in Due Diligence’, *Dalhousie Journal of Legal Studies*, 16, S Maljean-Dubois (2018) in Société Française pour le Droit International (ed) *Le standard de due diligence et la responsabilité internationale* (Pedone, 2018) 159.

19 For a discussion on the relevance of such pronouncements in defining the required conduct by States see chapter 3, section 3.1., and see also the analysis of the duty to cooperate with expert treaty bodies, chapter 3, section 2.5.2.

20 ILA, Study Group on Due Diligence in International Law, Second Report, July 2016, Tim Stephens (Rapporteur) and Duncan French (Chair), 7.

21 Seabed Chamber’s Advisory Opinion, para 222.

22 *Ibid*, para 123.

23 See chapter 3, section 3.2.

is also contingent upon normative developments in international environmental law and the adherence of States to them.²⁴ These environmental rules can provide the parameters to elucidate the conduct required of States in each case. Rules and standards of international environmental law influence one another to achieve their overarching object of environmental protection.²⁵ Thus, the due diligence standard rises as rules and standards in marine environmental law evolve and States are bound by more detailed and specialised environmental obligations.²⁶

The tribunal in the *South China Sea* Arbitration considered the content of due diligence also as a question of law, instead of treating it as merely a fact-sensitive standard.²⁷ In that way, the tribunal interpreted the provisions of Part XII of UNCLOS in a dynamic way, taking into account other applicable rules that form part of the “general corpus of international law” on the protection of the marine environment.²⁸ The stance of the tribunal towards the cross-fertilisation between UNCLOS and other environmental agreements revealed that, under certain conditions, subsequent normative developments in international environmental law are a source of richness for the standard of due diligence.²⁹ Environmental agreements include a wealth of benchmarks to determine what constitutes significant harm to the marine environment and identify the conduct that States need to adopt to prevent or minimise such harm. Those more specific provisions of international environmental agreements can “feed” into the due diligence obligations under Part XII of UNCLOS, by giving them a “particular shape”.³⁰ Besides, due diligence can also incorporate environmental principles, such as the precautionary principle and the associated duty to apply BEP and BAT.³¹ As the content of the duty to prevent harm to the marine environment under UNCLOS is enhanced by the normative developments in international environmental law, the discretion of States in determining what exactly the duty to take all the necessary measures entails is commensurately limited.

1.2. The rule of reference under UNCLOS: a treaty-based mechanism to determine due diligence concerning offshore energy production

Rules of reference are another significant legal mechanism enshrined in UNCLOS to determine the content of due diligence in the light of normative developments in international law. Article 208(3) of UNCLOS dictates that domestic laws, regulations and measures relating to seabed activities “*shall be no less effective than international rules, standards and recommended practices and procedures*”. This provision aims to set a minimum standard of diligence based on international rules and standards, but it does not impair a State’s authority to impose stricter environmental standards on

24 I Caracciolo, ‘Due Diligence et Droit De La Mer’ in Société Française pour le Droit International (2018) *supra* n. 18, 165.

25 Matz-Lück and van Doorn, *supra* n. 10, 191.

26 M Mbengue (2016) ‘The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations’, *American Journal of International Law*, 286.

27 Caracciolo, *supra* n. 24, 177.

28 *South China Sea* Arbitration, para 941.

29 Mbengue (2016) *supra* n. 26, 286.

30 *Ibid.*

31 See chapter 3, section 3.3.

those activities.³² Article 208(3) of UNCLOS does not create a duty to adopt rules of specific content, but instead, it requires States, at the very least, to achieve or exceed the benchmark of environmental protection established by international rules and standards.³³ While the wording used in article 208(3) of UNCLOS differs from other rules of reference in the Convention,³⁴ in the sense that this article is referring to “international” rather than “generally accepted” rules and standards, it has been interpreted as requiring that those rules are generally accepted.³⁵ As discussed in chapter 3, the use of the term “rules” unambiguously refers to binding norms, while “standards” should be understood “*as having an extra legal meaning of a level of quality or achievement*”, since standards can be contained both in legally binding agreements (including Annexes) and non-binding instruments.³⁶

The crux of the problem remains the identification of these rules and standards, which qualify as such for the application of article 208(3) of UNCLOS, since the Convention does not provide much guidance on the matter. For instance, the ILA’s final report on coastal State jurisdiction relating to marine pollution underlined that the determining factor in their identification is the general acceptance of the rules and standards by States, attaching only secondary importance to the legal nature and status of the instrument in which they might be incorporated.³⁷ While those rules are not required to have reached the status of customary law, in the sense that *opinio juris* is not required, they still need to enjoy widespread and representative participation, including that of States whose interests are especially affected.³⁸ This acceptance cannot only be gleaned from the widespread participation of States in the agreements that incorporate those rules, but general practice in implementing the rule is an equally important consideration.³⁹ While acceptance needs to be extensive, and must pay particular attention to the conduct of specially affected States,⁴⁰ such acceptance does not have to be universal.

32 E Franckx, ‘Marine Environmental Jurisdictional Issues: Coastal States’, in M Nordquist, J N Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Kluwer Law International, 2003) 290.

33 Andrew Friedman, ‘Article 208 of UNCLOS and National Regulation of Seabed Mining’ in L Martin, C Salonidis, C Hioureas, I Laird, and B Sahabi (eds) *Natural Resources and the Law of the Sea: Exploration, Allocation, Exploitation of Natural Resources in Areas under National Jurisdiction and Beyond* (Juris Arbitration Law, 2017) 273.

34 See also relevant analysis in chapter 3, sub-section 3.4.

35 B Oxman (1991) ‘The Duty to Respect Generally Accepted International Standards’, *New York University Journal of International Law and Politics*, 132-133.

36 B Vukas (1980) ‘Generally Accepted International Rules and Standards’, in 23rd Annual Conference of the Law of the Sea Institute, 603, see *contra* A Boyle (1985) ‘Marine Pollution under the Law of the Sea Convention’, *American Journal of International Law*, 357 “*states should be allowed the freedom to make collective recommendations without their becoming instantly and directly a form of binding obligation*”.

37 ILA (2000) Committee on Coastal State Jurisdiction Relating to Marine Pollution, Final Report, 37.

38 ICJ, North Sea Continental Shelf Cases, 1969, para 73.

39 Oxman (1991) *supra* n. 35, 152-153.

40 W van Reenen (1981) ‘Rules of Reference in the New Convention on the Law of the Sea, In Particular in Connection with the Pollution of the Sea by Oil from Tankers’, *Netherlands Yearbook of International Law*, 11-12, where van Reenen suggests that the rule should be accepted by a wide and representative group of States, including those without which the purpose of the rule could not be achieved. On the debate about identifying specially affected States in the context of customary law formation, see also K J Heller (2018) ‘Specially Affected States and the Formation of Custom’, *American Journal of International Law*, 191-243.

1.2.1. Global treaty rules enriching the standard of due diligence under article 208(3) of UNCLOS

Scholars appear to concur on accepting that specific IMO Conventions, such as the MARPOL, the SOLAS, the London Convention and the OPRC, contain international rules, which enjoy wide acceptance by a cross-section of States and, thus, qualify as international rules in the meaning of article 208(3) of UNCLOS.⁴¹ Arguably, at the time of adoption of UNCLOS, the negotiators had considered these agreements when they referred to generally accepted rules.⁴² As discussed in chapter 3, these IMO Conventions contain rules which also apply to certain aspects of offshore oil and gas activities.⁴³ In addition, some globally applicable nature conservation agreements have reached a similar level of general acceptance. For instance, CITES is an agreement of nearly universal adherence and, for that reason, according to the tribunal in the *South China Sea* Arbitration, forms part of the general corpus of international law on the protection of the marine environment.⁴⁴ Likewise, the quasi-universal participation in the CBD and, at the very least, the fact that the all parties to UNCLOS are simultaneously parties to the CBD, was a significant factor taken into account by the tribunal in determining that the CBD has an impact on the interpretation and implementation of the duties under Part XII of UNCLOS.⁴⁵ Therefore, the relevant rules under the CBD, CITES and most likely the Ramsar Convention can qualify as generally accepted rules for article 208(3) of UNCLOS.⁴⁶ This conclusion cannot be safely reached with regard to the CMS Convention, which does not enjoy the same wide acceptance by States,⁴⁷ counting only 125 parties.⁴⁸

While UNCLOS imposes an explicit obligation for the development of international rules and standards to prevent, reduce and control pollution produced by offshore energy activities,⁴⁹ there is much left to be desired when it comes to

41 ILA (2000) *supra* n. 37, 39; C Redgwell, 'The Never Ending Story: The Role of GAIRS in UNCLOS Implementation in the Offshore Energy Sector' in J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a Living Treaty* (British Institute of International and Comparative Law, 2016) 176, B Sage-Fuller, *The Precautionary Principle in Marine Environmental Law, With Special Reference to High Risk Vessels* (Routledge, 2013) 16-17.

42 M Nordquist et al (eds) *United Nations Convention on the Law of the Sea 1982: A Commentary, Volume IV* (Brill, 1991) Part XII UNCLOS, 6-9.

43 See chapter 3, section 1.3.1.

44 *South China Sea* Arbitration, para 956.

45 A Boyle (2005) 'Further Development of the Law of the Sea Convention: Mechanisms for Change', *International Law and Comparative Law Quarterly*, 571, who has stressed that the level of participation in a treaty cannot be ignored as it provides evidence on whether it has the support of Parties to UNCLOS.

46 The Ramsar Convention has 170 parties and, thus, has almost parallel membership with UNCLOS.

47 R Caddell (2005) 'International Law and the Protection of Migratory Wildlife: An Appraisal of Twenty-Five Years of the Bonn Convention', *Colorado Journal of International Environmental Law and Policy*, 146.

48 However, as already mentioned, general acceptance does not require universal acceptance and it is not merely a numbers game. Instead, it suffices that a wide and representative group of States, including the specially affected ones, have adhered to the rules in question. In the case of the CMS that does not seem to be the case, because many significant range States are not parties to it, see C M Hensz (2018) 'Participation in the Convention on Migratory Species: A Biogeographic Assessment', *Ambio*, 739-746.

49 Article 208(5) of UNCLOS.

globally applicable environmental standards.⁵⁰ The scarcity of global environmental standards is even more evident in the case of the regulation of marine renewables. As explained in chapter 3, renewable energy generation does not fall within the scope of the relevant IMO conventions. In fact the operation of marine renewables is primarily subject to general rules found in nature conservation agreements.⁵¹ Arguably, the lack of a single international organisation with competence for the regulation of offshore energy activities at the international level, such as the IMO for shipping, partly explains the lack of specific environmental standards in the offshore energy sector at the global level.⁵² For that reason, the study has also examined whether regional rules and standards, as well as non-binding instruments by non-State actors, can add flesh to the bare bones of article 208(3) of UNCLOS.

1.2.2. *The potential of regional rules to qualify as “international” under article 208(3) of UNCLOS*

In comparison with article 210(6), the rule of reference under article 208(3) of UNCLOS does not refer to global rules but instead sets “international” rules, standards and recommended practices and procedures as the minimum standard with which domestic regulations must abide.⁵³ Therefore, it does not *prima facie* appear to exclude the potential of regional norms to provide the minimum standard for the content of domestic regulations.⁵⁴ However, international rules and standards are required to be generally accepted in order to inform the application of article 208(3) of UNCLOS.⁵⁵ Arguably, common rules found across different regional agreements could be considered as generally accepted so long as there is consistent and widespread relevant State practice supporting their general acceptance.⁵⁶ Given the scarcity of specific, globally applicable rules,⁵⁷ regional normative developments can play an influential role in catalysing consistent State practice with regard to

50 R Churchill, ‘The 1982 United Nations Convention on the Law of the Sea’ in D Rothwell, A Oude Elferink, K Scott, and T Stephens (eds) *The Oxford Handbook of the Law of the Sea* (Oxford University Press, 2015) 28.

51 See chapter 3, sub-section 1.3.

52 J Ashley Roach, ‘International Standards for Offshore Drilling’ in M Nordquist, N Moore, A Chircop, and R Long (eds) *The Regulation of the Continental Shelf Development: Rethinking International Standards* (Martinus Nijhoff, 2013) 106.

53 See also chapter 5, section 4.2.

54 See also article 119(a) of UNCLOS, specifically referring to regional generally recommended minimum standards.

55 See chapter 3, sub-section 3.1. See also *South China Sea* award, paras 1081-1083, which relied on the fact that the COLREGS comprises one of the most widely adopted multilateral conventions in force to conclude that its regulations are generally accepted for the purpose of the rule of reference under article 94 of UNCLOS. In that way it seems to rely on the number of ratifications (156 Contracting Parties) of the convention by the representative States, given that they represent 98 percent of world shipping tonnage.

56 J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 225, ILA (2000) *supra* n. 37, 160, where it is argued that “when the initiation by a limited number of States is supported by sufficient state practice indicating acceptance of these rules and standards, there seems to be no reason why rules with a regional origin cannot in principle become generally accepted”, Boyle (2005) *supra* n. 45, 569.

57 See for instance the relevant provisions of MARPOL Annexes as far as discharges from offshore installations are concerned, as well as the OPRC with respect to prevention of and response to accidental pollution caused by offshore oil and gas installations.

the prevention of pollution from seabed activities.⁵⁸ In that way, regional rules and standards can fill the regulatory gaps concerning the implementation of UNCLOS in the offshore energy sector.⁵⁹

Moreover, the premise that rules and standards which are developed to apply to a specific region can set an international minimum standard, by which domestic rules must be assessed, does not appear to breach the *pacta tertiis* rule. That is because the adherence of States to UNCLOS is an expression of their consent to be bound by an evolving standard of diligence, which is contingent upon changes in the international legal framework.⁶⁰ Nonetheless, this observation raises a question regarding the limits of the expressed consent of States adhering to UNCLOS. Their consent to comply with evolving environmental standards concerns only those international standards which qualify as generally accepted. It also needs to be remembered that UNCLOS does not prescribe the content of domestic measures and regulations for offshore activities. In the words of Barnes, the rule of reference requires “*what might be called parallelism: the adoption of equivalent rules*.”⁶¹ Therefore, if it is accepted that regionally developed international rules and standards qualify as international standards for article 208(3) of UNCLOS, these regional standards do not become, strictly speaking, legally binding upon third States.⁶² States have to adopt equivalent rules and standards and not simply integrate these international standards. In that sense, regional norms have legal effects on third States, and they may be, in that way, legally relevant since these rules and standards are intended to function as benchmarks for assessing the reasonableness of a State’s conduct when complying with the duty to protect and preserve the marine environment in the context of seabed activities.

Therefore, it is posited that the adoption of similar rules and standards in many regional conventions, especially when that coincides with their reference in global instruments, both binding and non-binding, may qualify these rules as international rules and standards under article 208(3) of UNCLOS.⁶³ Nonetheless, the task of identifying consistent State practice across regions becomes rather daunting in the case of offshore energy production activities, due to the absence of a competent global organisation, like the IMO, where States can exchange their views and make relevant statements.⁶⁴ Moreover, States may incorporate these regional rules and standards

58 It is noteworthy that, on the contrary, article 210(5) of UNCLOS only refers to global rules and standards in the case of the regulation of dumping. It is argued that with respect to dumping the minimum international standard is only set by global rules and standards and, therefore, regional rules and standards as well as recommended practices and procedures do not need to be considered when adopting national legislation, see A Proelss (ed) *United Nations Convention on the Law of the Sea: A Commentary* (Hart/ Nomos, 2017) 1418.

59 C Redgwell (2014) ‘Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Sector’, *International Journal of Marine and Coastal Law*, 611-612.

60 ILA (2000) *supra* n. 37, 157.

61 R Barnes, ‘The Continuing Vitality of UNCLOS’ in J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a Living Treaty* (British Institute of International and Comparative Law, 2016), 20.

62 *Contra* J Harrison (2017) *supra* n. 56, 225.

63 T Treves, ‘Regional Approaches to the Protection of the Marine Environment’ in M Nordquist, J Norton Moore, and S Mahmoudi (eds) *The Stockholm Declaration and Law of the Marine Environment* (Martinus Nijhoff, 2003) 149.

64 Perhaps the UNGA could serve as a forum for such exchanges between States.

in their domestic legislation without explicitly referring to them, thus making it difficult to assess whether these national rules are based on common regional rules and standards. For those reasons, it appears that information relating to such State practice is often not easily accessible.

1.2.3. *The formulation of standards by international organisations and treaty bodies*

While it appears relatively straightforward to assess whether rules enshrined in international agreements fall within the scope of application of the rule of reference contained in article 208(3) of UNCLOS, the task of identifying the referred standards, procedures and practices is quite challenging.⁶⁵ UNCLOS is silent on the meaning of “standards, recommended procedures and practices”. However, article 208(5) of UNCLOS imposes an obligation on States, acting especially through competent international organisations or a diplomatic conference, to establish those international standards, both at the global and regional levels. Therefore, – at least *prima facie* – UNCLOS seems to attach some importance to the forum in which standards are promulgated.⁶⁶

According to the Virginia Commentary on UNCLOS, the reference to a “diplomatic conference” in its article 208(5) as an appropriate forum for the promulgation of international rules and standards implies that it must be a “*plenipotentiary conference of the representatives of States (and not a conference composed exclusively of the representatives of international organizations or independent experts)*”, regardless of the type of instrument it adopts.⁶⁷ Such an interpretation appears to encompass CoPs to environmental agreements, such as the CBD, as potential fora for the development of international standards and recommended practices and procedures for the implementation of article 208(3) of UNCLOS.⁶⁸ By contrast, if it is accepted that UNCLOS expresses a preference for specific fora, which alone can produce the norms required under article 208(5) of UNCLOS, resolutions produced by treaty bodies composed exclusively of independent experts, such as scientific committees under environmental agreements (for instance, the Scientific Committee to the Whaling Committee), cannot be considered to be benchmarks which are to be incorporated by reference in UNCLOS.⁶⁹ Even though the output of such treaty bodies can affect the normative content of due diligence in respect of the parties to the agreements under which these bodies operate, they would not qualify

65 On the potential relevance of the ISA Regulations for the establishment of standards in the meaning of article 208(3), see Chapter 2, sub-section 3.1.3.

66 The provision dictates that such standards must be developed “especially” through competent international organisations and diplomatic conferences, which can be interpreted as being an indicative enumeration of the fora through which such international rules can be promulgated. See also chapter 3, sub-section 3.4. The relevance of the forum of promulgation of the standards for identifying international standards is also advocated by R Beckman, ‘Global Legal Regime on the Decommissioning of Offshore Installations and Structures’ in Nordquist, Norton Moore, Chircop and Long (2013) *supra* n. 52, 278.

67 Nordquist, Grandy, Rosenne and Yankov (1991) *supra* n. 42, commentary on article 207, applicable *mutatis mutandis* to article 208 UNCLOS.

68 On the relevance of decisions and recommendations of CoPs to environmental agreements in the process of treaty interpretation, see chapter 3, section 2.5.

69 However, it is stressed that article 208(5) merely indicates a preference and does not restrictively refer to diplomatic conferences and competent international organisations and, therefore, these are not the only fora through which international standards can be developed, Proelss (2017) *supra* n. 58, 1398.

as international standards for the purpose of the rule of reference, unless they are adopted or endorsed by the CoP to the respective treaty.

In addition, the normative value of such instruments depends on whether their content can inform the laws and regulations or measures to be adopted by States.⁷⁰ In that respect, their prescriptive nature and the language used could provide some indication as to whether these instruments were drafted with the aspiration of becoming generally accepted international standards.⁷¹ However, the absence of such intention at the stage of the promulgation of standards or their hortatory nature does not preclude their potential to acquire general acceptance, which can only be traced in the relevant State practice.⁷² In light of the above, the study has identified that specific non-binding instruments adopted by the IMO are relevant for determining the standard of diligence required under article 208(3) of UNCLOS. For instance, the MODU code contains safety standards which can be relied upon to prevent accidental pollution and, therefore, are relevant for the application of article 208(3) of UNCLOS.⁷³

1.2.4. *The relevance of environmental standards of the offshore energy industry*

Due to the flexibility of the relevant international legal framework, States maintain a broad discretion in adopting environmental measures for offshore energy production activities. On that account, many domestic regulatory regimes do not prescribe specific technical requirements for the operation of offshore energy production activities (command and control approach), but instead, they adopt a goal-based or performance-based approach.⁷⁴ The goal-based regulatory approach ensures that the regulation of the offshore energy sector remains technologically neutral and facilitates the adaptation of environmental measures to technological and scientific advancements.⁷⁵ At the same time, this approach fosters self-regulation, as it enables the offshore energy industry to have a strong say in developing its operational standards.⁷⁶ Global oil and gas industry associations, such as the International Association of Oil and Gas Producers (OGP) and the International Petroleum Industry Environmental Conservation Association (IPIECA) have been notably instrumental in the development of good practices to assist the industry and improve

70 Oxman (1991) *supra* n. 35, 148.

71 Beckman (2013) *supra* n. 66, who refers to the drafting history of the 2008 IMO Guidelines for the Placement of Artificial Reefs in order to argue that they were not drafted with the intention of becoming relevant internationally accepted standards. Also, the guidelines explicitly mention that “they are not legally binding on any country”.

72 Oxman (1991) *supra* n. 35, 150. On the difficulties of identifying relevant State practice concerning the environmental regulation of offshore energy production activities, see also chapter 8, section 2.2.

73 IMO Resolution A.1023(26), 2 December 2009. The first MODU code was adopted in 1979 and was revised in 1989.

74 B Baker (2012) ‘Offshore Oil and Gas Regulation in the Arctic: Room for Harmonization?’, *The Yearbook of Polar Law*, 481-484.

75 On the concept of “technology neutrality” see, for instance, W Maxwell, and M Bourreau (2015) ‘Technology Neutrality in Internet, Telecoms and Data Protection Regulation’, *Computer and Telecommunications Law Review*, 1-4.

76 H Jessen, ‘Sustainable Energy Generation from the Oceans’, in M Kotzur, N Matz-Lück, A Proelss, J Sanden, and R Verheyen (eds) *Sustainable Ocean Resource Governance: Deep Sea Mining, Marine Energy and Submarine Cables* (Brill, 2018) 79, N Hasson (2013) ‘Deepwater Offshore Oil Exploration Regulation: The Need for a Global Environmental Regulation Regime’, *Washington and Lee Journal of Energy, Climate and the Environment*, 287.

its environmental performance.⁷⁷ However, empirical research has shown that self-regulation by the private industry often prioritises private over public interests.⁷⁸

UNCLOS does not refer to standards which are produced by private actors.⁷⁹ *Prima facie* that could mean that standards produced by the offshore energy industry are not legally relevant in the process of defining the standard of due diligence. Under UNCLOS, international standards need to be generally accepted by States for such standards to be able to dictate the content of domestic rules on offshore energy production activities. However, States that opt for the goal-based approach seem to endorse – at least tacitly – the standards produced by the offshore energy industry, so long as they can reach the goals set by the domestic regulators. Nonetheless, it is questionable whether that implicit endorsement or acquiescence means that States, in that way, delegate their regulatory authority to those private actors. In other words, when the offshore industry engages in self-regulation, it does not act as a State agent. Moreover, it is debatable whether the generalised practice by the offshore energy industry reflects implicit State practice.⁸⁰ For instance, the 2018 ILC draft conclusions on subsequent agreements and practice for treaty interpretation have suggested that the conduct of non-State actors does not qualify as State practice.⁸¹ Therefore, the general adherence to self-regulatory standards by the industry, even if the practice of the industry was found to be consistent around the world, would not necessarily alter the non-binding nature of private standards. Even more, these private standards as such cannot be regarded as informing the normative content of international environmental obligations of States.

Nonetheless, the input of the offshore energy industry in adopting international standards and best practices for the environmental regulation of offshore energy production activities appears to be essential.⁸² Guidelines and technical standards can operate as models for the adaptation of the existing legal framework to new circumstances.⁸³ Co-regulation, as a means for interaction between international marine environmental law and standards of the private industry, could perhaps

77 See IPIECA's website: <http://www.ipieca.org/>, OGP's website: <https://www.iogp.org>.

78 In that regard, the potential of self-regulation to promote public interests, such as the protection of the marine environment, has been called into question, see, for instance, T Bartley, *Rules without Rights* (Oxford University Press, 2018), J Ruggie, and T Nelson (2015) 'Human Rights and the OECD Guidelines for Multinational Enterprises: Normative Innovations and Implementation Challenges', *Brown Journal of World Affairs*, 99.

79 In comparison, see "good industry practice" in ISA's regulations, for instance, see Draft Regulations on exploitation of mineral resources in the Area, ISBA/24/LTC/WP.1/Rev.1, and see also Note by the Secretariat of the ISA on "Distinguishing between good industry practice and best practices under the draft regulations on exploitation of mineral resources in the Area", ISBA/25/C/11, 15 January 2019.

80 Oxman (1991) *supra* n. 35, 153.

81 ILC Draft conclusions on subsequent agreements and subsequent practice in relation to the interpretation of treaties (2018), *Yearbook of the International Law Commission*, vol II, Part Two, draft conclusion 5(2), which reads as follows: "Other conduct, including by non-State actors, does not constitute subsequent practice under articles 31 and 32. Such conduct may, however, be relevant when assessing the subsequent practice of parties to a treaty".

82 S Trevisanut, 'Is There Something Wrong with the Increasing Role of Private Actors? The Case of the Offshore Energy Sector' in C Ryngaert, E Molenaar, and S Nouwen (eds) *What's Wrong with International Law? Liber Amicorum A.H.A. Soons* (Martinus Nijhoff, 2015) 73, J Norton Moore, 'Comments on the Unfinished Business of UNCLOS III' in Nordquist, Norton Moore, Chircop and Long (2013) *supra* n. 52, 361.

83 M Karavias (2018) 'Interactions between International Law and Private Fisheries Certification', *Transnational Environmental Law*, 176-77.

generate solutions for the vexed environmental problems related to offshore energy production. Nevertheless, private environmental standards can only be incorporated by reference and, thus, become internationally binding under UNCLOS, if they are met with general acceptance by States. Such State practice, for instance, could be reflected in the consistent incorporation of private environmental standards in State contracts with operators of offshore energy activities.⁸⁴

2. Interpretative normative interactions between UNCLOS and international environmental law: harnessing global waves and regional tides

As discussed in chapter 2, the institutional framework of UNCLOS has played an incidental role in the further development of environmental standards relating to offshore energy production.⁸⁵ However, the Convention functions as a framework agreement, requiring States to cooperate for the development of specific rules and standards.⁸⁶ According to Allott, UNCLOS provides for a “*delegation of power*”.⁸⁷ In the view of the tribunal in the *South China Sea Arbitration*, article 237 of UNCLOS offers a mechanism for normative interactions by facilitating the integration of substantive provisions of other environmental agreements within the overall framework of Part XII of UNCLOS.⁸⁸ It reflects the “*inevitable dynamism*” of UNCLOS, which incorporates by reference existing environmental instruments and integrates the respective developments in marine environmental law.⁸⁹ At the same time, the Convention contains specific normative safeguards, which frame the impact of such normative developments on the fundamental principles forming the foundations of UNCLOS. In that respect, it appears that its article 311 sets the outer limits of normative interactions between UNCLOS and other agreements.⁹⁰

However, there are also “*external*” legal mechanisms under general international law, for instance, the customary rules on treaty interpretation, which also foster and govern normative interactions between UNCLOS and other relevant norms. Having said that, it needs to be remembered that the potential for such an evolutionary interpretation of the provisions of UNCLOS, in the light of subsequent normative developments in international law, is also an attribute of the wording of the Convention. Therefore, even though, in practice, internal and external legal mechanisms governing normative interactions are interwoven, this section examines interactions separately, as far as it is possible to do so, through the means of interpretation.

84 See chapter 8, section 2.2. See also, A Bonfanti, and F Romanin Jacur (2014) ‘Energy from the Sea and the Protection of the Marine Environment: Treaty-Based Regimes and Ocean Corporate Social Responsibility’, *International Journal of Marine and Coastal Law*, 637-638.

85 See chapter 2, section 3.1

86 See articles 197 and 208(5) of UNCLOS.

87 P Allot (1983) ‘Power Sharing in the Law of the Sea’, *The American Journal of International Law*, 10.

88 Nordquist, Grandy, Rosenne and Yankov (1991) *supra* n. 42, article 237, 237.1, S Trevisanut ‘La convention des Nations Unies sur le droit de la mer et le droit de l’environnement : développement intrasystémique et renvoi intersystémique’, in H Ruiz Fabri, and L Gradoni (eds) *La Circulation des Concepts Juridiques* (Société de Législation Comparée, 2009) 414.

89 Trevisanut (2009) *supra* n. 88, 415.

90 M Gavouneli, ‘Protection Standards for the Marine Environment: Updating Part XII of the Law of the Sea Convention?’ in S Minas, and J Diamond (eds) *Stress Testing the Law of the Sea: Dispute Resolution, Disasters & Emerging Challenges* (Brill/Nijhoff, 2018) 265-266.

As discussed in chapters 3, 6 and 7, States have attempted to address the challenges of offshore energy production activities within other specialised agreements, both at the global and regional levels. At the global level, the rules which directly or coincidentally regulate offshore energy production activities stand out as being mostly sectoral and recommendatory.⁹¹ That is to say, most of the examined global agreements create normatively modest obligations of conduct, which allow States wide discretion in their implementation.⁹² However, even though most of these global conventions themselves fail to offer concrete environmental standards for offshore energy production activities, the significant contribution of their treaty bodies, through the adoption of non-binding guidelines and scientific assessments relating to such activities, should not be overlooked.⁹³ Indeed, most of the specific environmental rules and standards concerning offshore energy production activities have been developed at the regional level.⁹⁴ UNCLOS accommodates and, in certain instances, encourages the development of regional agreements for the protection of the marine environment. The multitude of references to regional rules and regional forms of cooperation in UNCLOS is indicative of the significance of regionalism for marine environmental protection in respect of certain sources of pollution. As illustrated in chapter 5, regional marine environmental rules and standards can significantly contribute to the implementation of the environmental obligations under UNCLOS at the regional level.⁹⁵ Moreover, under certain conditions, regional rules and standards can be used as a means for the interpretation and implementation of the duty to protect the marine environment concerning offshore energy production.

2.1. Rules governing intra-systemic interactions between UNCLOS and international environmental instruments

UNCLOS has been characterised as the “mother” of all its interactions with other environmental agreements.⁹⁶ Besides the legal mechanisms incorporated in the Convention to update its content, other international law rules also promote normative interactions between UNCLOS and other relevant environmental rules, which may assist in defining the normative contours of the duty to protect the marine environment concerning offshore energy production. In that respect, this section primarily stresses the relevance of rules of treaty interpretation in updating the content of the duty to protect the marine environment. These normative interactions illustrate the Convention’s character as a “living” instrument.⁹⁷

91 See chapter 3, section 1.3.3.

92 See the example of the CBD, discussed in chapter 3, section 1.3.2.

93 See chapter 3, section 2.5.

94 See chapter 5, section 2.3.

95 P Birnie, A Boyle, and C Redgwell, *International Law and the Environment* (Oxford University Press, 3rd edition, 2009) 391.

96 See F Romanin Jacur, ‘Formalism and Law-Making in Treaty-Based Ocean Governance: Limits and Challenges’ in S Trevisanut, N Giannopoulos, and R Roland Holst (eds) *Regime Interaction in Ocean Governance: Problems, Theories and Methods* (Brill, 2020) 171.

97 R Barnes, ‘The Continuing Vitality of UNCLOS’ in J Barrett, and R Barnes (eds) *Law of the Sea: UNCLOS as a Living Treaty* (British Institute of International and Comparative Law, 2016) 459.

2.1.1. *The inadequacy of treaty-conflict rules to address intra-systemic interactions*

In the context of (marine) environmental protection, the applicable environmental treaties, even when they use different approaches and methods, seem to converge on their goal to prevent harm to the (marine) environment and preserve biological diversity. Given their sectoral approach and cross-cutting nature, environmental agreements need to supplement and complement rather than prevail over each other.⁹⁸ When it comes to interactions between successive treaties that do not aim to supplant their predecessors, the traditional treaty-conflict rules quickly show their limits: they do not, by their nature and function, aim to harmonise or coordinate the contents of different international treaties.⁹⁹ For instance, in the case of normative interactions between simultaneously applicable environmental rules, the application of conflict clauses, such as the *lex specialis* rule, which allows for one rule to prevail at the expense of another, would undermine the shared objective of environmental agreements to protect the marine environment.¹⁰⁰

A rule may be *lex specialis* in relation to another rule as an elaboration of the more general rule or its implementation in a particular context, i.e. a regional sea area. In such a case, the special rule supplements the (limited) normative specificity of the general rule, in the sense that it provides normative guidance on how the general rule has to be implemented in a particular case.¹⁰¹ Recalling the dictum of the arbitral tribunal in the *Southern Bluefin Tuna* cases, when there is no contradiction between the *lex specialis* and the *lex generalis*, the former should not trump the latter, but instead, work together. Therefore, both rules should be interpreted in combination.¹⁰² The general rule continues to serve as a source of principles and objectives that underlie and guide the interpretation and implementation of the more specific rule.¹⁰³ In that sense, there is a normative cross-fertilisation between the two rules.

The inadequacy of treaty-conflict rules to address normative interactions between UNCLOS and other relevant environmental agreements also relates to the nature of environmental obligations. Environmental agreements do not aim to establish a series of bilateral duties on a reciprocal basis because their success in protecting the common interest of environmental protection depends upon the diligent compliance by all their parties. In that respect, it has been suggested

98 M Young, *Trading Fish, Saving Fish: The Interaction between Regimes in International Law* (Cambridge University Press, 2011) 298-299.

99 R Wolfrum, and Nele Matz-Lück, *Conflicts in International Environmental Law* (Springer, 2003) 129.

100 See chapter 3, section 2.2.

101 Report of the Study Group of the ILC on "Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law", A/CN.4/L.702, 18 July 2006, para 98, Wolfrum and Matz-Lück (2003) *supra* n. 99, 155.

102 See *Southern Blue Fin Tuna* cases (*New Zealand v Japan/Australia v Japan*) Provisional Measures of 27 August 1999, para 51, see also J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to other Rules of International Law* (Cambridge University Press, 2003), 410. The ILC Report on Fragmentation, *supra* n. 101, para 99, has also supported the view that, in such cases, the *lex specialis* rule only partially replaces the more general one, while the more general one remains in the background providing interpretative direction to the more specific one.

103 ILC, Report on Fragmentation, *supra* n. 101, para 99. See also para 102, citing the example of the *Oil Platforms* case, where the general law concerning the use of force was applied to give meaning to a wide standard of "necessity" in the relevant *lex specialis*, which in that case was the 1955 Treaty of Amity between Iran and the United States. In that case the *lex specialis* received its meaning from the *lex generalis*.

that treaties containing non-reciprocal or interdependent obligations,¹⁰⁴ such as environmental agreements, should be subject to different conflict rules from those found in article 30 of the VCLT.¹⁰⁵ Their approach to treaty-conflict resolution, which results in one treaty trumping the other, may work well for agreements which establish reciprocal, bilateral obligations, because such agreements are only concerned with the performance of a State towards another State.¹⁰⁶ This approach, however, disregards the fact that environmental agreements establish interdependent obligations, as their goal to protect common interests shared by their parties depends on the compliance by all of them.¹⁰⁷ For that reason, it appears that the rules on treaty interpretation are better equipped to resolve that issue by providing the legal basis for the synergetic interaction of simultaneously applicable environmental duties.¹⁰⁸

2.1.2. Rules on treaty interpretation as a means for normative interactions

Through the process of interpretation, relevant environmental agreements can interact with UNCLOS and enable it to keep abreast of legal developments, without a formal amendment.¹⁰⁹ According to the principle of systemic integration, the interpreter of UNCLOS can seek additional interpretative guidance concerning the environmental duties under the Convention in the content of “external” environmental rules.¹¹⁰ As the tribunal in the *South China Sea Arbitration* highlighted, UNCLOS needs to be interpreted as embedded in the normative environment created by simultaneously applicable environmental agreements.¹¹¹ In the tribunal’s view, environmental agreements can form the “corpus of international law relating to the environment” for the interpretation of the obligations under Part XII of UNCLOS.¹¹²

Given the thorny legal issues related to the application of article 31(3)(c) of the VCLT,¹¹³ the principle of systemic integration seems to have been cautiously relied upon by international courts and tribunals.¹¹⁴ In the case of UNCLOS, the less frequent invocation of article 31(3)(c) of the VCLT may also be explained by the fact

104 The VCLT seems to deal with such obligations in Articles 41(1)(b), 58(1)(b) and 60(2)(c).

105 Pauwelyn (2003) *supra* n. 102, 410-415, M Fitzmaurice, and O Elias (eds) *Contemporary Issues in the Law of Treaties* (Eleven, 2005) 331.

106 Wolfrum and Matz (2003), *supra* n. 99, 130, 131-132.

107 L Boisson de Chazournes, ‘Features and Trends in International Environmental Law’ in Y Kerbrat, and S Maljean-Dubois (eds) *The Transformation of International Environmental Law* (Hart and Pedone, 2011) 11, Wolfrum and Matz-Lück (2003) *supra* n. 99, 132.

108 Wolfrum and Matz-Lück (2003) *supra* n. 99, 133.

109 J Barret, ‘The UN Convention on the Law of the Sea: A Living Treaty?’ in Barret and Barnes (2016) *supra* n. 97, 25.

110 N Matz-Lück (2006) ‘Harmonization, Systemic Integration and Mutual Supportiveness as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation’, *Finnish Yearbook of International Law*, 44.

111 *South China Sea Arbitration*, para 941.

112 *Ibid.*, see also C Kojima (2018) ‘South China Sea Arbitration and the Protection of the Marine Environment: Evolution of UNCLOS Through Interpretation and the Duty to Cooperate’ *Asian Yearbook of International Law*, 172.

113 See chapter 3, section 2.3.1.

114 For instance, in the *South China Sea Arbitration*, the tribunal did not explicitly rely upon article 31(3)(c) of the VCLT to interpret UNCLOS in the wider framework of marine environmental agreements. Similarly, the judgment in the *Whaling in the Antarctic* case does not refer to Article 31(3)(c) despite claims by the parties. See also, J Smith (2014) ‘Evolving to Conservation? The International Court’s Decision in the Australia/Japan Whaling Case’, *Ocean Development and International Law*, 318. See also Boyle (2005) *supra* n. 45, 564 and 567, D French (2006) ‘Treaty

that UNCLOS refers to the application of other relevant rules of international law by courts and tribunals having jurisdiction to hear disputes under the Convention.¹¹⁵ However, other interpretation techniques also require the harmonious interpretation of UNCLOS and other relevant environmental agreements. For instance, normative interactions, giving rise to the evolutionary interpretation of UNCLOS, are more feasible when its provisions are interpreted in the light of the ordinary meaning and object and purpose of the Convention. Subsequent agreements and subsequent practice may also assist in identifying whether the presumed intention of the parties was to give a certain term evolutionary character.¹¹⁶

The use of generic terms in the text of a treaty is a crucial element opening the door to the evolutionary interpretation of rules under UNCLOS in the light of other relevant normative developments in international law.¹¹⁷ The inclusion of “*by definition evolutionary*”¹¹⁸ terms in a treaty has been regarded to be an inter-temporal *renvoi*, which is arguably based on the presumed intentions¹¹⁹ of the State parties to allow for such terms to be interpreted in light of new (legal) developments.¹²⁰ According to the ICJ, “[t]here are situations in which the Parties’ intention upon conclusion of the treaty was, or may be presumed to have been, to give the terms used – or some of them – a meaning or content capable of evolving, not once fixed once and for all, so as to make allowance for, among other things, developments in international law”.¹²¹

An alternative legal basis for such an evolutionary interpretation is grounded in the object and purpose of a treaty according to article 31(1) of the VCLT.¹²² In that respect, another argument in favour of the evolutionary character of the environmental rules of UNCLOS is linked with the Convention’s objective to protect

Interpretation and the Incorporation of Extraneous Legal Rules’, *International and Comparative Law Quarterly*, 300.

115 M Fogdestam Agius, *Interaction and Delimitation of International Legal Orders* (Brill, 2014) 305.

116 ILC Draft Conclusions (2018) *supra* n. 81, 83.

117 Y Tanaka (2013) ‘Reflections on Time Elements in the International Law of the Environment’, *ZaōRV*, 150, J Arato (2010) ‘Subsequent Practice and Evolutive Interpretation: Techniques of Treaty Interpretation over Time and Their Diverse Consequences’, *The Law and Practice of International Courts and Tribunals*, 468, French (2006) *supra* n. 114, 295, Boyle (2005) *supra* n. 45, 567-568, ILC Report on Fragmentation, *supra* n. 101, para 478.

118 ICJ, *Dispute Regarding Navigational and Related Rights (Costa Rica v Nicaragua)* Judgment of 13 July 2009, para 64.

119 In the words of the Special Rapporteur for the ILC in the study of the law of treaties, Sir Humphrey Waldock: “*whether the terms used were intended to have a fixed content or to change in meaning with the evolution of the law could be decided only by interpreting the intention of the parties*”. See J Noyes, ‘Memorializing UNCLOS III, Interpreting the Law of the Sea Convention, and the Virginia Commentary’ in M Lodge, and M Nordquist (eds) *Peaceful Order in the World’s Oceans Essays in Honor of Satya N. Nandan* (Brill, 2014) 230 citing *Yearbook of the International Law Commission*, 1966, vol 1., UN Doc. A/CN.4/SER.A/1966.

120 French (2006) *supra* n. 114, 296, Tanaka (2013) *supra* n. 117, 153, ILC Report on Fragmentation, *supra* n. 101 para 478.

121 *Dispute regarding navigational and related rights*, para 64.

122 In the *Iron Rhine* arbitration, the Tribunal held that “[i]n the present case it is not a conceptual or generic term that is in issue, but rather new technical developments relating to the operation and capacity of the railway. But here, too, it seems that an evolutive interpretation which would ensure an application of the treaty that would be effective in terms of its object and purpose, will be preferred to a strict application of the intertemporal rule”, *Iron Rhine Arbitration (Belgium v Netherlands)*, Award of 24 May 2005, para 80.

the marine environment for both present and future generations.¹²³ Arguably, intertemporality is inherent in the Convention's object and purpose.¹²⁴ In other words, it appears necessary to interpret the environmental provisions of UNCLOS in an evolutionary manner to make its object and purpose effective.¹²⁵ However, it is not always easy to determine the normative effects of such interactions upon the implementation of UNCLOS, as the interpretation of the Convention in the light of other applicable environmental agreements does not necessarily provide a single meaning for the interpreted provisions. The rules of treaty interpretation "*are not step-by-step formulae for producing an irrefutable interpretation in each case*".¹²⁶ That may have significant consequences relating to legal certainty, since such interpretative interactions can lead to diverse interpretations of the prevention obligations under UNCLOS between its State parties.¹²⁷

2.1.3. *The role of regional rules and standards for the interpretation and implementation of UNCLOS*

As already discussed, the rules of treaty interpretation call on the interpreter of UNCLOS to read its provisions in the normative context of other environmental agreements. However, that does not necessarily mean that treaty interpretation rules enable its interpreter to constantly engage in a process of updating the Convention's provisions in the light of each new treaty on the protection of the marine environment.¹²⁸ There are limits to this process.¹²⁹ According to Boyle, an agreement lacking almost universal support could still offer interpretative guidance, but in that case, its "persuasive force" as a basis for the evolutionary interpretation of UNCLOS would be weaker, the fewer parties it has.¹³⁰ Given that States have primarily adopted specific environmental rules and standards for offshore energy production at the regional level, this thesis has also examined whether these regional norms can qualify as subsequent agreements or practice for the interpretation and, consequently, the implementation of the relevant duties under UNCLOS.¹³¹

The rules and standards developed in the context of an agreement that applies to a certain marine region cannot by themselves provide sufficient evidence of widespread State practice regarding the interpretation of the relevant environmental obligations under UNCLOS. For instance, State practice in the North Sea as such cannot influence the interpretation of UNCLOS, except for the North Sea States. Indeed, the rules of treaty interpretation do not allow the interpreter to use them as an excuse in order to impose rules and standards that are well-developed and supported in one region on States that do not border that region, without their consent.¹³²

123 See preamble to UNCLOS, see also chapter 3, sub-section 2.3.2.

124 Tanaka (2013) *supra* n. 117, 155-156.

125 See *Iron Rhine Arbitration*, para 80, Arato (2010) *supra* n. 117, 473.

126 R Gardiner, *Treaty Interpretation* (Oxford University Press, 2nd edition, 2017) 10.

127 Tanaka (2013) *supra* n. 117, 159, Boyle (2005) *supra* n. 45, 569.

128 Boyle (2005) *supra* n. 45, 568.

129 J Harrison (2019) 'The Protection of Species, Ecosystems and Biodiversity under UNCLOS in Light of the South China Sea Arbitration: An Emergent Duty of Marine Ecosystem Restoration?', *Edinburgh School of Law Research Paper No 2019/20*, 9.

130 Boyle (2005) *supra* n. 45, 571.

131 See chapter 8, section 2.2.

132 Harrison (2019) *supra* n. 129, 9.

However, the convergence among multiple regional agreements concerning specific rules and standards may reflect representative State practice, which can, in principle, inform the interpretation of obligations under UNCLOS.¹³³ Subsequent practice does not necessarily need to consist of joint conduct by the State parties to UNCLOS. Instead, parallel conduct by parties may suffice if it articulates a sufficiently common understanding regarding the interpretation of the treaty.¹³⁴ Therefore, parallel regional rules on the protection of the marine environment against pollution from offshore energy activities could be considered as subsequent practice if they demonstrate the shared understanding of a representative number of parties to UNCLOS regarding its interpretation.

The regional agreements examined in the thesis do not appear to reflect the practice of all the parties to UNCLOS. As underlined in the previously mentioned ILC draft conclusions, agreements or practice between less than all the parties to a treaty regarding the interpretation or the application of that treaty are not to be considered as an authentic means of interpretation under article 31(3)(a) and (b) of the VCLT. Instead, in the ILC's view, such practice should be received as a form of "other" practice under article 32 of the VCLT.¹³⁵ The ILC has also submitted that State practice, which is not in the application of a treaty, can also be a means of interpretation.¹³⁶ In such a case, the conduct of States can assist in assessing relevant subsequent practice in the application of a treaty.¹³⁷ In the light of the above conclusions of the ILC, if it is not accepted that the examined regional instruments reflect sufficiently generalised State practice, which can be used for the interpretation and implementation of UNCLOS, their relevance still remains.¹³⁸ They are legally relevant, in a sense, in clarifying the content of the duty to protect and preserve the marine environment in the context of offshore energy production activities under UNCLOS.¹³⁹

However, the reasoning of the arbitral tribunal in the *South China Sea* Arbitration seems to question the strict interpretation of article 31(3)(a) and (b) of the VCLT suggested by the ILC. Specifically, the tribunal suggested some flexibility in identifying the rules which can inform the interpretation of the environmental duties under UNCLOS.¹⁴⁰ In the light of the reasoning of the tribunal, it is arguable that subsequent agreements or practice for the interpretation of UNCLOS do not need to concern all the parties of the Convention, but nearly all of them. On that account, it is submitted that participation from a cross-section of States from around the world can be significant for accepting the relevance of subsequent practice in the interpretation of UNCLOS.¹⁴¹

133 J Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press, 2017) 225.

134 ILC Draft Conclusions (2018) *supra* n. 81, commentary on draft conclusion 6.

135 *Ibid*, commentary on draft conclusion 6.

136 *Ibid*, commentary to draft conclusion 2, 21.

137 *Ibid*, draft conclusion 5(2) on "Conduct as subsequent practice".

138 M Fitzmaurice (2020) 'Subsequent Agreements and Subsequent Practice: Some Reflections on the International Law Commission's Draft Conclusions', *International Community Law Review*, 19.

139 Matz-Lück and van Doorn (2017) *supra* n. 10, 169-187.

140 Harrison (2019) *supra* n. 129, 8.

141 *Ibid*, 9, where Harrison refers to the example of the CMS, which has a much lower participation rate and which cannot be considered as a treaty of nearly universal adherence. However, the CMS has

2.2. The normative implications of interactions for the duty to protect the marine environment in the context of offshore energy production

As already discussed, the standard of due diligence can be used as a means to adapt the content of the duty to protect and preserve the marine environment under UNCLOS to changing legal and factual circumstances.¹⁴² Many of the concepts and principles developed in international environmental law since the Rio Conference in 1992, such as the precautionary principle, the duty to conduct SEAs, public participation in decision making and the ecosystem-based management approach, are not mentioned in UNCLOS. Normative interactions with subsequent environmental agreements through interpretation can add normative layers to the environmental obligations under UNCLOS. The content of other environmental agreements has a normative impact on the interpretation and implementation of the relevant duties under UNCLOS, because they provide benchmarks of conduct against which to assess the compliance of States. At the same time, international environmental agreements are “enhanced” in terms of enforcement by operating as benchmarks for assessing compliance with the due diligence obligations under UNCLOS, which are subject to compulsory dispute settlement.

2.2.1. *The cross-fertilisation between UNCLOS and global environmental rules*

Notwithstanding the weaknesses of the global rules that apply to offshore energy production,¹⁴³ the interplay between UNCLOS and the relevant global environmental agreements can result in their normative cross-fertilisation. These agreements can inform the meaning of the provisions of UNCLOS. For instance, in the *South China Sea Arbitration*, the tribunal interpreted the term “ecosystem” under article 194(5) of UNCLOS drawing upon the “internationally accepted definition” under article 2 of the CBD,¹⁴⁴ which defines an ecosystem as “a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit”. By referring to the CBD, the tribunal read into UNCLOS a duty not only to prevent, reduce and control pollution but also to take the necessary steps to preserve marine ecosystems.¹⁴⁵ Similarly, against the backdrop of article 8(f) of the CBD, article 192 of UNCLOS can be interpreted as demanding States restore and rehabilitate degraded ecosystems.¹⁴⁶ Interpreting UNCLOS in the light of the CBD can also act as a gateway for considering an ecosystem-based approach when implementing UNCLOS.¹⁴⁷ The added value of the ecosystem approach compared

been relied upon by the WTO Appellate Body in the *US-Shrimp* case for the interpretation of the GATT, even though the respondent was not a party to it.

142 Matz-Lück and van Doorn (2018) *supra* n. 10, 180.

143 Y Tanaka (2016) ‘Four Models on Interaction between Global and Regional Legal Frameworks on Environmental Protection against Marine Pollution: The Case of the Marine Arctic’, *Ocean Yearbook*, 355–356.

144 *South China Sea Arbitration*, para 945.

145 *South China Sea Arbitration (Philippines v China)*, Award (on Jurisdiction and Admissibility) of 29 October 2015, PCA Case No 2013-19, para 284, see also Harrison (2019) *supra* n. 129, 9.

146 Harrison (2019) *supra* n. 129, 11. By the same token, article 3(4)(a) of CMS further supports the interpretation of UNCLOS as imposing an obligation to improve the conservation status of endangered species.

147 See also the establishment of the duty to restore a damaged ecosystem and the prescription of an ecosystem-based approach under regional instruments in sub-section 2.2.2.

with the piecemeal approach to the protection of the marine environment against each source of pollution, as originally envisaged by the Convention, is that it adopts a more holistic and integrated perspective to the protection of marine species and their habitats based on the premise that a threat to any single element of the ecosystem can have adverse impacts on all other components of marine biodiversity.¹⁴⁸

In addition, global agreements on the conservation of marine species and their habitats are useful in giving precise content to the obligation to protect “*the habitat of depleted, threatened or endangered species and other forms of marine life*” contained in article 194(5) of UNCLOS. Take for example Appendix I of the CMS, which could serve as evidence that species enlisted therein are internationally accepted as threatened with extinction,¹⁴⁹ and the list of the Ramsar Convention on wetlands of international importance, which could indicate habitats that necessitate specific conservation measures. In that respect, the tribunal in the *South China Sea Arbitration* cited CITES and its Appendices as evidence of species which are unequivocally threatened.¹⁵⁰ Harrison has argued that in the absence of parallel membership between UNCLOS and CITES, the latter was not invoked by the tribunal as a binding rule, but “*as evidence of a generally accepted understanding of a concept by the international community at large*”.¹⁵¹ However, in this author’s view, the tribunal invoked CITES as imposing a binding duty (“part of the general corpus of international law”), which informs the standard of diligence that China had to exercise to comply with its obligations under UNCLOS. That argument was probably also based on the fact that both China and the Philippines are parties to CITES.

The tribunal also addressed the cross-fertilisation between the duty to conduct an EIA under article 206 of UNCLOS and the content of that duty under customary international law. The tribunal appears to have read an international standard of “comprehensiveness” of EIAs into article 206 of the Convention.¹⁵² That standard was deduced from the customary obligation to conduct an EIA, as consistently interpreted by other international courts and tribunals.¹⁵³ Remarkably, the tribunal applied that standard to the facts of the case to conclude that China’s alleged report was far less comprehensive than EIAs reviewed by other international courts and tribunals, specifically comparing it with the respective assessments reviewed in the *Pulp Mills* case. In that light, it seems that the tribunal engaged in an evolutionary interpretation of UNCLOS taking into account the changing content of the customary obligation, as interpreted by other international judicial bodies.¹⁵⁴

2.2.2. *The significant contribution of regional rules and standards*

As illustrated in the second part of the study, regional arrangements have considerably contributed to the formulation of specific rules and standards on offshore energy production. In that respect, they shape the normative content and guide the

148 Harrison (2017) *supra* n. 133, 30.

149 See respectively the use of CITES by the arbitral tribunal in the *South China Sea Award*, paras 956-957.

150 *Ibid.*

151 Harrison (2019) *supra* n. 129, 8.

152 *South China Sea Arbitration*, para 990, see also M Mbengue (2016) ‘The South China Sea Arbitration: Innovations in Marine Environmental Fact-Finding and Due Diligence Obligations’, *American Journal of International Law Unbound*, 287.

153 *Ibid.*

154 Kojima (2018) *supra* n. 112, 177.

implementation of the duty to protect and preserve the marine environment at the regional level. Many of the second-generation regional sea agreements have incorporated common environmental principles and approaches, such as the precautionary principle and the ecosystem-based approach.¹⁵⁵ In particular, the examined agreements require States to take measures beyond traditional pollution prevention, such as measures to restore degraded marine ecosystems, adopting a more holistic perspective in managing offshore activities. These regional sea agreements and the Espoo Convention – initially developed as regional – add normative content to the requirements to conduct EIAs and to continuously monitor offshore energy production operations,¹⁵⁶ introducing new elements, such as the duty to conduct SEAs and public participation.¹⁵⁷

Most significantly, the selected regional instruments contain substantive environmental rules addressing primarily offshore oil and gas activities. Looking into the regional instruments examined in chapter 6, one can deduce best practices to be adopted by States in other regions.¹⁵⁸ These rules can give normatively concrete content to the duty to “take all necessary measures” and can specify the “best practicable means” to be used.¹⁵⁹ Arguably, certain rules and standards appear to be generally applicable by States in representative regions for offshore oil and gas activities and, thus, can set a minimum international standard. Specifically, the examined agreements converge on the fact that they subject offshore oil and gas activities to prior authorisation and require States to apply dynamic standards of care, such as BAT and BEP. Domestic regulations have to make offshore energy production activities conditional upon prior authorisation by the competent regulatory authority, which presupposes the conducting of an EIA. The conditions and requirements of the authorisations must aim at the reduction of operational discharges which, as a minimum standard, have to follow the relevant Annexes of the MARPOL Convention.¹⁶⁰ States must also apply the precautionary principle in adopting protective measures and take especially into account the protection of sensitive marine areas. Additionally, such prior authorisation must be used to ensure that the operators apply BET and BAP.¹⁶¹ These dynamic standards evolve over time and are contingent upon the individual capacity of the concerned States.¹⁶² However, their inherent flexibility is a double-edged sword, as they are heavily conditional upon economic considerations.

In addition, under the selected regional sea agreements, States are expected to establish a system of supervision and control of the activities of the offshore oil and gas industry to combat both operational and accidental pollution. In furtherance of the duties under UNCLOS and building upon the relevant rules of the OPRC, regional

155 Even though the content of the principle varies widely in the examined regions, it seems that at least States cannot justify inaction in the face of scientific certainty.

156 See chapter 6, section 2.

157 *Ibid.*

158 See also the comparative analysis of relevant state practice contained in the REMPEC study on countries surrounding the Mediterranean, REMPEC/WG.34/19, 4 December 2013, 113-141.

159 See article 194 of UNCLOS.

160 As discussed, both the Helsinki Convention and the Offshore Protocol to the Barcelona Convention regulate such discharges by reference to the Annexes of MARPOL.

161 See also J Harrison (2017) *supra* n. 133, 225.

162 See chapter 6, section 3.1.

sea agreements contain procedural safeguards to prevent, respond and control pollution caused by offshore oil and gas accidents. Apart from the State-centred duties of notification, consultation and cooperation, they oblige both States and the operators of offshore oil and gas installations to formulate contingency plans and conduct exercises to ensure their capacity to immediately respond to acute pollution. Remarkably, at present there are no specific regional rules on the environmental regulation of marine renewables. In fact, the potential risks from marine renewable energy generation are regulated – often incidentally – under general environmental obligations and regional agreements relating to nature conservation. Nonetheless, as discussed below in sub-section 2.2.3, treaty bodies under these regional agreements have developed considerable non-binding environmental guidelines which address certain types of marine renewables.

The study has also looked into the role of the EU, as a unique example of enhanced regional cooperation, in advancing the standard of care required for the environmental regulation of offshore energy production activities. From the analysis in chapter 7, it follows that the EU law instruments have significantly contributed to the further development and enhancement of the environmental protection standards concerning offshore energy production activities under the selected regional sea conventions across Europe. The EU's robust legal framework has the potential to transform the sometimes weak and vague regional commitments into clear and enforceable targets.¹⁶³ EU instruments, such as the MSFD, the MSP, and the Offshore Safety directives, appear to have contributed to the existing rules under the examined regional sea conventions, in terms of both substantive and procedural obligations. EU law instruments also have increased potential in catalysing cross-regional normative interactions and promoting the coherent implementation of environmental rules and standards throughout Europe. Most significantly, the added value of the EU as a regional organisation with shared competence on the protection of the marine environment can be found in its elaborate mechanisms of control and compliance. The regional sea conventions may avail themselves of the robust compliance mechanisms of EU law, such as monitoring, enforcement, and infringement proceedings. These mechanisms can fill in the compliance deficit in regional sea conventions when EU members are the majority of their contracting parties, as in the case of OSPAR and the Helsinki Convention. Therefore, normative interaction between EU law and regional sea conventions can shape an enhanced level of marine environmental protection concerning offshore energy production in Europe.

However, it is striking that the EU has not yet developed any specific, binding rules to address the environmental externalities of marine renewables. In particular, that lack of specific EU rules appears paradoxical, given the emphasis that the EU institutions have put on the promotion of marine renewables in Member States. Most recently, the EU Green Deal and the EU Biodiversity Strategy 2030 have highlighted the key role of marine renewables in the energy transition towards achieving the

163 An example highlighted in chapter 7 has been the contribution of the EU MSFD and its eleven environmental quality descriptors in substantiating the content of the ecosystem-based approach in the Barcelona Convention, see chapter 7, sub-section 3.3.1.

EU goal of climate neutrality.¹⁶⁴ Nonetheless, at present, EU legislation appears to be overly preoccupied with economic considerations, such as removing the barriers for the development of marine renewables and attracting investments by harmonising the national support schemes, to ensure energy security and the functioning of the internal energy market.¹⁶⁵ By contrast, the EU Commission has only developed non-binding guidelines relating to the environmental externalities of specific types of marine renewables, such as offshore windfarms, in the context of the EU Nature directives.

2.2.3. *The relevance of “secondary” (non-binding) instruments by treaty bodies to environmental agreements*

Due diligence calls for States to keep abreast of current specifications and standards.¹⁶⁶ In that respect, the several non-binding instruments produced by treaty bodies to the examined conventions can also enhance the level of diligence required of States in the implementation of their duty to protect and preserve the marine environment. Even though most of these “secondary” instruments are non-binding, they appear to be legally relevant in guiding the implementation of their respective agreements and, consequently, in shaping the standard of care required of States. In other words, they play an essential norm-shaping role, and they help to identify the conduct required of States. With regard to decisions adopted by CoPs, the ILC draft conclusion 11(3) states that they embody “*a subsequent agreement or subsequent practice under article 31, paragraph 4, in so far as it expresses agreement in substance between the parties regarding the interpretation of a treaty, regardless of the form and the procedure by which the decision was adopted, including by consensus*”. Even though that conclusion does not apply across the board to the output of all treaty bodies, these instruments can still qualify as “other” practice relevant for the interpretation of their respective agreements under article 32 of the VCLT. In that sense, they can contribute to the determination of the ordinary meaning of the respective treaty rules.¹⁶⁷

In addition, their significance lies in their capacity to catalyse and influence domestic implementation measures or even to lead to the emergence of customary rules. The voluntary compliance of States with recommended actions under these non-binding instruments can result in the harmonisation of State practice in respect of the implementation of the duty to protect the marine environment concerning offshore energy production. Such consistent and widespread practice can then, in principle, be considered as subsequent practice for the interpretation of UNCLOS.¹⁶⁸ In addition, non-binding instruments can serve as benchmarks against which to evaluate the reasonableness of compliance measures adopted by States. In that sense, they can serve as recommended best practices, which are not the only way

164 See Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the “European Green Deal”, COM/2019/640 final, section 2.1.2. on supplying clean, affordable and secure energy, and Communication on the “EU Biodiversity Strategy for 2030”, COM (2020) 380 final, 20 May 2020, section 2.2.5.

165 See chapter 7, sub-section 2.3.1.

166 J Kulesza, *Due Diligence in International Law* (Brill, 2016) 259.

167 S Raffaeiner (2016) ‘Organ Practice in the Whaling Case: Consensus and Dissent between Subsequent Practice, Other Practice and a Duty to Give Due Regard’, *European Journal of International Law*, 1056.

168 See discussion above, section 2.1.2 and 2.1.3.

of implementing their duty to protect the marine environment in the context of offshore energy production, but if followed, conduct in accordance with their recommendations provides evidence that a State has acted diligently.¹⁶⁹

For instance, treaty bodies to global nature conservation agreements have produced guidelines on the conduct of EIAs and SEAs, addressing the particularities of offshore energy production projects.¹⁷⁰ These guidelines stress the importance of applying a precautionary approach in decision making when there is scientific uncertainty regarding the risks to marine biodiversity.¹⁷¹ Furthermore, they recommend including noise emissions in the screening criteria for determining the need for EIAs, and they recall the importance of continuously monitoring the impact of the planned activities.¹⁷² Similarly, the guidance related to activities in the energy sector, including tidal and wave energy projects, adopted by the CoP to the Ramsar Convention recommends the meticulous application of EIAs and SEAs to energy production activities that may significantly affect the ecological character of wetlands.¹⁷³ Additionally, the CoP to the CMS has adopted resolutions on the prevention and mitigation of impacts of marine renewable energy devices on migratory species.¹⁷⁴

At the regional level, the institutional framework of regional sea agreements has significantly contributed to the adoption of region-specific environmental standards. Their scientific committees have also played a key role by increasing awareness of the environmental status of marine regions and evaluating the impact of offshore energy activities, including marine renewable energy generation. Their guidelines addressing certain types of marine renewables could offer valuable guidance on the implementation of general environmental obligations, as they take into account the specificities of the ocean energy generation technologies. Overall, the input of these treaty bodies has been influential in devising region-specific rules and standards to address local challenges. In that respect, the examined regional treaty bodies offer good examples of regional cooperation in the implementation of the duty to formulate and elaborate international rules, standards, recommended practices and procedures for the protection of the marine environment, while taking into account characteristic regional features. They all demonstrate how regional cooperation can be dynamic and responsive in adapting to changes as well as capable of meeting specific regional needs and creating regional approaches through different normative tools.

In particular, the OSPAR and Helsinki Conventions have progressively advanced their regulatory approaches through the use of their institutional arrangements, which have produced a range of decisions, recommendations and guidelines, as well as through the development of action programmes and strategies for the offshore energy sector. In the Mediterranean, the wider divergence between States has led

169 Harrison (2017) *supra* n. 133, 9.

170 For instance, see CBD 'Decision X1/18, Marine and Coastal Biodiversity' UN Doc UNEP/CBD/COP/11/23, 5 December 2012.

171 S McDonald, and D VanderZwaag (2015) 'Renewable Ocean Energy and the International Law and Policy Seascape: Global Currents, Regional Surges', *Ocean Yearbook*, 307.

172 See also the relevant instruments developed by regional nature conservation agreements, chapter 6, section 3.3.2.

173 Ramsar Res XI.10, 'Wetlands and Energy Issues', July 2012.

174 CMS Res 11.27, 'Renewable Energy and Migratory Species', 9 November 2014.

to a slightly different approach in cooperation for the regulation of offshore energy activities. The limited ratifications of the Offshore Protocol and the remarkably long period it took for both its adoption and, subsequently, its entry into force indicate the difficulty of establishing regional rules in regions with a large number of developing States.¹⁷⁵ The difficulties were aggravated by the lack of treaty bodies with the power to further develop rules and standards on the protection of the Mediterranean concerning offshore energy production activities.¹⁷⁶ Nonetheless, since the adoption of the Mediterranean Offshore Action Plan in 2016, the parties to the Mediterranean Offshore Protocol have taken stock of best practices in other regions, which have culminated in the recent adoption of Mediterranean-specific guidelines for offshore oil and gas activities.¹⁷⁷ Last, but not least, the Arctic States have primarily managed to cooperate on an informal basis under the auspices of the Arctic Council and its relevant working groups and scientific bodies.¹⁷⁸ The contribution of these working groups in the development of a series of instruments, recommendations, guidelines and environmental assessments is commendable.

The less formalistic approach of adopting non-binding instruments, such as recommendations and guidelines, appears to have played a catalytic role in substantiating the content of the obligation to prevent pollution from offshore energy activities in all the examined regions. That seems to be the case not only because non-binding instruments allow greater flexibility than binding agreements, but also because they retain the ability to quickly adapt and respond to the environmental, technological, and scientific changes. Furthermore, that less formalistic approach enables States to involve relevant stakeholders from the energy sector, whether indigenous populations, NGOs, or private industry, in the law-making and the implementation of environmental standards. The protection of the interests of the offshore energy industry is an essential consideration for States when adopting protective environmental measures. Indeed, States are simultaneously bound by other international obligations, such as their duty to protect foreign investments in offshore energy production. Relevantly, States have to strike a balance between promoting marine environmental protection and safeguarding other economic and social interests. As a result, such “competing” international obligations of States also affect the implementation of the duty to protect and preserve the marine environment in relation to offshore energy production activities. For that reason, the study has also attempted to shed light on the implications of normative interactions between investment and marine environmental law for the implementation of the duty to protect the marine environment.

3. Are host States servants of two masters? Normative interactions between international investment and marine environmental obligations

Initially, international environmental law and international investment law were two fields of international law which developed separately. As these international regimes mature, they sometimes speak to the same facts, bringing about their ever-increasing

175 See Chapter 6, sub-section 3.1.

176 Even though REMPEC has quite a broad mandate, its activities are limited to the preparedness for and response to acute oil pollution.

177 See chapter 6, section 4.3.

178 However, see the binding MOSPA, chapter 6, section 3.2.4.

normative interaction, way before any disputes arise.¹⁷⁹ However, their normative interactions have largely been manifested in the context of investment disputes. For instance, investors have sometimes relied on separate treaty regimes, such as human rights or environmental treaties, to claim that their complementary application should broaden the standard of investment protection accorded to them under IIAs.¹⁸⁰ Most often, States have relied upon their non-investment duties to justify their actions which have allegedly breached investment protection standards. For example, host States may claim that the adoption of environmental measures, such as the imposition of a moratorium on offshore oil and gas activities in a marine area, is justified in furtherance of their international environmental obligations.¹⁸¹ Similarly, States might attempt to justify changes in the regulatory framework applying to offshore windfarms, which adversely affect the profit of investors, claiming that such change was dictated by EU law rules on the internal energy market. For that reason, it is primarily the issue of normative conflicts between investment protection standards and other rules of international law, which has generated scholarly debates.¹⁸² It has been claimed, *inter alia*, that international investment standards can unduly restrain States' regulatory discretion or result in a regulatory chill and, in that way, may prevent host States from adopting measures which are dictated by other international commitments.¹⁸³

3.1. Rules governing inter-systemic interactions between investment and marine environmental law

Even though investment tribunals generally enjoy considerable discretion regarding the applicable rules in investment disputes under most IIAs, specific jurisdictional limitations may debar them from considering non-investment obligations of the host State.¹⁸⁴ Often, IIAs provide explicitly that investment tribunals can take into consideration other rules of international law as part of the applicable law. However, the biases of arbitrators appear to have played an essential role in shaping the way in which interactions between investment and other international law rules take place in investment disputes.¹⁸⁵ In early investment awards, tribunals were reluctant to

179 As discussed in chapter 4, both these branches of international law aim to restrain the sovereign discretion of States in regulating certain economic activities. Investment law does so in order primarily to protect foreign investments, whereas environmental law mostly aims to achieve the protection of the environment. In that respect, they both encroach on the discretion of States to regulate the operation of investments in offshore energy production.

180 For instance, see *Spyridon Roussalis v Romania*, ICSID Case No ARB/06/1, Award of 7 December 2011, where the investor relied on the 1st Additional Protocol to the European Convention on Human Rights to substantiate the breach of Romania's obligation not to expropriate his investment under the applicable IIA. See also *Peter Allard v Barbados*, where the investor argued that the host State had violated its duties under the IIA, *inter alia*, because it did not enforce environmental measures, in defiance of its obligations under the CBD and Ramsar Conventions.

181 See *Rockhopper Exploration Plc, Rockhopper Italia SpA and Rockhopper Mediterranean Ltd v Italian Republic*, ICSID Case No ARB/17/14 (pending).

182 V Prislán, 'Non-investment Obligations in Investment Treaty Arbitration: towards a Greater Role for States?' in F Baetens (ed) *Investment Law within International Law: Integrationist Perspectives* (Cambridge University Press, 2013) 451.

183 See chapter 4, sub-section 2.2.

184 Prislán (2013) *supra* n. 182, 453.

185 B Simma (2011) 'Foreign Investment Arbitration: A Place for Human Rights?', *International and Comparative Law Quarterly*, 576, O Fauchald (2008) 'The Legal Reasoning of ICSID Tribunals: An

apply human rights rules in investment disputes.¹⁸⁶ Nonetheless, as was illustrated by several investment awards discussed in chapter 4, investment tribunals have gradually abandoned the idea that IIAs are operating in clinical isolation from the rest of public international law.¹⁸⁷

In the case of normative conflicts between investment and marine environmental protection obligations, the treaty-conflict rules, such as the *lex specialis* principle, cannot offer useful solutions.¹⁸⁸ In particular, the principle does not provide any interpretative guidance on its application, and it would be quite challenging to determine whether an investment rule is more specific than an environmental rule when a conflict between them arises.¹⁸⁹ Besides, it appears questionable to suggest that investment obligations are adopted to override any simultaneously applicable environmental commitments of the host States.¹⁹⁰ Therefore, the *lex specialis* rule cannot resolve genuine normative conflicts, where the simultaneously applicable rules of international law prescribe inconsistent standards of behaviour for the host State. However, in such a case, the host State is required to make a political decision of prioritising one duty and face the consequences for breaching its competing duty.

Similarly, the *lex posterior* rule is inadequate for resolving such conflicts, because it only governs the relationship between treaties which relate to the same subject matter.¹⁹¹ The nature of the duty to protect the marine environment as an *erga omnes* or integral obligation cannot resolve this problem either since it cannot absolve States from their concurrent duty to protect foreign investments. Likewise, the anticipated universal recognition of an autonomous right to a healthy environment does not necessarily mean that such a right would enjoy any kind of normative priority over investment protection duties, despite its potential to enhance the enforcement of marine environmental obligations.¹⁹² However, under certain conditions, the systemic interpretation of the competing obligations can serve as a tool to reconcile their normative requirements by “interpreting away” the identified incompatibility between them.¹⁹³

Empirical Analysis’, *European Journal of International Law*, 357.

186 See chapter 4, sub-section 2.5. See also, E de Brabandere, ‘Human Rights Considerations in International Investment Arbitration’ in M Fitzmaurice and P Merkouris (eds) *The Interpretation and Application of the European Convention of Human Rights: Legal and Practical Implications* (Martinus Nijhoff, 2013) 191.

187 The *Saluka v Czech Republic* award provides an apt example of how investment tribunals have tried to embed IIAs in the wider international law through systemic interpretation, see *Saluka Investments BV v Czech Republic*, UNCITRAL, Partial Award of 17 March 2006.

188 A Lindroos (2005) ‘Addressing Norm Conflicts in a Fragmented Legal System: The Doctrine of *Lex Specialis*’, *Nordic Journal of International Law*, 41.

189 *Ibid*, 41-42.

190 Such an argument appears even more unlikely to be made in the case of IIAs which explicitly refer to the protection of the environment among their objectives, see for instance the preambles to recent IIAs, see chapter 4, sub-section 4.1.

191 See article 30 of the VCLT. See also, R. Michaels, and J. Pauwelyn ‘Conflict of Norms or Conflict of Laws? Different Techniques in the Fragmentation of International Law’ in T. Broude, and Y. Shany (eds) *Multi-sourced Equivalent Norms in International Law* (Hart, 2011) 19-44.

192 On the potential positive impacts of the recognition of an autonomous human right to a healthy environment, see J Knox (2020) ‘Constructing the Human Right to a Healthy Environment’, *Annual Review of Law and Social Science*, 15-19.

193 Prislán (2013) *supra* n. 182, 474, ILC Report on Fragmentation, *supra* n. 101, para 412, C McLachlan (2005) ‘The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention’, *International and Comparative Law Quarterly*, 286.

Even when the relevant clauses under IIAs on the applicable law limit the capacity of tribunals to apply other rules of international law, normative interactions are still possible through the interpretation of the applicable investment rules.¹⁹⁴ IIAs, like any other international law rules, cannot be interpreted and applied in a legal vacuum. Their normative content has to be determined against the backdrop of their normative context, which is none other than the simultaneously applicable rules of international law.¹⁹⁵ In that respect, the potential jurisdictional constraints under the applicable IIA cannot debar arbitral tribunals from resorting to the customary treaty interpretation rules, as reflected in the VCLT.¹⁹⁶ Investment tribunals have relied upon article 31(3)(c) of the VCLT to interpret substantive investment protection standards in the light of other relevant rules of international law.¹⁹⁷ By taking into account the relevant environmental obligations of the host State, investment tribunals have acknowledged that contested measures constitute a valid exercise of the State's right to regulate or of its police powers.¹⁹⁸ Nonetheless, article 31(3)(c) of the VCLT does not enable arbitral tribunals to apply the other rules of international law directly, nor defer to their normative content, because its purpose is to make the meaning of the interpreted rule clear.¹⁹⁹ An investment tribunal, due to its mandate, will inevitably interpret the rules under the IIA in the light of the other applicable rules between the parties.²⁰⁰ That does not mean that the investment tribunal applies or integrates these non-investment rules.

The use of generic or open-ended terms in IIAs can also function as a gateway for their interpretation in light of their normative context. As already discussed, such terms might be considered as inherently evolutionary. For instance, terms such as the FET standard, "like circumstances", "discriminatory", "just compensation", "public purpose" can be interpreted in the context of concurrently applicable environmental obligations.²⁰¹ Indeed, when the IIA does not define the precise content of such terms, the interpreter needs, *inter alia*, to refer to other relevant rules of international law to determine their meaning in a specific case. In other words, the interpreter can use the interpretative flexibility of such notions.²⁰² That interpretative process results in a cross-fertilisation between the interpreted rule and its normative context.

Nonetheless, on several occasions, investment tribunals have avoided addressing horizontal normative conflicts between investment and non-investment

194 Prislán (2013) *supra* n. 182, 465.

195 ICSID, *Asian Agricultural Products Ltd v Republic of Sri Lanka*, ICSID Case No. ARB/73/3, Final Award of 27 June 1990, para 21.

196 Some tribunals have referred to the customary rules for the interpretation of IIAs, which were concluded before the VCLT entered into force; see, for instance, *Malaysian Historical Salvors Sdn Bhd v. Malaysia*, ICSID Case No. ARB/05/10, Decision on the Application for Annulment, 16 April 2009, para 56.

197 *Saluka v Czech Republic*, *supra* n. 187, paras 254-255.

198 For instance, in *Chemtura* the tribunal considered Canada's obligation under the Aarhus Protocol to the Long-Range Transboundary Air Pollution Convention, see *Chemtura Corporation (formerly Crompton Corporation) v Government of Canada*, Award of 2 August 2010, para 266.

199 Gardiner (2017) *supra* n.126, 271.

200 S Trevisanut, N Giannopoulos, and Rozemarijn Roland Holst, 'Introduction: Regime Interaction in Ocean Governance' in Trevisanut, Giannopoulos and Roland Holst (2020) *supra* n. 96, 17-18.

201 Simma (2011) *supra* n. 185, 589.

202 A Mills (2014) 'The Balancing (and Unbalancing) of Interests in International Investment Law and Arbitration', in Z Douglas, J Pauwelyn, and J Viñuales (eds) *The Foundations of International Investment Law* (Oxford University Press, 2014) 453-454, Prislán (2013) *supra* n. 182, 471.

obligations.²⁰³ Notably, several investment tribunals have treated them as vertical conflicts between investment standards and domestic environmental measures.²⁰⁴ Others have rejected the existence of a genuine horizontal conflict between investment and non-investment obligations, upholding that the host State was not required to make an impossible choice, because it could resort to alternative measures which would not breach its investment obligations.²⁰⁵ In addition, some tribunals have engaged in a quite superficial discussion about the relationship of non-investment obligations with investment protection obligations, on the grounds that the parties did not adequately argue the matter.²⁰⁶ Arguably, with a few exceptions in recent investment jurisprudence, the stance of investment tribunals illustrates that they have moved from an isolationist position towards acknowledging the existence and parallel operation of non-investment obligations, but have not yet expressed a genuine will to integrate such obligations into investment law interpretation and application.²⁰⁷ The crux of the matter is, though, whether they interpret and apply investment protection rules in a fashion that can unduly restrain the regulatory discretion of States to comply with their duty to protect the marine environment.

3.2. Are investment law obligations the ‘big bad wolf’ for environmental measures induced by international obligations?

In 2009, the Special Representative of the Secretary-General on the Issue of Human Rights, Transnational Corporations and Other Business Enterprises stated during the United Nations Human Rights Council that “*recent experience suggests that some [investment] treaty guarantees and contract provisions may unduly constrain the host Government’s ability to achieve its legitimate policy objectives, including its international human rights obligations*”.²⁰⁸ Similar concerns have been expressed concerning the impacts of investment protection standards on the ability of States to comply with their environmental obligations.²⁰⁹ On considering the analysis in chapter 4, it seems that the allegations regarding the far-reaching impact of investment obligations on the discretion of States to adopt environmental measures in compliance with their international obligations are overemphasised. As far as indirect expropriation is concerned, States maintain a broad discretion in adopting environmental measures without breaching that standard and, therefore, without risking being held liable to pay compensation to foreign investors.²¹⁰ In response to indirect expropriation claims, arbitral tribunals have upheld that environmental measures can rarely

203 However, some have decided upon the compatibility of IIAs with EU law, see for instance, *Rockhopper Italia S.P.A v Italian Republic*, ICSID Case No. ARB/17/14, Decision on the Intra-EU Jurisdictional Objection of 26 June 2019.

204 See chapter 4, section 2.5.

205 *Ibid.*

206 *Azurix v Argentine Republic*, ICSID Case No ARB/01/12, Award of 14 July 2006, para 261.

207 P Acconci (2014) ‘The Integration of Non-Investment Concerns as an Opportunity for the Modernization of International Investment Law: Is a Multilateral Approach Desirable?’ in Giorgio Sacerdoti, P Acconci, M Valenti, and A De Luca (eds) *General Interests of Host States in International Investment Law* (Cambridge University Press, 2014) 181.

208 Report of the SRSG (2009) ‘Business and Human Rights: Towards Operationalizing the Protect, Respect and Remedy Framework’, A/HRC/11/13, para 30.

209 S Spears (2010) ‘The Quest for Policy Space in a New Generation of International Investment Agreements’, *Journal of International Economic Law*, 1039.

210 See chapter 4, section 3.1.1.

have such a grave impact on the property of an investment as to effectively deprive the investor of all its value.²¹¹ Moreover, recent awards that examined indirect expropriation claims adopted the police powers doctrine, which justifies regulatory measures adopted for public policy reasons, as long as they are not discriminatory and grossly disproportionate.²¹²

Tribunals have generally accepted that, in the absence of stabilisation clauses, the FET standard does not impose an obligation of strict regulatory stability, as any such claim would violate the sovereign right (and duty under environmental agreements) of host States to take all necessary measures in order to respond to changing environmental needs and evolving environmental standards.²¹³ However, the host State should not renege on specific commitments and representations made to foreign investors, especially when these had been the basis for their decision to invest in the first place, and when the frustration of such commitments and representations can adversely affect the economic viability of the investment.²¹⁴ States can impose, amend, or abolish environmental measures governing the operation of investments so long as these do not exceed the margin of acceptable change, and they are proportionate.²¹⁵ As suggested in the reasoning of recent investment awards, investment tribunals are keen to adopt a more lenient standard of review when testing the proportionality of challenged environmental measures. In that respect, tribunals recognise a margin of appreciation for the host State, which allows it to base its decisions on scientific evidence, albeit evidence retrieved respecting the requirement for due process.²¹⁶ In addition, the host State can rely on interpretative guidance and scientific findings by treaty bodies to environmental agreements or competent international organisations to determine the most appropriate measures in compliance with its environmental obligations.²¹⁷ When implementation measures are adopted on the basis of such instruments, these measures should be presumed to be reasonable to achieve the intended objective of environmental protection. Therefore, they cannot be grossly disproportionate.

Nevertheless, investment tribunals have a strong say in the implementation of investment disciplines as they can interpret and apply malleable concepts such as “the acceptable margin of regulatory change” or *stricto sensu* proportionality to reach their conclusions on the appropriate balance between investment protection and protection of common interests. In addition, normative conflicts – at least when they are genuine conflicts – cannot always be “interpreted away”.²¹⁸ Therefore, addressing inter-systemic normative interactions might necessitate a legislative response.²¹⁹

211 *Ibid.*

212 See chapter 4, section 3.1.2.

213 See chapter 4, section 3.2.1.

214 See chapter 4, section 3.2.2.

215 See chapter 4, section 3.2.3.

216 P-K Yang (2018) ‘The Margin of Appreciation Debate over Novel Cigarette Packaging Regulations in Philip Morris v Uruguay – A Step Toward a Balanced Standard of Review in Investment Disputes’, *Brill Open Law*, 9.

217 ICSID, *Philip Morris Brands SARL, Philip Morris Products SA and Abal Hermanos SA v Oriental Republic of Uruguay*, ICSID Case No ARB/10/7, Award of 8 July 2016, paras 408-409.

218 ILC Report on Fragmentations, *supra* n. 101, para 484.

219 A. Spears, ‘Making Way for the Public Interest in International Investment Agreements’, in C Brow, K Miles (eds) *Evolution in Investment Treaty Law and Arbitration* (Cambridge University Press, 2011) 271-297.

3.3. “Innovative” provisions in new-generation IIAs: integrating environmental obligations or paying lip service?

Against the backdrop of the backlash concerning investor-State arbitration, IIAs are undergoing a significant reorientation, which aims to offer increased flexibility to host States in adopting necessary environmental measures in compliance, *inter alia*, with their environmental obligations. The recalibration of the preambles, substantive provisions, and exception clauses in IIAs can limit the broad interpretative discretion of arbitral tribunals, which was partly due to the highly unqualified and evaluative language of earlier IIAs. Greater precision in the formulation of the IIAs is expected to exert greater control on behalf of States over the interpretation of IIAs²²⁰ and encourage investment tribunals to engage in a balancing exercise paying due consideration to the right (and duty) of the host State to take environmental measures. That balance is especially relevant when investment disputes concern environmentally sensitive sectors, such as the offshore energy industry.

The incorporation of environmental considerations in the preambles to IIAs can offer interpretative guidance when investment tribunals seek to identify the object and purpose of these agreements.²²¹ In that way, environmental protection is on the same plane as investment protection, which cannot anymore be considered the exclusive objective under IIAs. To provide legal certainty, States have also attempted to clarify with greater precision the normative content of the investment protection standards under new-generation IIAs. Specifically, States have refined the most commonly invoked standards of treatment by using interpretative language, which can guide the balancing act between investment protection and other competing objectives, such as marine environmental protection.²²² As discussed in chapter 4, these provisions prescribe the required conduct of States under the FET standard and delimitate the concept of legitimate expectations. Regarding indirect expropriation, these provisions lay down specific factors to be considered by investment tribunals and restrict the cases in which host States are liable to pay compensation. New exception clauses, like the ones included in CETA, allow States to derogate from investment protection obligations where compliance would obstruct the host State from taking measures which are necessary for the protection of the environment.²²³ Thus, subject to the requirements under the exception clauses, these measures are not deemed to be violating investment protection standards.

It has been suggested that new IIAs are undergoing such drastic changes that they hardly bear any resemblance to the first-generation ones.²²⁴ However, the reformed provisions in new generation IIAs should not be mistaken for a panacea for the tension between investment protection and the right and duty of States to

220 C Henckels (2016) ‘Protecting Regulatory Autonomy through Greater Precision in Investment Treaties: The TPP, CETA and TTIP’, *Journal of International Economic Law*, 49.

221 Take the example of the preamble to the 2012 Model US BIT, which dictates that treaty objectives must be achieved in a manner consistent with the protection of health, safety and the environment.

222 See chapter 4, sub-section 4. 2. See also, articles 10 and 13 of the recent EU draft proposal for the modernisation of the ECT. In addition, the EU proposal aims to fortify the right of host States to regulate, especially for mitigating climate change, 27 May 2020.

223 See, for instance, Art. 17 of the 2009 ASEAN Comprehensive Investment Agreement.

224 K Nowrot (2014) ‘How to Include Environmental Protection, Human Rights and Sustainability in International Investment Law?’, *The Journal of World Investment and Trade*, 643.

regulate for public purposes. Preambles usually refer to environmental protection in open-ended terms and rarely refer to the environmental obligations of the host States. Substantive standards of investment protection still contain evaluative terms and their references to proportionality provide broad discretion to investment tribunals to determine the appropriate standard of review on a case-by-case basis. Environmental chapters or protocols related to environmental aspects attached to IIAs²²⁵ are usually subordinated to their investment protection provisions²²⁶ and, so far, have played a rather marginal role in integrating the environmental obligations of host States.²²⁷

A significant problem relating to the balancing of competing obligations arises from the fact that States and the relevant international organisations approach the reform of IIAs by focusing on safeguarding the right to regulate. For instance, the European Parliament, in the context of the negotiations for the conclusion of TTIP and the reform of investment standards therein, stated that “*standards of protection and definitions of investor and investment should be drawn up in a precise legal manner protecting the right to regulate in the public interest, clarifying the meaning of indirect expropriation and preventing unfounded and frivolous claims*”²²⁸ Similarly, the recent EU proposal for the modernisation of the ECT has put considerable emphasis on the right to regulate.²²⁹ In particular, the EU proposal reiterates that parties to the ECT must “effectively implement” the environmental agreements that they have ratified, and reaffirms that its parties have the right to adopt or maintain measures to further the objectives of these agreements.²³⁰ However, the problem is still framed as a tension between the foreign investors’ rights and the host States’ right to regulate. That is not entirely correct. Although safeguarding the regulatory discretion of the host State is a relevant concern, its explicit acknowledgement does not have much added legal value, since such a right is rooted in the incontestable sovereignty of States. That position already seems to be well established in recent investment awards.²³¹ The references to the right to regulate serve a similar, mostly political, function to the mentions of the principle of permanent sovereignty over natural resources in environmental agreements. Besides the sovereign right to regulate, the

225 See for instance, Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA).

226 See PEEREA article 13(1) stating that: “*In the event of inconsistency between the provisions of this Protocol and provisions of the Energy Charter Treaty, the provisions of the Energy Charter Treaty shall, to the extent of inconsistency, prevail*”.

227 In the *Metaclad v Mexico* case, Mexico explicitly referred to the North American Agreement on Environmental Cooperation (NAAEC), an agreement negotiated after the conclusion of NAFTA and which entered into force immediately after NAFTA’s entry into force. Despite the fact that all three NAFTA parties are also signatories of this agreement, the tribunal did not mention it at all and refrained from considering it to interpret the FET standard under article 1105 NAFTA.

228 European Parliament (2015) ‘Negotiations for the Transatlantic Trade and Investment Partnership (TTIP)’, Resolution, 8 July 2015.

229 See EU Proposal on the modernization of the ECT (2020), new articles entitled ‘Regulatory Measures’ and ‘Sustainable Development – Right to Regulate and Levels of Protection’.

230 See EU Proposal on the modernization of the ECT (2020), new article entitled ‘Sustainable Development – Multilateral Environmental Agreements and Labour Conventions’.

231 C Tietje, and K Crow, ‘The Reform of Investment Protection Rules in CETA, TTIP, and Other Recent EU FTAs: Convincing?’ in S Griller, W Obwexer, and E Vranes (eds) *Mega-Regional Trade Agreements: CETA, TTIP, and TiSA – New Orientations for EU External Economic Relations* (Oxford University Press, 2017) 96.

interpreter of IIAs must also consider the duty of the host State to regulate according to its environmental obligations. States are obliged to regulate for the protection of the marine environment: it is not just their right. In that respect, the interest of investment protection must be balanced with, for instance, the community interest in marine environmental protection, which transcends the benefit of a single state, or that of the totality of States. It is, instead, a collective interest of present and future generations.

Another critical issue is that these new IIAs do not apply retroactively. In the meantime, investment tribunals will continue interpreting and implementing pre-existing IIAs. Their co-existence can accentuate the already existing fragmentation of international investment law, as the newly drafted treaties are added to the original structure of IIAs.²³² However, it is arguable that, at least in the hypothetical case where a new-generation IIA between the host and the investor's home State exists, it could serve as proof of subsequent practice of the States for the interpretation of the earlier IIA.²³³ States can also address the issue by adopting, *ex post*, interpretative statements to clarify the scope of investment protection standards.²³⁴ Indeed, States, as the masters of their treaties, retain the right to provide an authoritative interpretation of their provisions.²³⁵ Given the fact that such interpretative guidelines will reflect the common understanding of their parties, they constitute an authentic interpretation and, therefore, the provisions of the IIAs are to be read taking them into account as "*subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions*".²³⁶ Recent IIAs explicitly recognise the authority of States to issue such authoritative interpretations of investment protection standards.²³⁷ In other investment agreements, States have delegated the power to issue authentic interpretation of the investment treaty provisions to treaty bodies, as in the case of NAFTA.²³⁸ Even within the framework of the earlier IIAs, investment tribunals can resort to the customary rules of treaty interpretation and, in the main, adopt an approach of systemic interpretation of IIAs considering the relevant environmental obligations of the host State. Such an interpretative approach can enable investment tribunals to strike a balance between investment protection and the duty to protect the environment by implementing domestic measures. However, one cannot predict with certainty the normative weight that arbitral tribunals will attach to interpretative guidelines.²³⁹ The legal uncertainty regarding the awards of ad hoc arbitral tribunals has in fact resulted in a generalised backlash against investor-

232 M Sornarajah, *The International Law on Foreign Investment* (Cambridge University Press, 4th edition, 2017) 562.

233 Article 31(3)(b) of the VCLT.

234 Nowrot (2014) *supra* n. 224, 640.

235 T Gazzini, *Interpretation of International Investment Treaties* (Hart, 2016) 328.

236 Article 31(3)(a) of the VCLT.

237 For instance, the 2009 ASEAN Comprehensive Investment Agreement, article 40(3), provides that "*a joint decision of the Member States, declaring their interpretation of a provision of this Agreement shall be binding on a tribunal, and any decision or award issued by a tribunal must be consistent with that joint decision*".

238 NAFTA, article 2001(2), which establishes a treaty body for the interpretation of the FET standard. See also CETA, article 8.31(3) creating a mechanism to adopt binding interpretation of its provisions.

239 R Klager 'Revisiting Treatment Standards – Fair and Equitable Treatment in Light of Sustainable Development' in S Hindelang, and M Krajewski (eds) *Shifting Paradigms in International Investment Law – More Balanced, Less Isolated, Increasingly Diversified* (Oxford University Press, 2016) 77.

State arbitration. That backlash is also vividly illustrated in the ongoing UNCITRAL negotiations concerning the reform of the dispute settlement mechanisms in IIAs.²⁴⁰ Similarly, the EU has been a strong advocate of such a reform, as seen in its recent mega-regional FTAs, as well as in the agreement on the termination of intra-EU BITs and the EU proposal for the modernisation of the ECT.²⁴¹

The most direct solution would be to include specific provisions governing the relationship between IIAs and non-investment duties of host States to guide the interpreter in the case of normative conflicts.²⁴² Instead, the new-generation IIAs address normative interactions indirectly. Neither of the two solutions is the “master key” for resolving normative conflicts between investment and environmental duties because the law only provides the tools but cannot abstractly address all potential normative conflicts.²⁴³ Only time can tell whether the new generation IIAs and the attempted reform of the investor-State dispute settlement mechanisms will fulfil their potential in enhancing the regulatory discretion of States so as to safeguard the legitimacy of international investment law as a balanced and, thus, sustainable international regime. Although such a reform appears likely to happen in the case of IIAs, the author is not convinced that States are predisposed towards the adoption of a new instrument to address the lack of global environmental standards for offshore energy production. On that note, the chapter now moves to examine whether it is feasible and necessary to adopt a globally applicable agreement on the environmental regulation of offshore energy production to enhance the standard of protection offered by the current legal framework and cover the gaps in marine regions, where States have not yet created any specific rules.

4. Offshore energy production and universal environmental standards: is a new global instrument feasible and necessary?

Even though normative developments in international environmental law have a positive normative impact in enhancing the level of diligence required of States in the regulation of offshore energy production, the international legal framework at the global level is characterised by a high degree of generalisation.²⁴⁴ The scarcity of specific environmental standards for offshore energy activities by which the compliance of States can be assessed remains the primary weakness of the examined global rules. That allows both States and the industry broad discretion in determining the appropriate standard of diligence concerning marine environmental protection. However, the crux of the matter concerns marine regions where States have not developed elaborate environmental rules and standards for such activities. Against that backdrop, the present section examines whether a global legally binding

240 See website of UNCITRAL on the work of Working Group III on Investor-State Dispute Settlement Reform: https://uncitral.un.org/en/working_groups/3/investor-state.

241 See chapter 4, section 4.

242 Art. 32 of the 2007 Investment Agreement for the COMESA Common Investment Area. However, see the example of the relevant provision under NAFTA, chapter 4, section 4.

243 ILC Report on Fragmentation, *supra* n. 101, para 488.

244 M Smith (2011) ‘The Deepwater Horizon Disaster: An Examination of the Spill’s Impact on the Gap in International Regulation of Oil Pollution from Fixed Platforms’, *Emory International Law Review*, 1483-1484, M Cates (1984) ‘Offshore Oil Platforms Which Pollute the Marine Environment: A Proposal for an International Treaty Imposing Strict Liability’, *San Diego Law Review*, 605-696.

instrument, as suggested by international law scholars,²⁴⁵ could provide a remedy for that issue.

Due to the interconnected nature of the oceans, the threats posed by the production of energy at sea are rarely confined within the maritime borders of the State of origin. The segregation of the oceans in zones may be necessary for the allocation of authority among States, but marine pollution does not respect legal boundaries. In that respect, risks to the marine environment are inherently transboundary. For instance, hydrocarbon spills spread over the surface of the seas and noise pollution or electromagnetic fields produced by offshore energy devices can affect marine species over long distances. Given the increased risk for transboundary harm resulting from the operation of offshore energy devices,²⁴⁶ there have been a few attempts to develop a global agreement for the regulation of offshore drilling activities. Initially, in 1977, at the request of the IMO, the Comité Maritime International (CMI), a non-governmental organisation for the unification of maritime law, proposed a draft Convention on Offshore Mobile Craft (“the Rio Draft”).²⁴⁷ The draft Convention suggested the incorporation by reference of various existing international conventions, which already applied to the prevention of pollution from shipping. However, at that time, other issues were considered to be more urgent, and the draft was shelved.²⁴⁸

In the aftermath of several accidents related to offshore energy exploitation, the IMO Legal Committee requested the CMI to re-examine the draft Convention almost fifteen years later.²⁴⁹ Perhaps the conclusion of UNCLOS, requiring States to set out international rules and standards to prevent and control pollution from seabed activities, was among the factors which triggered that decision. Adding to the momentum, the GESAMP recommended the establishment of international regulations for offshore energy activities during the same period.²⁵⁰ Initially, the CMI again suggested adopting a treaty, which would transplant rules which were applicable to the regulation of shipping activities (‘the Sydney Draft’). However, several maritime States advocated the adoption of an international instrument regulating all types of offshore energy installations,²⁵¹ which would cover not only accidental but also

245 See *infra* n. 261 and accompanying text.

246 Y Lyons, ‘Transboundary Pollution from Offshore Activities: A Study of the Montara Offshore Oil Spill’, in S Jayakumar, T Koh, R Beckman, H Duy Phan (eds) *Transboundary Pollution: Evolving Issues of International Law and Policy* (Edward Elgar, 2015) 162.

247 J Rochette, M Wemaere, L Chabason, and S Callet (2014) ‘Seeing Beyond the Horizon for Deepwater Oil and Gas: Strengthening the International Regulation of Offshore Energy Exploration and Exploitation’, *IDDR Studies No 01/14*, 9.

248 For a discussion of the draft Convention, see V Radovich, ‘Governance of Oil and Gas Exploration and Exploitation at Sea: Towards Coastal Maritime Biodiversity Preservation’, in E Couzens, A Paterson, S Riley, and Y Fristikawati (eds) *Protecting Forest and Marine Biodiversity: The Role of Law* (Edward Elgar, 2017) 237-238.

249 Canadian Maritime Law Association, ‘Discussion Paper on the Need for an International Convention on Offshore Units, Artificial Islands and Related Structures Used in the Exploration for and Exploitation of Petroleum and Seabed Mineral Resources’, *CMI Yearbook 2006*, 116.

250 C Brown (1998) ‘International Environmental Law in the Regulation of Offshore Installations and Seabed Activities: The Case for a South Pacific Regional Protocol’, *Australian Mining and Petroleum Law Journal*, 124.

251 Pursuant to Article 2 of the Draft Convention, it applies to all offshore units used or intended to be used on the EEZ and the continental shelf. Interestingly, the same article mentioned the possibility of extension of the scope of application to cover new technologies. That would probably also cover the

operational pollution.²⁵² The ensuing draft was primarily criticised for failing both to incorporate the relevant environmental agreements related to offshore energy activities and to consider best practices and standards produced by the industry.²⁵³

Similarly, the draft Convention on Offshore Units, Artificial Islands, and Related Structures Used in the Exploration for and Exploitation of Petroleum and Seabed Mineral Resources faced strong opposition from several industry associations and the Maritime Law Association of the United States.²⁵⁴ States were concerned that, in the interest of obtaining a consensus, the negotiators would stage a race to the bottom concerning standards and rules in the proposed agreement and that the inclusion of specific standards would affect the flexibility and adaptability of the agreement to technological developments. In addition, industry associations, such as the Oil Industry International Exploration and Production Forum (E&P Forum) and the United States Offshore Operators' Association, questioned the need for compulsory or globally applicable standards as distinct from voluntary and regional guidelines.²⁵⁵ Despite the concerns voiced by some States, mostly those affected by accidental pollution from offshore energy installations, there appears to have been an absence of political will for the adoption of a global agreement on the regulation of offshore energy activities.²⁵⁶

Following the 2009 Montara accident, the issue resurfaced when Indonesia submitted a proposal to the IMO Legal Committee for the development of an international regime for liability and compensation relating to offshore energy activities.²⁵⁷ However, the IMO rejected the proposal, referring to the lack of a compelling need and suggesting that the issue would be better addressed at the regional level.²⁵⁸ The UN Commission on Sustainable Development adopted the same view, advocating regionalism as the most suitable approach for the protection and sustainable use of offshore energy resources.²⁵⁹ In the context of the IMO, the thorniest issue has been the development of an international agreement covering the aspects of liability and compensation for damage from offshore energy exploitation activities, as States with large or growing offshore oil and gas industries do not relish the idea of subjecting these issues to international regulation.²⁶⁰

generation of marine renewable energy, see CMI Newsletter 1/2004, <http://www.comitemaritime.org/Uploads/Newsletters/2004/Binder1.pdf>.

252 *Ibid*, Article 11 of the Draft Convention, Radovich (2017) *supra* n. 248, 238-239, Rochette et al (2014) *supra* n. 247, 9-10.

253 *Ibid*.

254 Rochette et al (2014) *supra* n. 247, 10, M White (1999) 'Offshore Craft and Structures: A Proposed International Convention', *Australian Resources and Energy Law Journal*, 26.

255 CMLA Position Paper, 1996 CMI Yearbook, 124.

256 See the International Working Group's (CMI) Report on Offshore Activities, <www.comitemaritime.org/Uploads/1.Report%20of%20the%20IWG%20on%20Offshore%20Activities%203.pdf>.

257 IMO, 'Report of the Legal Committee on the Work of Its One Hundred and First Session', 13 May 2014, LEG 101/12, 16, see also IMO 'Position Paper of the Iberoamerican Institute of Maritime Law in relation to the need of an international convention on the offshore extractive activity promoted by the IMO', LEG 102, 14 April 2015.

258 IMO, 'Report of the Legal Committee on the Work of Its One Hundred and Second Session', 20 April 2015, LEG 102/12, 12-13.

259 Brown (1998) *supra* n. 250, 126.

260 R Balkin (2013) 'Is There a Place for the Regulation of Offshore Oil Platforms Within the International Maritime Law? If not, Then Where?', *CMI Yearbook 2014*, 181.

Numerous scholars have also recommended the adoption of a sector-specific global instrument to address the issues regarding offshore energy activities in a comprehensive manner.²⁶¹ Arguably, a new international agreement could consolidate and complement the existing international legal framework, serve as a coordinating mechanism for the variety of organisations that exercise functions with regard to offshore energy activities, and rectify the compartmentalised environmental regulation of the industry.²⁶² Perhaps the weakness of the existing legal framework is not only due to the absence of a global treaty containing specific standards for offshore energy activities, but is also due to the lack of proper and meaningful implementation of both the binding rules²⁶³ and the non-binding standards that have been developed by the relevant actors in the sector.²⁶⁴ The lack of supervisory mechanisms with regard to the applicable international rules at both the global and regional levels potentially contributes to the weakness of the international legal framework.²⁶⁵

The common thread of all these initiatives for the elaboration of a global agreement has been the fact that they attempted to remain consistent and build upon the jurisdictional and environmental framework of UNCLOS.²⁶⁶ For instance, the Global Ocean Commission in its 2014 Report 'Rescue Package for the Global Ocean' argued that an international instrument is necessary to complement UNCLOS in defining what constitutes acceptable risk regardless of the location in the world where oil and gas drilling activities take place.²⁶⁷ Nonetheless, considering the rapid

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- 261 Regarding the need for an international convention on liability and compensation concerning offshore energy activities, see S Rares (2012) 'An International Convention on Off-Shore Hydrocarbon Leaks?', *Australian and New Zealand Maritime Law Journal*, J Radovich, and A Brandani (2017) 'The Need for International Regulation of Offshore Liability and Financial Security', *Ocean Yearbook*, 313-344. See also Violeta Radovich (2010) 'International Legal Regime of Offshore Structures: Environmental Concerns', presentation in the CMI Session, http://www.comitemaritime.org/Uploads/Young%20CMI/Paper_2_Violeta_Radovich.pdf, N Hasson (2013) 'Deepwater Offshore Oil Exploration Regulation: The Need For a Global Environmental Regulation Regime', *Washington and Lee Journal of Energy, Climate and the Environment*, 278-303, D Fowler (2012) 'Offshore Oil: A Frontier for International Lawmaking', *Chicago-Kent Journal of International and Comparative Law*, 192. In particular, regarding offshore renewable energy see F Galea (2011) 'A Legal Regime for the Exploration and Exploitation of Offshore Renewable Energy', *Ocean Governance*, 101-129, M Tsamenyi, and M Herriman (1998) 'Ocean Energy and the Law of the Sea: The Need for a Protocol', *Ocean Development and International Law*, 11-13.
- 262 Z Gao (ed) *Environmental Regulation of Oil and Gas* (Kluwer Law International, 1998) 31.
- 263 Y Lyons, 'Transboundary Pollution from Offshore Oil and Gas Activities in the Seas of Southeast Asia', in R Warner, and S Marsden (eds) *Transboundary Environmental Governance in Inland, Coastal and Marine Areas* (Routledge, 2012) 202.
- 264 D Kenneth Leary (2018) 'International Environmental Law, Sustainable Energy Generation from the Ocean and Small Island Developing States in the Pacific', in M Kotzur, N Matz-Lück, A Proelss, J Sanden, and R Verheyen (eds) *Sustainable Ocean Resource Governance: Deep Sea Mining, Marine Energy and Submarine Cables* (Brill, 2018) 99.
- 265 EU Commission, 'Communication from the Commission to the European Parliament and the Council: Facing the Challenge of the Safety of Offshore Oil and Gas Activities', COM 2010, 12 October 2010, 4.
- 266 The need for consistency of any proposed convention on the regulation of offshore installations with the principles and articles of UNCLOS was underlined by the Comité Maritime International (CMI), which adopted principles regarding the development of a draft Offshore Regime in 1996, see principle C, 1996 CMI Yearbook, 107.
- 267 Global Ocean Commission (2014) 'From Decline to Recovery: A Rescue Package for the Global Ocean', Proposal 6 Offshore Oil and Gas – Establishing Binding International Safety Standards and Liability,

commercial and technological evolution of the offshore energy industry, any global convention including specific or technical rules on the regulation of offshore energy activities would potentially face the same criticisms as the ones raised about the previous drafts. Such an instrument needs to be flexible enough to accommodate future developments and, rather than lay down detailed prescriptive rules, it needs to focus on setting certain regulatory objectives.²⁶⁸ That approach would allow the industry to adapt to any technological and environmental changes. In particular, such an approach is essential, given the current efforts for a transition to more climate friendly methods of energy generation. Setting prescriptive, technical standards in stone would almost certainly serve as an obstacle to promoting innovative solutions which aim to mitigate climate change and address the global energy needs.

Region-specific environmental standards appear to be much more appropriate for addressing the needs of different marine areas, which a potentially globally binding agreement, achieved as a result of substantial compromises among different interests at the global level, would probably fail to consider. Best regulatory practices might not always be universally applicable because the diversified regional needs call for tailor-made rules and standards. Indeed, marine environmental challenges are very diverse, and a one-size-fits-all approach may not be able to address the specific features and needs in each marine region. A major takeaway from the Deepwater Horizon blowout was that applying unified standards across the board might not be the most effective regulatory response.²⁶⁹ In that respect, formulating regional standards may be more appropriate than creating universal environmental standards. Perhaps one problematic issue, which was also highlighted in the current negotiations concerning the ILBI, is the lack of a global supervisory mechanism to address disparities and problems of compliance across different regions.²⁷⁰ However, that observation is not so much a criticism of regionalism as of the appropriate form of cooperation. Instead, that observation serves as a reminder that global and regional arrangements need to interact with each other to achieve an ecosystem-based approach in order to safeguard the integrity of the marine environment.²⁷¹ Therefore, in the author's view, adopting a global agreement does not appear necessary, nor would it be feasible in practice. Existing global and regional instruments contain adequate rules and standards for the regulation of offshore energy production. There is no conclusive evidence and, for that reason, the author is not convinced, that at a deeper, regulatory level a globally binding agreement could strengthen the environmental regulation of offshore energy production. Instead, such an instrument could result in lowering existing environmental standards in order to achieve wider acceptance by States around the world.

www.mckinsey.com/~/media/mckinsey/dotcom/client_service/Sustainability/PDFs/From_decline_to_recovery_A_rescue_package_for_the_global_ocean.ashx.

268 See adopted principles by CMI regarding the development of a draft Offshore Regime (principle G), *supra* n. 266, 107.

269 See also chapter 7, sub-section 3.1.2.

270 A Oude Elferink (2019) 'Exploring the Future of the Institutional Landscape of the Oceans Beyond National Jurisdiction', *Review of European, Comparative and International Environmental Law*, 241-242.

271 A Oude Elferink, E Molenaar, and D Rothwell, 'The Regional Implementation of the Law of the Sea and the Polar Regions', in A Oude Elferink, E Molenaar, and D Rothwell (eds) *The Law of the Sea and the Polar Regions: Interactions between Global and Regional Regimes* (Brill, 2013) 7.

In fact, the study has revealed that the already existing global environmental rules contain some benchmarks for determining the conduct which States are expected to adopt in order to protect the marine environment in relation to offshore energy production activities. Therefore, the standard of care required by States in implementing their obligation under UNCLOS to protect and preserve the marine environment can be informed and strengthened through interactions with normative developments in international environmental law.²⁷² These already existing global environmental agreements enhance the standard of care by attaching precise content to the duty of States to protect the marine environment. Regional agreements appear to have played a much more considerable role than the global ones. Although the rules and standards under regional agreements do not directly apply to third States, they can contribute to the synthesis of the existing amalgam of international best practices for offshore energy production. Such best practices can be incorporated into domestic regulations and, therefore, catalyse consistent State practice in several ways.²⁷³ In addition, several regional instruments refer to best practices as dynamic standards to add content to their environmental obligations concerning offshore energy activities.²⁷⁴ In that fashion, they draw upon rules and standards which apply in other regions facing similar environmental challenges.²⁷⁵ Therefore, normative interactions between UNCLOS and the various global and regional instruments can lead the way forward; they can shape and strengthen the level of protection required of States in regulating offshore energy production activities.

272 Matz-Lück and Van Doorn (2017) *supra* n. 10, 169-187.

273 M Nordquist, and A Fausser, 'Offshore Drilling in the Outer Continental Shelf: International Best Practices and Safety Standards in the Wake of the Deepwater Horizon Explosion and Oil Spill', in Lodge and Nordquist (2014) *supra* n. 119, 143-144.

274 See, for instance the several references to best practices in the EU 2013/30 Directive, discussed in chapter 7, sub-section 2.3.2, see also H Jessen, 'Joint Approaches and Best Practices – An Integrated and Coherent EU Arctic Policy in Support of Articles 208 and 214 UNCLOS', in N Liu, A Kirk, and T Henriksen (eds) *The European Union and the Arctic* (Brill, 2017), 352.

275 Nordquist and Fausser (2014) *supra* n. 273, 141-142.

SAMENVATTING

Internationaal recht en offshore energieproductie: bescherming van het mariene milieu door normatieve interacties

Het gecompliceerde internationale juridische kader ter regulering van de offshore energieproductie vormt de achtergrond voor dit onderzoek, waarin wordt bestudeerd hoe de norm ter bescherming van het mariene milieu wordt ingevuld door normatieve interacties tussen UNCLOS (het VN-Zeerechtverdrag) en andere toepasselijke internationale en supranationale instrumenten. Daartoe worden in dit proefschrift de juridische mechanismen onderzocht, waaraan de normatieve interacties in het internationale recht, en in het bijzonder interacties binnen de context van het zeerecht, onderworpen zijn. Overwogen wordt dat de versnippering van het geldende juridische kader en de hieruit voortvloeiende normatieve interacties niet noodzakelijkerwijze leiden tot normatieve conflicten. Er wordt daarentegen gesteld dat de wisselwerking tussen UNCLOS en de relevante mondiale en regionale instrumenten het niveau van bescherming van het mariene milieu, waaraan landen dienen te voldoen bij het reguleren van offshore energieproductieactiviteiten, kan vormen en vergroten.

In het proefschrift worden de normatieve implicaties van zowel de inter-systematische als de intrasystematische normatieve interacties voor de interpretatie en implementatie van de verplichting tot bescherming en behoud van het mariene milieu onderzocht. In het kader van intrasystematische interacties wordt bestudeerd hoe mondiale en regionale milieuverdragen meer body kunnen geven aan het geraamte van het door UNCLOS geboden dynamische, maar tevens lapidaire kader voor milieubescherming. In het eerste deel ligt de focus meer specifiek op de wisselwerking tussen UNCLOS en instrumenten met een mondiale werkings sfeer die op directe of indirecte wijze de offshore energieproductie reguleren. De internationale milieuregelgeving inzake de offshore energieproductie wordt, behalve door de mondiale milieuverdragen, evenzeer beïnvloed door andere internationale verplichtingen van landen, zoals de verplichting tot het beschermen van buitenlandse investeringen krachtens internationale investeringsverdragen. In het eerste deel van het onderzoek worden derhalve de implicaties van de intersystematische interacties tussen het investeringsrecht en het recht ter bescherming van het mariene milieu besproken. De auteur stelt, dat de desbetreffende investeringsverplichtingen van landen niet noodzakelijkerwijze een weerslag hebben op de standaard ter bescherming van het mariene milieu. Het is echter wel zo, dat arbitrale colleges, afhankelijk van de specifieke kenmerken van het investeringsregime, grote zeggenschap kunnen hebben bij de interpretatie van de soevereine discretie en verplichting van landen om offshore energieproductieactiviteiten te reguleren.

Ofschoon mondiale milieuverdragen een veelheid aan criteria bevatten om te bepalen welke mate van voortvarendheid van landen wordt verwacht bij het reguleren van de offshore energieproductie, bevat het merendeel ervan geen concrete normen en wordt hierin niet specifiek aandacht besteed aan cruciale aspecten van offshore energieproductieactiviteiten. Daarom bevat het tweede

deel van het proefschrift een uitgebreide vergelijkende analyse van de regels en de normen die zijn vastgesteld in het kader van vier geselecteerde mariene regio's, te weten de Middellandse Zee, de Baltische Zee, het noordoostelijk deel van de Atlantische Oceaan en de Arctische Oceaan. Het belang van regionalisme wordt benadrukt, omdat regionale regelingen gedetailleerde regels en normen bevatten die direct van toepassing zijn op offshore energieproductieactiviteiten. Bovendien past het institutionele kader van regionale verdragen juridische normen aan de regionale specifieke omstandigheden aan, voorziet het in mechanismen voor de omgang met wetenschappelijke-, technologische- en milieuontwikkelingen en faciliteert het de naleving door de staat. In het tweede deel van het onderzoek wordt ook de wisselwerking tussen het EU-recht en de geselecteerde regionale verdragen onderzocht om na te gaan hoe de kruisbestuiving tussen beide kan leiden tot een verbetering van het materiële en het formele milieurecht en, hetgeen nog belangrijker is, tot een verbeterde naleving ervan in de gehele EU. Het proefschrift bevat de stelling, dat regionale regels en normen niet alleen kunnen dienen als best practices die kunnen worden aangepast aan de behoeften van andere mariene regio's, maar dat zij, onder bepaalde voorwaarden, ook juridisch relevant kunnen zijn bij de interpretatie en de toepassing van de UNCLOS-regels.

Aangezien de regulering van de offshore energieproductie in de eerste plaats is verankerd in UNCLOS, start het onderzoek met een studie naar het belang van het Verdrag voor offshore energieproductieactiviteiten. Hoofdstuk 2 biedt, na een korte beschrijving van de historische ontwikkeling van het zeerecht in het licht van de opkomende energiebehoefte van landen, een overzicht van UNCLOS als het fundamentele normatieve en institutionele kader voor de internationale regulering van de energie exploitatie op zee. Het behandelt daarom de regels van formeel en materieel milieurecht die van toepassing zijn op offshore energieproductieactiviteiten krachtens het Verdrag. Er is met name aandacht voor de toepasselijke milieuverplichtingen, die dienen als springplank voor normatieve interacties tussen UNCLOS en andere gerelateerde internationale regels en normen. Vervolgens verschuift de focus naar het 'systeem' van instituties binnen het UNCLOS-stelsel, die relevant zijn voor de regulering van de offshore energieproductie, om hun bijdrage (of het ontbreken ervan) aan de implementatie en de potentiële evolutie van de verplichtingen van het Verdrag met betrekking tot offshore energieproductie te beoordelen.

De algemene milieuvoorschriften en -beginselen van UNCLOS met betrekking tot projecten voor offshore energieproductie worden aangevuld met een breed aanbod aan meer specifieke mondiale en regionale instrumenten. Hoofdstuk 3 presenteert daarom een analyse van de regels van internationaal gewoonterecht en van mondiaal geldende internationale verdragen die op directe of indirecte wijze de offshore energieproductie reguleren. Eerst worden de inhoud en aard van deze verplichtingen onderzocht om de tekortkomingen ervan bij de aanpak van specifieke aspecten van offshore energieproductieactiviteiten te belichten. Vervolgens wordt onderzocht hoe diverse normatieve ontwikkelingen in het internationale milieurecht, met inbegrip van mondiale verdragen en door niet-overheidsactoren gegenereerde instrumenten, kunnen interageren met en inhoud geven aan de due diligence verplichting krachtens UNCLOS ter bescherming en behoud van het mariene milieu. Na het bestuderen van de juridische methodes waaraan dergelijke normatieve interacties zijn onderworpen, wordt de invloed van deze interacties op het toepassen van de algemene verplichting

van landen tot bescherming en behoud van het mariene milieu in het kader van de offshore energieproductie onderzocht.

In het proefschrift wordt vervolgens aandacht besteed aan de interacties tussen twee op het eerste gezicht concurrerende internationale regimes, te weten het internationale mariene milieurecht en het internationale investeringsrecht. In hoofdstuk 4 wordt allereerst onderzocht waarom en hoe deze twee verschillende takken van internationaal recht met elkaar interageren, gezien de bijzonderheden van het internationale investeringsrecht. Na een uitleg over de wijze waarop deze twee takken van internationaal recht zich vermengen, volgt een beoordeling van de effecten van deze kruisbestuiving op de toepassing van verplichtingen op basis van zowel het investeringsrecht als het mariene milieurecht.

Nadat de internationaalrechtelijke voorschriften met implicaties voor de offshore energieproductie op mondiaal niveau zijn onderzocht, verschuift de focus van het proefschrift naar normatieve ontwikkelingen op regionaal niveau. Hoofdstuk 5 behandelt het vraagstuk van regionalisme in het zeerecht. Na een studie van het belang van regionalisme voor het formuleren van internationale milieuregels en -normen voor de offshore energieproductie worden de relevante ontwikkelingen in de geselecteerde mariene regio's beoordeeld. Vervolgens is onderzocht hoe UNCLOS het regionalisme heeft ingepast in de context van de bescherming van het mariene milieu. Tegen deze achtergrond is de onderlinge relatie tussen regionale verdragen en UNCLOS geanalyseerd om de implicaties van hun interactie voor de toepassing van de verplichting tot bescherming en behoud van het mariene milieu in relatie tot de offshore energieproductie te evalueren.

Voortbouwend op de bevindingen over regionalisme, wordt in hoofdstuk 6 een vergelijkende analyse van de materieelrechtelijke normatieve ontwikkelingen met betrekking tot offshore energieproductieactiviteiten krachtens de geselecteerde regionale instrumenten uitgevoerd. Na een onderzoek van de op het verdrag gebaseerde regels, wordt in het hoofdstuk gekeken hoe institutionele regelingen krachtens deze instrumenten hebben bijgedragen aan de verdere verfijning en aanpassing van regels en normen voor de omgang met opkomende lokale uitdagingen. Onderzocht wordt hoe regionale regels en normen zich op dynamische wijze hebben ontwikkeld als gevolg van beslissingen en aanbevelingen van de regionale verdragsorganen in de geselecteerde gebieden. Deze vergelijkende analyse helpt om te beoordelen op welke wijze deze regionaal ontwikkelde regels en normen vorm kunnen geven aan de implementatie van de verplichting tot bescherming en behoud van het mariene milieu krachtens UNCLOS.

In hoofdstuk 7 wordt onderzocht of het EU-recht met haar verfijnde institutionele mechanismen de regels en normen in heel Europa kan versterken, zowel door toevoeging van normatieve inhoud als door verbetering van de naleving ervan. Na een overzicht van de competenties en verplichtingen van de EU inzake de bescherming van het mariene milieu, worden in het hoofdstuk de diverse secundaire juridische instrumenten van de EU behandeld die directe of indirecte implicaties hebben voor de offshore energieproductie. Vervolgens wordt onderzocht hoe deze instrumenten interageren met de geselecteerde regionale zee-instrumenten om te beoordelen of er een vruchtbare wisselwerking mogelijk is die vormgeeft aan de bescherming van het mariene milieu in alle lidstaten van de EU. Uit dien hoofde wordt in het hoofdstuk ingezoomd op de zeeën die Europa omringen, om duidelijk

te maken hoe diverse, elkaar overlappende, normatieve ontwikkelingen vorm geven aan de verplichting tot bescherming en behoud van het mariene milieu.

Op basis van de analyse in de twee voorgaande hoofdstukken, volgt in hoofdstuk 8 een beschouwing over het potentieel van uit regionale verdragen voortvloeiende algemene regels en normen om oplossingen te bieden die verder reiken dan hun territoriale werkingssfeer. Besproken wordt het potentieel van regionale zee verdragen, die zowel omzetbare modellen bieden voor vergelijkbare normatieve ontwikkelingen in andere mariene gebieden die kampen met vergelijkbare uitdagingen op milieugebied, als een geschikt middel vormen om de inhoud van de relevante verplichtingen uit hoofde van UNCLOS te definiëren. Ook wordt onderzoek gedaan naar het vermogen van het EU-recht om te voorzien in normen die buiten de EU gelden aan de hand van de EU Richtlijn betreffende de veiligheid van offshore olie- en gasactiviteiten, evenals naar de rol van de Richtlijn (of het ontbreken ervan) voor de interpretatie en implementatie van UNCLOS.

Het laatste hoofdstuk, hoofdstuk 9, bevat de conclusies uit het voorgaande. Op basis van de voorlopige bevindingen in de voorgaande hoofdstukken, wordt besproken hoe zowel intra- als intersystematische normatieve interacties vorm geven aan de bescherming van het mariene milieu voor wat betreft dergelijke activiteiten, en wordt de noodzaak van een mondiaal geldend verdrag inzake de bescherming van het milieu bij de regulering van offshore energieproductieactiviteiten overwogen. Gesuggereerd wordt dat een dergelijk bindend verdrag niet realiseerbaar noch noodzakelijk lijkt. In plaats daarvan kunnen normatieve interacties tussen UNCLOS en de diverse toepasselijke mondiale en regionale instrumenten leiden tot een verbetering van de zorgvuldigheidsnorm die is vereist ter bescherming van het mariene milieu in relatie tot de offshore energieproductie.

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