



TETHYS BLAST

March 17, 2017

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 wind and marine 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 wind and marine renewable energy development.

Upcoming WREN Webinar

WREN is hosting a public webinar on March 28 about the US Bureau of Ocean Energy Management's (BOEM) Real-time Opportunity for Development Environmental Observations (RODEO) study. The objective of the RODEO study is to acquire real-time observations of the construction and initial operation of offshore wind facilities to aid the evaluation of environmental effects of future wind farms. [Login instructions are available on Tethys.](#)

Interactions between Wind Turbines and Wildlife, Part 2

Because there were many more questions from a March 1st webinar, "Interactions between Wind Turbines and Wildlife," the Northeast Wind Resource Center will be hosting a follow-up webinar to address additional questions from the audience. Attendees are encouraged to come prepared with questions. The webinar will be held on 29 March 2017 from 1-2PM EDT (17:00-18:00 UTC). [Register for this free event here.](#)

2017 INORE North American Symposium

The International Network on Offshore Renewable Energy (INORE) is hosting their annual North American Symposium from May 18-22, 2017 in Portland, Oregon, USA. Graduate students, early-stage researchers, and young professionals in offshore renewable energy are invited to attend. Topics include technology and engineering, environmental monitoring and sustainability, marine resource assessment, and policy and human dimensions of marine renewable energy. [Applications are due today \(March 17\).](#)

New Documents on Tethys

New documents are regularly added to Tethys, hand-selected for their relevance to the environmental effects of wind and marine renewable energy. Short introductions to new or popular documents are listed below, accessible by the accompanying Tethys links:

[Turning Off the DRIP \('Data-Rich, Information-Poor'\) - Rationalising Monitoring with a Focus on Marine Renewable Energy Developments and the Benthos - Wilding et al. 2017](#)

The benthos underpins crucial marine ecosystem services yet, in relation to Marine renewable energy developments (MREDs), is currently poorly monitored: current monitoring programmes are extensive and costly yet provide little useful data in relation to ecosystem-scale-related changes, a situation called 'data-rich, information-poor' (DRIP). MRED–benthic interactions may cause changes that are of a sufficient scale to change ecosystem services provision, particularly in terms of fisheries and biodiversity and, via trophic linkages, change the distribution of fish, birds and mammals.

[Changes in Fish Communities on a Small Spatial Scale, an Effect of Increased Habitat Complexity by an Offshore Wind Farm - van Hal et al. 2017](#)

The number of offshore wind farms (OWF) is increasing to meet the demands for renewable energy. The piles and hard substrate surrounding these piles creates new habitat for species with preference to hard substrates. We studied the impact of this hard substrate on the fish community in a Dutch OWF in the sandy southern North Sea, which had been in operation for five years. Multi-mesh gillnets were placed near the OWF structures on the hard substrate protection revetments and on the sandy bottom in the middle of the farm.

[Environmental Interactions of Marine Renewables \(EIMR\) 2016 Expert Workshop Report: Biofouling - Miller & Loxton 2016](#)

Environmental Interactions of Marine Renewable Technologies (EIMR) is an international conference held at different sites across the Scottish Highlands and Islands region. It serves as a major forum for global researchers to come together to present their latest research, results and ideas; and to strengthen relations between the emerging marine renewables industry, research laboratories, and universities.

[Passive Acoustic Methods for Fine-Scale Tracking of Harbour Porpoises in Tidal Rapids - Macaulay et al. 2017](#)

The growing interest in generating electrical power from tidal currents using tidal turbine generators raises a number of environmental concerns, including the risk that marine mammals might be injured or killed through collision with rotating turbine blades. To understand this risk, information on how marine mammals use tidal rapid habitats and in particular, their underwater movements and dive behaviour is required. Here, an alternative approach is explored, whereby passive acoustic monitoring (PAM) is used to obtain fine scale geo-referenced tracks of harbour porpoises in tidal rapid areas.

[Siting and Designing Wind Farms in the Landscape - Version 3](#) - Scottish Natural Heritage

This guidance provides advice on the siting and design of wind farms in Scotland's landscapes. It also includes advice on assessing the landscape and visual effects of wind farms, as this is an iterative process with design. The guidance draws on two decades of experience of planning for wind farms by SNH, planning authorities and landscape assessors. Design is a material consideration in the planning process and good siting and design helps to produce development which is appropriate for a landscape whilst delivering renewable energy.



[ORJIP Ocean Energy](#) is a UK-wide collaborative programme of environmental research with the aim of reducing consenting risks for wave, tidal stream and tidal range projects. Partnering with Annex IV, ORJIP provides content input to Tethys Blasts. ORJIP also wishes to make you aware of the following opportunities:

- [The Marine Renewables Canada 2017 Annual Conference will be held on 8-9 November 2017 in Ottawa, Ontario, Canada.](#)

News and Current Events

Marine Renewable Energy

[Ireland's ocean energy capability one step closer to reality as Seapower survives winter at Sea](#)

An Irish-designed device to generate electricity from ocean wave power is another step closer to breaking into the massive potential on offer in the ocean energy market. Irish company, Sea Power Ltd., has concluded the winter survivability testing programme of their prototype wave energy device at the Galway Bay Marine and Renewable Energy Test Site. In the coming week the device will be removed from the test site and brought back into Galway Docks.

[Green Marine installs Penguin WEC at EMEC](#)

Wello Oy's wave energy converter (WEC) has been successfully installed at the European Marine Energy Centre (EMEC) in Orkney as part of the CEFOW (Clean Energy from Ocean Waves) project. The Penguin WEC was deployed at EMEC's grid-connected wave test site at Billia Croo, off the west coast of Orkney, over the weekend.

Tidal Sails granted permit for 4 MW pilot project in Norway

Tidal Sails is pleased to announce that the Norwegian Water Resources and Energy Directorate (NVE) has granted permission to proceed with the scheduled full-scale pilot project in the Kvalsund Strait, near Hammerfest, Norway. The pilot plant will have an installed capacity of 4 MW.

ENVIROTEK Deploys Tidal Energy in South East Asia

In Mid-February, ENVIROTEK, together with an international team of experts, has successfully deployed a SCHOTTEL Instream Turbine (SIT) in the waters off the Sentosa Boardwalk in Singapore to showcase the viability of tidal energy in the region. ENVIROTEK, a Singapore-based clean-technology investment company, aspires to lead tidal in-stream energy projects in South East Asia.

Wind Energy

Amazon Wind Farm developer Avangrid wins \$9M bid to build offshore wind farm off Kitty Hawk

A Spanish energy conglomerate won the rights to develop an offshore wind farm off Kitty Hawk with a \$9 million bid to the federal government Thursday. Avangrid Renewables beat out three other bidders by posting the nation's second-highest bid for wind farm development rights. Avangrid's U.S. subsidiary, based in Portland, Oregon, handled the bidding. It is already a known quantity in North Carolina as the developer and operator of the Amazon Wind Farm, which generates power for the online retailer's data centers in Virginia.

World's First Offshore Wind Farm Says Goodbye

After more than 25 years of operation, DONG Energy has decided to retire Vindeby, the world's first offshore wind farm. Vindeby Offshore Wind Farm, consisting of 11 wind turbines, was connected to the grid in 1991. The Danish wind project is situated close to shore in the low waters off Vindeby near Lolland. Even though the wind farm is being decommissioned – and the turbines are small compared to current standards – the project has been of “vital importance” to the offshore wind industry, according to Leif Winther, who is responsible for DONG Energy's Danish offshore wind farms.

Scotland approves innovative floating offshore wind farm

The Scottish Government has granted planning consent for an eight turbine, six megawatt (MW) offshore wind farm off the coast of Aberdeen. In an announcement on Thursday, authorities said that the floating facility will have a capacity of as much as 50 MW and is set to support roughly 110 jobs through assembly, installation and "ongoing operations and maintenance activities."

Tanker ships look to wind energy for fuel savings

Look for new spinning wind rotors on Maersk Tankers next year, in an effort to reduce fuel consumption. Norsepower, in partnership with Maersk Tankers, Shell Shipping & Maritime, and the U.K.'s Energy Technologies Institute (ETI) plans to install two, 30 meter rotating sails to a Maersk Tanker vessel in 2018, with testing at sea until the end of 2019. The majority of the project will be funded by ETI, with contributions from the other partners.