



Tethys Blast

December 25, 2015

Welcome to the last Tethys Blast of the year and Merry Christmas! This will provide an update on 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.

Tethys – Improved Accessibility and a New Look

Tethys has been revamped to allow more immediate access to the papers and resources you have come to know, and includes a fresh modern look. You will find all the features on Tethys, but you will more readily be able to hone in on wind energy or marine energy. Direct access to the Knowledge Base is available from the front page, and an area for new users is now more distinct. Our team is constantly working to provide intuitive tools and accurate content to help promote the renewable energy industry. We invite you to [visit Tethys](#) and explore the redesigned website.

New Documents on Tethys

A total of 33 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:

[Underwater Noise Modelling for Environmental Impact Assessment](#) - Farcas et al. 2016

Assessment of underwater noise is increasingly required by regulators of development projects in marine and freshwater habitats, and noise pollution can be a constraining factor in the consenting process. Noise levels arising from the proposed activity are modelled and the potential impact within the affected area is then evaluated.

[Reviews of Power Supply and Environmental Energy Conversions for Artificial Upwelling](#)
- Zhang et al. 2016

Wave energy is being increasingly regarded as a major and promising resource since the artificial upwelling was invented. There are many different ways to convert wave energy to electricity and some other energy such as the power supply for artificial upwelling in this paper. An overview of wave energy converters in artificial upwelling application as well as the power systems and environmental energy conversions for the artificial upwelling all over the world is given in this article.

[Scotland's National Marine Plan - A Single Framework for Managing Our Seas](#) - **Marine Scotland 2015**

This Plan covers both Scottish inshore waters (out to 12 nautical miles) and offshore waters (12 to 200 nautical miles). It also applies to the exercise of both reserved and devolved functions. The Scottish and United Kingdom Governments have agreed that a marine plan for Scotland's inshore waters and a marine plan covering Scottish offshore waters will be published in one document and will be collectively referred to as the 'National Marine Plan'.

[An Italian Proposal on the Monitoring of Underwater Noise: Relationship Between the EU Marine Strategy Framework Directive \(MSFD\) and Marine Spatial Planning Directive \(MSP\)](#) - **Maccarrone et al 2015**

In recent years, many studies have evaluated the effects of anthropogenic acoustic disturbance on marine organisms. Sounds associated with shipping, seismic surveys, sonar, and many other such sources induce several types of effect on fish and marine mammals. In this regard, the European Marine Strategy Framework Directive 2008/56/EC has not only defined underwater acoustic noise as "the intentional or accidental introduction of acoustic energy in the water column from impulsive and diffuse sources", but has also expressly identified it as a form of pollution.

[Framework for Assessing Ecological and Cumulative Effects of Offshore Wind Farms: A First Approach to Deal with Cumulative Effects on Birds and Bats of Offshore Wind Farms and Other Human Activities in the Southern North Sea](#) - **Leopold et al. 2015**

Renewable energy is an increasing demand, and governments of North Sea countries are looking at developing offshore wind farms to help meet sustainability demands. The first at-sea wind farms have become operational in several countries, or are under construction, but many more are on the drawing board. This report considers the cumulative impact of all projected wind farms in the southern North Sea (by 2023) on birds and bats.

Current News

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

[ORPC receives US\\$2.5 million grant for MHK development through ARPA-E](#)

The U.S. Department of Energy has awarded Portland, Oregon-based Ocean Renewable Power Co. a US\$2.25 million grant for testing the deployment, anchor and retrieval system of ORPC's tidal and river units at the marine hydrokinetics (MHK) project site in Cobscook Bay, Maine.

[ORE Catapult Acquires Samsung's Demonstration Offshore Wind Turbine](#)

The Offshore Renewable Energy (ORE) Catapult has today announced that it has completed the acquisition of the Levenmouth 7MW demonstration offshore wind turbine, located off the East Fife coast, from Samsung Heavy Industries (SHI). The turbine becomes the world's most advanced, open access, offshore wind turbine dedicated to research, and offers opportunities for considerable training and development of skills vital for the future of the offshore wind industry.

[Wales' first full-scale tidal energy device is installed](#)

A Welsh tidal stream technology company has installed the country's first tidal energy generator in Ramsey Sound, Pembrokeshire. Developed by Cardiff-based Tidal Energy Ltd, the DeltaStream device will become one of the first grid-connected demonstration devices worldwide to generate green, sustainable and predictable tidal power.

[Cable back online for 209 MW offshore wind farm in Denmark](#)

The cable connecting the 209-MW Horns Rev 2 offshore wind farm to the Danish grid is back in operation after a two-month repair effort, Energinet.dk said Sunday. The national transmission system operator (TSO) said it is not yet clear what caused the short circuit that put the cable out of service soon after midnight on October 19.