



TETHYS BLAST

January 22, 2016

Welcome to the latest bi-weekly Tethys Blast, which will update you with new information available on Tethys, new features of Tethys, and current news articles of international interest on offshore renewable energy. We hope that this becomes a valuable tool to help you stay connected to your colleagues and to introduce you to new research, new contacts, and ongoing milestones in renewable ocean energy development.

Upcoming Webinars

Mark your calendars for two upcoming webinars on Wednesday, 27 January 2016. The first is an Annex IV webinar on “[Adaptive Management in the Marine Renewable Energy Industry](#)” from 16:30-18:00 UTC with presenters from NOAA Fisheries, Ocean Renewable Power Company (ORPC), and Marine Scotland. The second is a National Wind Coordinating Collaborate (NWCC) webinar on “[Golden Eagles - Estimating Mitigation Credits from Voluntary Lead Abatement & Reducing Vehicle Strikes](#)” from 18:00-19:30 UTC with a presenter from the American Wind Wildlife Institute.

METS - Call for Abstracts Extended

METS (Marine Energy Technology Symposium) will be held in Washington DC from 25-27 April 2016 and will feature tracks on the environmental effects of marine energy development. This is a great opportunity to meet with, share, and hear from your colleagues on recent progress. **The abstracts deadline was extended until January 29**; instructions for submitting an abstract are available on Tethys: <http://tethys.pnnl.gov/events/mets-2016-abstracts-due>.

New Documents on Tethys

A total of 27 new documents have been added to Tethys in the last two weeks. These documents have been hand-selected for their relevance to the environmental effects of marine and wind renewable energy. The listings below are short introductions to several new or popular documents that can be accessed through the accompanying Tethys links:

Strangford Lough and the SeaGen Tidal Turbine - Savidge et al. 2014

The background to and outcomes of the Environmental Monitoring Programme (EMP) required by statutory regulators for the deployment of the SeaGen tidal turbine in Strangford Lough, Northern Ireland, an area with many conservation designations, are described. The EMP, which was set within the context of an adaptive management approach, considered possible effects of the device on local populations of seals and harbour porpoises, representative seabirds and benthic communities.

Assessing the Cumulative Impacts of Wind Farms on Birds - Masden 2010

As governments pledge to combat climate change, wind turbines are becoming a common feature of terrestrial and marine environments. Although wind power is a renewable energy source and a means of reducing carbon emissions, there is a need to ensure that the wind farms themselves do not damage the environment. There is particular concern over the impacts of wind farms on bird populations. In this thesis I have explored how to assess the cumulative impacts of wind farms on birds.

Marine Fouling Assemblages on Offshore Gas Platforms in the Southern North Sea: Effects of Depth and Distance from Shore on Biodiversity - van der Stap et al. 2016

Offshore platforms are known to act as artificial reefs, though there is on-going debate on whether this effect is beneficial or harmful for the life in the surrounding marine environment. Knowing what species exist on and around the offshore platforms and what environmental variables influence this species assemblage is crucial for a better understanding of the impact of offshore platforms on marine life. Information on this is limited for offshore platforms in the southern North Sea.

The Sensitivity of UK Marine Mammal Populations to Marine Renewables Developments - Harwood and King 2014

We review the potential threats to five marine mammal species (grey seals, harbour seals, minke whales, bottlenose dolphins and harbour porpoises) that may be associated with offshore renewable energy developments. We conclude that the most important risk is of disturbance from the noise associated with the construction of such developments, because of the large numbers of animals that may be affected and the fact that the resulting changes in behaviour may affect individual vital rates.

Strategic Review of Offshore Wind Farm Monitoring Data Associated with FEPA Licence Conditions: Marine Mammals - Philpott et al. 2009

Two rounds of offshore wind farm development have been licensed in UK waters. Each wind farm has to meet certain monitoring requirements, as detailed in its specific FEPA licence. In this review, FEPA monitoring protocols and subsequent data associated with marine mammals collected to date at operational wind farms were assessed, with a key aim to inform future monitoring programmes for Offshore Wind Farm developments.

Current News

Current news articles of international interest on offshore renewable energy include:

[Wave Energy Exploration Continues - Dehlsen Associates Gains Over Half-Million Grant](#)

A floating concept to reap wave energy offshore just received a \$600,000 Next-Generation Marine Energy Systems grant from the U.S. Department of Energy. With successful sea trials under its belt, the Centipod system being developed in Santa Barbara generates electricity as its 30-foot buoys rise and fall, driving generators in the tubular backbone structure

[DNV GL Certifies Siemens' 7 MW Offshore Wind Turbine](#)

DNV GL has awarded Siemens final type certification for its SWT-7.0-154 offshore wind turbine, confirming full IEC-61400-22 compliance ahead of schedule. DNV GL says the 7 MW direct-drive turbine, which Siemens revealed in March 2015, delivers nearly 10% more energy production than its 6 MW predecessor under offshore wind conditions, while retaining the same reliability.

[Orkney project aims to prevent "fouling" of marine-energy technology](#)

Orkney's European Marine Energy Centre (EMEC) and Edinburgh's Heriot-Watt University have teamed up to tackle a "major concern to industries working in the marine environment". The project – involving EMEC, Heriot-Watt's energy academy and the university's Stromness-based International Centre of Island Technology (ICIT) – aims to find a solution to biofouling, or the settlement and growth of organisms on submerged structures.

[CG wins contract from Energinet.dk to power offshore wind farm in Baltic Sea](#)

Avantha Group Company CG has won a contract from Energinet.dk, an electricity transmission system operator, to provide power transformers and gas insulated switchgear, or GIS, for the Kriegers Flak wind farm project in the Baltic Sea. The order consists of two onshore 500 MVA 410/235kV autotransformers (frame contract); four 220 MVA 32/225kV offshore platform substation transformers; and nine bays 220kV Gas Insulated Switchgear for the offshore platform substations.

[WW1 U-boat mystery solved after wreck discovered by offshore wind farm developers](#)

The mystery over the fate of a German First World War U-boat has been resolved a century after it went missing – after its wreck was discovered by offshore wind farm developers. The SM U-31 submarine disappeared after setting off from Wilhelmshaven in January 1915 on routine patrol, with 4 officers and 31 men on board.