



# Tethys Blast

November 28, 2014

Welcome to another November 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.

## New Broadcast on Tethys

Webinars, conferences, expert forums, and workshops are posted on Tethys when the material is freely available. On November 1 2014, Annex IV hosted a one-day workshop in Wolfville Nova Scotia to determine data needs and availability for siting and permitting marine energy devices.

[The presentations and video are available here.](#)

## New Articles on Tethys

A total of 9 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:

**Regime Shifts in Exploited Marine Food Webs: Detecting Mechanisms Underlying Alternative Stable States using Size-Structured Community Dynamics Theory – Gårdmark et al**

Many marine ecosystems have undergone ‘regime shifts’, i.e. abrupt reorganizations across trophic levels. Establishing whether these constitute shifts between alternative stable states is of key importance for the prospects of ecosystem recovery and for management. We show how mechanisms underlying alternative stable states caused by predator–prey interactions can be revealed in field data, using analyses guided by theory on size-structured community dynamics. This is done by combining data on individual performance (such as growth and fecundity) with information on population size and prey availability.

**A Gis-Based System for Assessing Marine Water Quality Around Offshore Platforms – Lu et al**

In this study, a GIS-based system (MWQ-FES) is developed for marine water quality assessment around offshore oil platforms. The developed method consists of a fuzzy risk assessment model, a eutrophication assessment module, a heavy metal assessment module, a dynamic database, the ArcGIS Engine, and a graphical user interface (GUI). The developed GIS-based GUI system integrates the fuzzy risk calculation, eutrophication risk assessment and heavy metal risk evaluation and both spatially and visually presents the results in the form of contour maps and color-coded maps that indicate the risk levels.

**Grey Seals use Anthropogenic Signals from Acoustic Tags to Locate Fish: Evidence from a Simulated Foraging Task – Stansbury et al**

Anthropogenic noise can have negative effects on animal behaviour and physiology. However, noise is often introduced systematically and potentially provides information for navigation or prey detection. Here, we show that grey seals (*Halichoerus grypus*) learn to use sounds from acoustic fish tags as an indicator of food location.

**Environmental Impacts of Renewable Energy – Spellman**

This book discusses both the merits and the physical, mechanical, electrical, and environmental limitations of renewable sources of energy. It discusses the pros and cons of renewable energy, addresses environmental issues and concerns, and determines ways to avoid or minimize these impacts. In 20 randomized trials each, 10 grey seals individually explored 20 foraging boxes, with one box containing a tagged fish, one containing an untagged fish and all other boxes being empty.

# Current News

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

## [Operational Wave Energy Project](#)

Wave energy developer Carnegie Wave Energy Limited is pleased to announce that the first of its new generation CETO 5 wave energy units has been successfully installed and is operating at its Perth Wave Energy Project site off Garden Island, Western Australia.

## [This Auction could Triple U.S. Offshore Wind Energy Real Estate](#)

Offshore wind energy generation always seems to be a distant reality, for the United States at least. But the development pace could pick up with the planned auction of over 742,000 acres off Massachusetts that could produce enough electricity to power half of the homes in that state, said the U.S. Department of Interior on Monday.

## [Administrators Slash 70 Percent of Workforce from Foremost Wave Energy Company](#)

A wave energy company has had its workforce slashed by over 70 percent after administrators enforced widespread redundancies. Pelamis Wave Power, widely recognised as the foremost wave energy technology company in the world, went into administration last Friday after failing to secure adequate funding to develop its technology.

## [Construction Phase of Gwynt y Môr Offshore Wind Farm Completed](#)

The construction phase of the Gwynt y Môr Offshore Wind Farm has been completed. Following the installation of the final array cable at the 576MWm site, off the North Wales coast, the next milestone is the final commissioning and operation of all remaining 41 turbines.