



# Tethys Blast

January 23, 2015

Welcome to the second January edition of the bi-weekly Tethys Blast!

Tethys Blasts 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.

## Provide Feedback to Help Improve Tethys

Based on your interest in renewable energy, we would like to invite you to provide a review of [Tethys](#), the online Knowledge Management System designed to house and organize information and research on environmental effects of renewable energy – e.g., marine and hydrokinetic energy, offshore wind energy, and land-based wind energy. Tethys is intended for a broad audience of users including international marine energy technology and project developers, researchers, regulatory and resource management agency staff, and stakeholders.

Please take a minute to respond to this very, very quick survey and provide our team with assistance in improving Tethys:

<https://www.surveymonkey.com/s/WLQ9723>

And if you are not familiar with Tethys, you might like to browse a bit:

<http://tethys.pnnl.gov>

# New Articles on Tethys

A total of 15 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:

## **[Assessment of Fish and Wildlife Presence Near Two River Instream Energy Conversion Devices in the Kvichak River, Alaska in 2014](#) – Nemeth et al. – Dec 2014**

Two river instream hydrokinetic (RISEC) devices were installed in the Kvichak River, Alaska in 2014 to demonstrate the ability to generate hydroelectric power. Fish and wildlife were monitored nearby to describe their presence and to document any negative effects from the devices. Fish were monitored using underwater video cameras and lights mounted to each device; wildlife (birds and mammals) were monitored using shore-based surveys by trained biologists and technicians.

## **[Renewables-To-Reefs? Decommissioning Options for the Offshore Wind Power Industry](#) – Smyth et al. – Jan 2015**

This paper considers the main decommissioning options – partial or complete removal of all components. A SWOT analysis shows environmental and economic benefits in partial as opposed to complete removal, especially if habitat created on the structures has conservation or commercial value. Benefits (and repercussions) are defined in terms of losses and gains of ecosystem services and societal benefits.

## **[Marine Defaunation: Animal Loss in the Global Ocean](#) – McCauley et al. – Jan 2015**

Marine defaunation, or human-caused animal loss in the oceans, emerged forcefully only hundreds of years ago, whereas terrestrial defaunation has been occurring far longer. Though humans have caused few global marine extinctions, we have profoundly affected marine wildlife, altering the functioning and provisioning of services in every ocean. Current ocean trends, coupled with terrestrial defaunation lessons, suggest that marine defaunation rates will rapidly intensify as human use of the oceans industrializes.

## **[Best Practices for Monitoring Environmental Effects of Marine Energy Devices](#) – Copping et al. – Dec 2015**

As the wave and tidal industry plans for initial commercial deployments, significant uncertainties remain about the risks to marine animals and habitats from wave and tidal devices; this uncertainty continues to slow and complicate siting and permitting (consenting) processes. Advancement of the industry can be simplified if the level of uncertainty is reduced, allowing regulators and the marine energy industry to focus monitoring on a small set of interactions for which risk remains uncertain.

## **Windpower and Grey Seals: An Impact Assessment of Potential Effects by Sea-Based Windpower Plants on a Local Seal Population – Sundberg and Söderman – Dec 1999**

The impact of five sea-based windpower plants on two haulout sites for grey seals on south-western Gotland, in the Baltic Sea, was analysed. Data on seal numbers was collected on a regular basis during the initial stages of the project from summer 1996, continuing during the building (autumn 1997) and running of the windpower plants (from spring 1998) until the end of June 1999. Additional observational data from earlier years was also available.

## Current News

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

### **German Offshore Wind Energy Flies Past 1 GW Mark**

By the time New Year's Day ticked over in Germany, the country had 258 offshore wind turbines feeding power into the national grid, with a total capacity of 1,049.2 MW. According to the figures released Thursday, 142 of the turbines totalling 528.9 MW were connected to the grid in 2014, representing a greater than 50% increase on the previous year.

### **Carnegie completes onshore plant for Perth wave energy project**

Australian firm Carnegie Wave Energy Ltd (ASX:CWE) said Wednesday it has completed the onshore power station for its Perth wave energy project off Garden Island. The onshore plant is now ready to be hooked to the electricity grid at HMAS Stirling, subject to clearance by state-owned utility Western Power.

### **America's first offshore wind project dealt major setback after utilities bolt**

An ambitious and controversial push to erect America's first offshore wind farm has been dealt what some call a potentially "fatal" blow after two utility companies pulled out of commitments to buy energy from the lagging operation. The \$2.6 billion Cape Wind project, a private operation benefiting from millions in federal subsidies, is attempting to pioneer offshore wind energy in pursuit of an eco-friendly, sustainable energy supply.

### **Israeli WERPO Signs Deal With Beijing Capital Group to Develop Sea Wave Energy**

Israeli company WERPO, a developer of renewable sea wave energy technology, has signed an agreement with Beijing Capital Group (BCG) to exclusively represent it in China. WERPO believes that this agreement has vast potential in promoting its sea wave energy systems across China and beyond.