BLUE ECONOMY
COOPERATIVE RESEARCH CENTRE

PRACTITIONER SUMMARY III

ETHICS, VALUES AND SOCIAL LICENCE IN THE BLUE ECONOMY

Ethical Risks in the Offshore Blue Economy

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Research Team

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The Blue Economy CRC

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Introduction

This Practitioner Summary explains the ethical risks at play in the offshore Blue Economy—including aquaculture and renewable energy industries.

The Summary explains how to use ethical values to gauge ethical risks, and practical methods for responding to them.

The *offshore* Blue Economy refers to economic activities happening in the 'exposed' ocean. These are areas further from land, which often have high energy waves, winds, and tides. Being further offshore, such activities may be subject to different laws and regulations. For example, in Australia, state jurisdiction switches to Commonwealth three nautical miles from land.

What is Ethical Risk?

'Ethical risk' refers to the risk that unethical actions will be done, or unethical consequences will result (Breakey & Sampford 2023). All human enterprises and institutions possess ethical risk. Institutions and organisations solve problems and achieve goals by drawing together various forms of power. Wherever there is power, there is the risk of its abuse.

Ethical risk differs from both operational risk and legal risk, but impacts on both (Figure 1). Ethical risk may set the stage for legal risk in cases where wrongdoing increases until it crosses compliance or legal thresholds, or because illegal actions are taken to cover up ethical wrongdoing. Ethical risk also poses operational risks. Wrongdoing can impact on the company's brand and employee retention and loyalty. As well, wrongdoing may lead to a public scandal or inquiry that drives intrusive regulation, or undermines the operations' 'social licence'.

Figure 1: Ethical risk, legal risk, operational risk

Key Takeaways

- **Ethical risk is the risk that ethical wrongdoing will occur.**
- **Ethical risk is an intrinsic concern. It also impacts legal and operational risk.**
- **Ethical risk profiles shift in different contexts and over time.**
- **Offshore, exposed Blue Economy industries will face heightened ethical risk in some important areas.**
- **Many different actors—including scientists and engineers—can work strategically to mitigate ethical risks.**

Determining Ethical Concerns

The first step in gauging ethical risk requires outlining the ethical principles that are relevant to a given practice. Practitioner Summary I (drawing on Cooper et al 2023) described six ethical principles relevant to Blue Economy activities:

I. Environmental Protection: Blue Economy activities should protect sustainability, biodiversity, and ecosystem function.

II. Stakeholder Participation: Community knowledge and engagement should play a role in Blue Economy decision-making.

III. Fairness & Equity: Opportunities, risks, impacts, costs, and benefits should be fairly distributed across stakeholders.

IV. Harm Prevention: Human rights and animal welfare should be protected and respected.

V. Beneficence: Blue Economy activities should deliver good outcomes, including food, safety, prosperity, and employment.

VI. Trustworthiness, Integrity, and Accountability: Blue Economy activities and systems must transparently demonstrate their trustworthiness to ensure that stakeholders can trust that what is said will be done and not be influenced by corrupt actors.

These Blue Economy ethical principles then may be applied to relevant stakeholder groups to derive a list of ethical concerns. While it can be a useful exercise to comprehensively apply all ethical principles to all stakeholders (see Lam 2016), Table 1 shows a streamlined illustrative result, with each principle applied to the most salient stakeholders.

For example, the subjects most likely to be harmed (Ethical Principle IV) by aquaculture operations are employees, animals (stock and wild), and consumers buying the fish (food safety). Combining the ethical principles with key stakeholders furnishes a list of the main ethical concerns that arise for Blue Economy activities.

Ethical principle	Key stakeholders	Ethical concerns
I. Environmental Protection	Local ecosystems	Negative impacts on ecosystem Degrading biodiversity
	Wider environment	Pollution Carbon emissions
II. Stake-holder Participation	Local communities	Inadequate consultation
	First Nations peoples	Lack of free, prior, informed consent
	Rival users	Inadequate consultation
	Interest-based stakeholders	Inadequate consultation
III. Fairness	Local community	Impact: infrastructure, noise, light, views, etc.
	Rival users of ocean space	Unfair interference with rival uses
	Employees	Unfair pay & conditions
	Industry	Unfair disruptions
IV. Harm Prevention	Employees	Worker safety failures
	Stock animals	Animal suffering/cruelty
	Wild animals (birds, seals)	Disproportionate harms
V. Beneficence	Public	Economic development Renewable energy
	Consumers	Quality accessible goods
	Employees	Creating employment
VI. Trust-worthiness	Scientists	Integrity failures
	Government & regulators	Corruption Regulatory 'capture'
	Industry	Unaccountability Ethics washing

Table 1: Blue Economy Ethical Principles, stakeholders and concerns

Blue Economy Integrity System

An 'integrity system' is a mutually supportive network of ethical standards, legal norms, institutions and incentive structures that work together to facilitate publicly stated goals, and limit temptations and opportunities for wrongdoing (Sampford 2009).

The integrity system includes:

- **Multiple levers to human conduct:** economic incentives, legal rules, institutional design, ethical norms.
- **Multiple institutions:** regulators, certifiers, journalistic news media, democratic elections, NGO activism, education and research institutions, scientists, professions and professional bodies, and more.
- **Holistic *interaction*:** The mutually supportive interaction between institutions is critical to making corrupt and unethical action risky, costly, and difficult.

The Blue Economy requires a strong integrity system, because the nature of Blue Economy activities inherently generates significant ethical risks.

The Blue Economy is a dynamic and innovative industry, that has social and environmental impacts, and operates on public resources. The features are compounded by the fact that the Blue Economy suffers from severe governance challenges. It can be hidden from media and community, far from normal governance bodies, regulated by unclear jurisdictions and laws, in a fluid environment impacting on little-known ecologies.

Determining Ethical Risks

In **Table 1** above, applying relevant Blue Economy ethical principles to key stakeholders created a list of Blue Economy ethical concerns.

Blue Economy integrity systems will often be able to mitigate or resolve many of these ethical concerns, reducing the likelihood they will occur.

The ethical concerns that are not appropriately mitigated remain as ethical risks.

Figure 2 below describes this process.

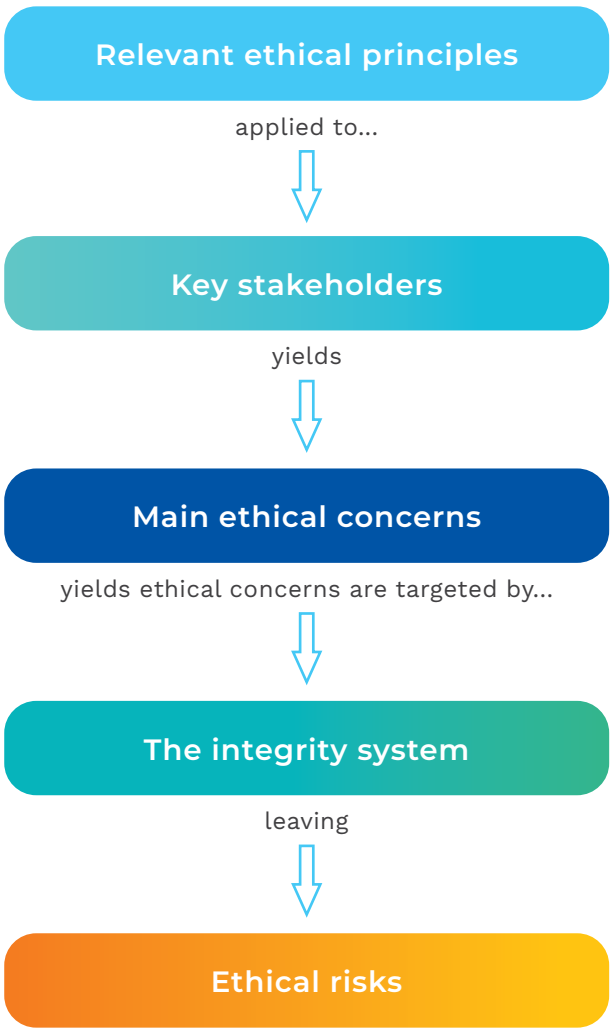


Figure 2: Determining ethical risks

Offshore Blue Economy Ethical Risks

One of the key reasons for moving Blue Economy activities to offshore, exposed waters is to improve the activities' ethical risk profile. Activities further from shore typically have less social impact and rival users, and be sited further from fragile coastal and estuary ecosystems. With more potential sites to choose from, site-selection can be done strategically from a marine spatial planning perspective.

Lower risk does not mean the risks are negligible, and can be ignored. While structures further from shore will have fewer rival users, this is only on average, and shipping lanes or fisheries may create exceptions.

Scale also matters. Offshore Blue Economy industries may be extensive (such as an enormous wind farm, covering hundreds of square kilometres). The sheer size of such operations increases the risks of ecological impact and interference with rival users.

Unfortunately, other areas of ethical risk are raised. The high-energy, dynamic environments of exposed oceans increase the risk of catastrophic failure of an entire structure, such as the loss of an aquaculture pen or large-scale loss of the fish stock. High waves and wind also make employee safety more challenging.

Table 2 summarises some of these broad shifts in ethical risk profile created by the shift to exposed ocean.

Further shifts in the risk profile may arise from the comparative lack of knowledge about operating in these new environments. Lack of existing data and scientific knowledge can muddy social expectations, cloud policy-makers' decision-making, and weaken economic risk judgments.

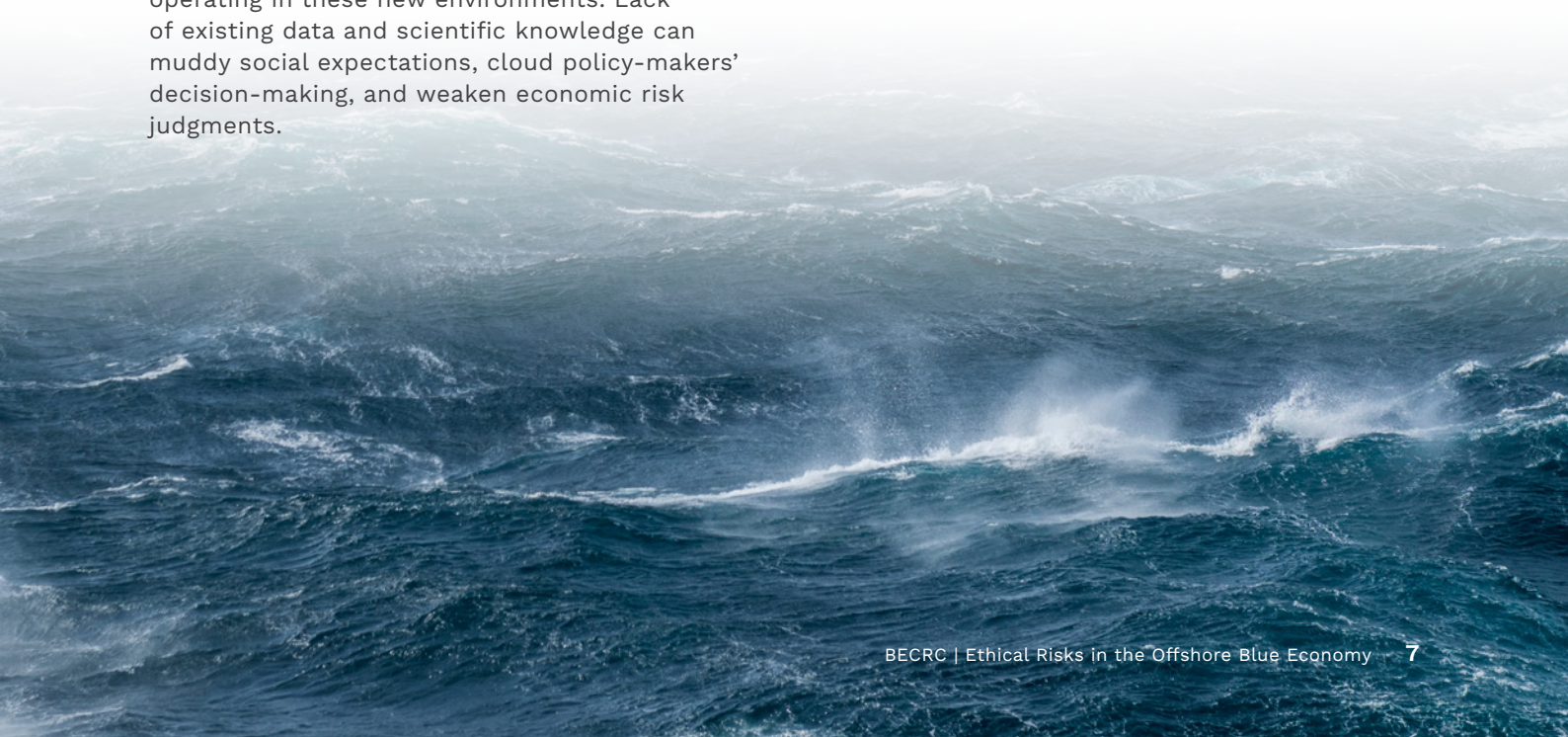
Ethical risk	Risk change
Catastrophic failure of structure	▶ Increased risk
Employee safety	▶ Increased risk
Accessibility to governance institutions	▶ Increased risk
Animal welfare	▶ Context dependent
First Nations consent	▶ Context dependent
Impact on rival users	▶ Decreased risk
Impact on coastal ecologies	▶ Decreased risk
Social (visual, noise) impact	▶ Decreased risk

Table 2: Changes in ethical risk profile from nearshore to offshore Blue Economy

Ethical risks shift over time. For example, ethical risks might grow as industries scale up their operations, or fall as improving knowledge and technology reduce unforeseen impacts.

Ethical risks sometimes arise in surprising ways. Some of the great promises of the offshore Blue Economy is the global supply of protein and the generation of renewable energy, such as through wind farms. Renewable energy is a crucial resource in efforts to decarbonise the economy and meet our international obligations.

However, that very feature creates ethical risks. Because governments may be keen to expedite offshore wind to meet their Net Zero commitments, there is a risk that the appropriate checks and balances will not be put in place.



Practical Responses to Ethical Risks

All the different groups and institutions that are part of the Blue Economy integrity system (including NGOs, media, professional organisations, and the community itself) have the capacity to respond to ethical risks. Here, we focus on four key actors (Figure 3).

The government has the capability to curate the entire integrity system, allowing it to direct economic incentives, legal rules, licensing conditions and regulatory activities towards achieving socially desirable outcomes and avoiding wrongdoing.

Industry itself has a major role to play. Many of the key Blue Economy ethical risks apply directly to the activities of companies. By putting in place internal and industry wide systems that allow companies to be aware of ethical risk areas and respond effectively to them, private enterprise can directly take responsibility for improving the Blue Economy's ethical risk profile.

Responses to ethical risk can also come from other types of decision-makers. Knowledge can play a major role in mitigating ethical risks. Improved knowledge shared across stakeholders can help manage social expectations, empower informed consent from stakeholders, avoid potential ecological impacts (for example, by understanding whale and bird migration patterns), and reduce economic risk for business (which itself is a stressor that can add to unethical corner-cutting). For this reason, scientists play a key role in mitigating Blue Economy ethical risk, as trustworthy, relevant and accessible research fills critical knowledge gaps.

Engineers can develop new technologies, making it more likely the system will deliver the values that justify it, including clean power and quality sustainable seafood. Technological solutions can also reduce unwanted impacts, like diesel spills, accidents, sound and light pollution, and stock escapes. Engineers can also improve ergonomics, shaping the interface between humans, systems and environment in ways that encourage ethical outcomes. However, to do so they need to have ethical risks included as system priorities as early in the design process as possible.

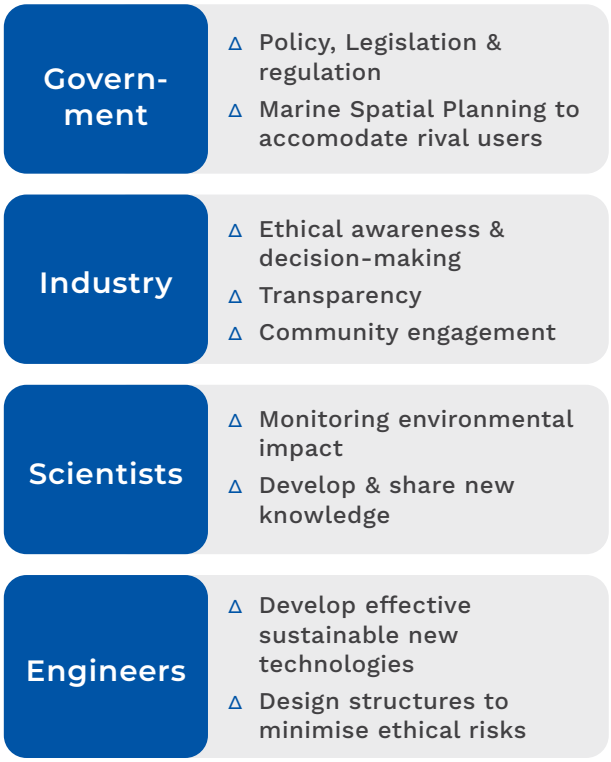


Figure 3: Figure 3. Capabilities of different actors to respond to ethical risk

Conclusion

This Practitioner Summary has explained ethical risk in the offshore Blue Economy. Applying relevant ethical principles to key stakeholder groups created a list of ethical concerns.

Integrity systems have many resources to respond to these ethical concerns. However, no system is perfect, and when an integrity system is unable to appropriately mitigate an ethical concern, it becomes an ethical risk.

The Summary sketched the differences in the ethical risk profiles between the near-shore and the off-shore Blue Economy, and considered the role of government, industry, scientists, and engineers in developing solutions to these ethical risks.

Further Reading

Breakey, H., & Sampford, C (2023) 'Ethical risk in the Offshore Blue Economy Integrity System' (Refereed conference paper) ASME (American Society of Mechanical Engineers 42nd International Conference on Ocean, Offshore & Arctic Engineering (OMAE2023) Melbourne, Australia. 14th June 2023.

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Further project research, including all four Practitioner Summaries, is available at https://blueeconomycrc.com.au/project/ethics-values-and-social-license-in-the-blue-economy/

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