



Tethys Blast

July 25, 2014

Welcome to the second July edition of the Tethys Blast! A new Tethys Blast will be sent to you every 2-4 weeks, unless you choose to unsubscribe; instructions to unsubscribe are at the bottom of this email.

Tethys Blast will keep you updated with new information available on Tethys, new features on 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.

New Articles on Tethys

A total of 69 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 offshore renewable energy. The listings below are short introductions to several popular documents that can be accessed through the accompanying Tethys links:

Marine Mammals Trace Anthropogenic Structures at Sea - Russell et al.

On land, species from all trophic levels have adapted to fill vacant niches in environments heavily modified by humans. In the marine environment, ocean infrastructure has led to artificial reefs, resulting in localized increases in fish and crustacean density.

<http://tethys.pnnl.gov/publications/marine-mammals-trace-anthropogenic-structures-sea>

Extensive Open Ocean Aquaculture Development Within Wind Farms in Germany: The Prospect of Offshore Co-Management and Legal Constraints – Buck et al.

In the offshore region of Germany, human activity is increasing in type and intensity. Larger portions of the sea are sectioned off, dedicated for specific, often exclusive uses that cause rising conflicts between interests groups. One solution calls for stakeholder integration and the multifunctional use of space.

<http://tethys.pnnl.gov/publications/extensive-open-ocean-aquaculture-development-within-wind-farms-germany-prospect>

Documentary Summary of the Environmental Impact of Renewable Marine Energy – Sotta

Suitable sites are selected by the promoters based on technical criteria: depth, reasonable distance from the coast, near a landfall point, nature of the seabed, etc. These sites could correspond with areas important for the good functioning of ecosystems (such as spawning and nursery) or pathways of migratory species. Generally, the coastal zone is a key area for the whole of the food chain (plankton, fish and invertebrates, marine mammals, birds).

<http://tethys.pnnl.gov/publications/documentary-summary-environmental-impact-renewable-marine-energy>

Offshore Marine Renewable Energy Devices as Stepping Stones Across Biogeographical Boundaries – Adams et al.

We used coupled biological and hydrodynamic models to investigate the spread of intertidal marine organisms with pelagic larvae (such as barnacles or gastropods) in the region around south-western Scotland. We assessed the impact of novel habitat on dispersal and its role in allowing transgression of physical barriers.

<http://tethys.pnnl.gov/publications/offshore-marine-renewable-energy-devices-stepping-stones-across-biogeographical>

Analysis of the Impacts of Wave Energy Converter Arrays on the Nearshore Wave Climate – O’Dea et al.

This study analyzes the impacts of offshore Wave Energy Converter (WEC) arrays on far-field waves and on nearshore wave-induced hydrodynamic forcing for a variety of array designs and incident wave conditions. The main objective of the study is to provide general conclusions on the nearshore impacts of WEC arrays in order to facilitate the assessment of future field test sites.

<http://tethys.pnnl.gov/publications/analysis-impacts-wave-energy-converter-arrays-nearshore-wave-climate>

Most Recent Blog Article

A new blog post will be available on *Tethys* every 2-4 weeks, so please rate and comment on the blog to engage with your colleagues. If you are interested in submitting a blog article, reply to tethys@pnnl.gov. Check out our most recent article:

Animals Interacting with Wave and Tidal Devices

As wave and tidal devices are deployed in coastal waters and estuaries in countries around the world, there is intense interest in understanding how marine mammals, sea birds, fish, and sea turtles may interact with the machines underwater. Will animals be at risk from rotating tidal turbine blades? Will they be attracted to the foundations, anchors, and devices? Will they sense the mooring lines and avoid them? All these questions have prompted researchers to explore effective methods for viewing interactions between animals and a variety of tidal and wave energy generating devices. Active acoustics, sometimes called underwater sonar, are among the key types of instruments that researchers are using to “see” animals in close proximity to devices.

<http://tethys.pnnl.gov/blog/animals-interacting-wave-and-tidal-devices>

Current News

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

Energy Company that Pulled Out in Maine Invests \$2.5 Billion in UK Offshore Wind Farm

Statoil, a Norwegian company that planned to build a major wind farm off Maine’s coast, but then pulled the plug last fall after political maneuvering by Gov. Paul LePage, has invested \$2.5 billion in a wind project off the shores of the United Kingdom.

<http://www.pressherald.com/2014/07/15/energy-company-that-pulled-out-of-maine-last-year-invests-2-5-billion-in-scotland-offshore-wind-farm/>

World's First Community Owned Tidal Energy Plant Operating In Scotland

Scotland is home to the world's first community-owned tidal power plant, now powering about 30 homes, a locally-owned ice plant and industrial area. Installed early this year, the tide flows past a rotating turbine propeller that sits 100-feet deep on the sea floor.

<http://www.sustainablebusiness.com/index.cfm/go/news.display/id/25825>

A Boost for Offshore Wind Energy? DOI Offers Commercial Leases for Development

Just in case you thought offshore wind energy was dead in the water, there has been a lot of activity in the past two months. Earlier this month the Department of the Interior announced that almost 80,000 acres off the Maryland shore will be available for commercial wind energy development in a competitive lease sale.

http://www.smartgridnews.com/artman/publish/Technologies_DG_Renewables/A-boost-for-offshore-wind-energy-DOI-offers-commercial-leases-for-development-6645.html/

Navy Expands Investment at Wave Energy Test Site

Work at the Wave Energy Test Site (WETS) located off Marine Corps Base Hawai‘i at Kāne‘ohe has received an infusion of \$9 million from the U.S. Navy. The funds, from the Naval Facilities Engineering Command, are directed to the Applied Research Laboratory at the University of Hawai‘i (ARL/UH), working with UH Mānoa’s Hawai‘i Natural Energy Institute (HNEI), to support industry testing of wave energy conversion devices.

<http://www.hawaii.edu/news/2014/07/21/navy-expands-investment-at-wave-energy-test-site/>