



# Tethys Blast

June 26, 2015

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

Tethys Blasts 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.

We need your help to ensure that Tethys functions at peak performance! Please notify us of any errors or broken links you come across within Tethys. The Tethys team is continuously on the lookout for these, but a short message with the name of the page or URL is extremely helpful! You can provide comments in the comment box on the bottom of each page. Thanks in advance!

## US DOE Announces Request for Information

The United States Department of Energy's (DOE) Water Power Program is seeking feedback from the marine and hydrokinetic (MHK) industry, academia, research laboratories, government agencies, and other stakeholders regarding the program's activities and priorities in MHK environmental monitoring instrumentation development and field testing opportunities. The Water Power Program is committed to supporting technological innovations that facilitate the growth of the MHK industry in addition to funding research and development that addresses market barriers that affect the deployment and operation of MHK devices.

Responses to this Request for Information (RFI) are due by August 7, 2015.

[More information about this RFI is available on Tethys.](#)

# New Articles on Tethys

A total of **46 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 prominent documents that can be accessed through the accompanying Tethys links:

## [Hearing Thresholds of a Harbor Porpoise \(\*Phocoena phocoena\*\) for Playbacks of Seal Scarer Signals, and Effects of the Signals on Behavior](#) - Kastelein et al. 2015

Acoustic Mitigation Devices (AMDs) are used to deter marine mammals from construction sites, in order to prevent hearing injury by offshore pile driving noise. To estimate the distance at which two AMDs designed as ‘seal scarers’ (Ace Aquatec and Lofitech) are detected by harbor porpoises, the 50% hearing detection thresholds for playbacks of recordings of the AMD sounds were assessed.

## [Comparison of Manual and Semi-Automatic Underwater Imagery Analyses for Monitoring of Benthic Hard-Bottom Organisms at Offshore Renewable Energy Installations](#) - Saskov et al. 2015

The construction of new offshore wind farms is one of the strategies to fulfill growing demands for “green” renewable energy. Underwater imagery is an important tool in the environmental monitoring of offshore renewable energy installations, especially in rocky benthic environment where traditional techniques are not applicable. Underwater video from the high energy Norwegian Sea coast was used for this study. Traditional manual point-based benthic cover estimations from selected frames were tested against a semi-automatic approach which involved making mosaic images from underwater videos.

## [Environmental Impact Assessment for an OTEC Plant in Martinique Island](#) - Auvray et al. 2015

The Ocean Thermal Energy Conversion (OTEC) is a marine renewable energy system that uses the temperature difference between the cold deep waters and warm surface waters to produce electricity. DCNS, a world-expert in naval defence and an innovator in energy has conducted technical, juridical and environmental feasibility studies of a plant offshore Martinique under an agreement with the Regional Council.

## [The Effects of Noise on Aquatic Life](#) - Popper and Hawkins 2012

These proceedings are the extended abstracts of the papers presented at the 2010 Second International Meeting on the Effects of Noise on Aquatic Life that took place in August in Cork, Ireland. The meeting brought together 248 scientists, regulators, and representatives from industry and environmental groups, representing 21 countries from all continents, to hear papers and discuss a broad range of topics focused on underwater sound and its effects on organisms living in the aquatic environment.

## **Integrated Environmental Mapping and Monitoring, a Methodological Approach to Optimise Knowledge Gathering and Sampling Strategy - Nilssen et al. 2015**

New technology has led to new opportunities for a holistic environmental monitoring approach adjusted to purpose and object of interest. The proposed integrated environmental mapping and monitoring (IEMM) concept, presented in this paper, describes the different steps in such a system from mission of survey to selection of parameters, sensors, sensor platforms, data collection, data storage, analysis and to data interpretation for reliable decision making. The system is generic; it can be used by authorities, industry and academia and is useful for planning- and operational phases.

## Current News

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

### **Tocado Installs Three Turbines in Dutch ‘Afsluitdijk’**

Tocado Tidal Turbines, producer of tidal and free-flow water turbines, has installed three of its T1 tidal turbines in the Dutch ‘Afsluitdijk’, a 32 km long primary sea defence. The three turbines are the first to be installed closely together in an array. Dutch Tidal Testing Centre, a long-standing partner of Tocardo, will manage the project.

### **USA: Icebreaker OW Project to Use Mono Bucket Foundations**

The Lake Erie Energy Development Corporation (LEEDCo) announced today that the Icebreaker offshore wind project, planned for the Ohio waters of Lake Erie, will utilize Mono Bucket foundations, developed by Denmark-based Universal Foundation (UF).

### **Wave energy device activated off Hawaii’s Kaneohe Bay**

Northwest Energy Innovations has deployed its wave energy device in waters off Marine Corps Base Hawaii in Windward Oahu, beginning a year-long test to commercialize this type of technology, the company said. The “Azura” wave energy device is located at the U.S. Navy’s Wave Energy Test Site, or WETS, at Kaneohe Bay.

### **DONG Energy to build Race Bank Offshore Wind Farm in the UK**

DONG Energy has decided to construct Race Bank Offshore Wind Farm, located in the Greater Wash area, approximately 27 km off the east coast of Britain. Race Bank will have a capacity of up to approx. 580MW and is expected to be fully commissioned in 2018. The wind farm will be constructed and operate under the UK’s ROC scheme (1.8 ROC). Siemens has been chosen as the preferred supplier for the proposed delivery of 91 Siemens 6MW wind turbines.