



March 18, 2016

Welcome to the latest bi-weekly Tethys Blast, which will update you with new information available on Tethys, new features of Tethys, and current news articles of international interest on wind and marine 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 wind and marine renewable energy development.

## Webinar on Collision Risk in Scotland

Annex IV hosted a webinar on March 15 about understanding and resolving collision risk between marine mammals and tidal turbines in Scotland. Information including presentations and a video recording are available on Tethys: <http://tethys.pnnl.gov/annex-iv-8>.

## Tethys Videos

Recent improvements to Tethys have synced video capabilities with YouTube, allowing better reliability and functionality. The Tethys YouTube channel can be found [here](#). Recently, Tethys linked to several brief environmental interviews hosted by Naturvårdsverket (Swedish Environmental Protection Agency):

- [Wind Power, Birds and Bats](#)
- [Effects of Wind Power on Marine Life](#)
- [The Effects of Wind Power on Land-Dwelling Mammals](#)
- [The Effects of Wind Power on Human Interests](#)

## New Documents on Tethys

A total of 26 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 wind and marine renewable energy. The listings below are short introductions to several new or popular documents that can be accessed through the accompanying Tethys links:

**[Habitat-Based Cetacean Density Models for the U.S. Atlantic and Gulf of Mexico](#) - Roberts et al. 2016**

Cetaceans are protected worldwide but vulnerable to incidental harm from an expanding array of human activities at sea. Managing potential hazards to these highly-mobile populations increasingly requires a detailed understanding of their seasonal distributions and habitats. Pursuant to the urgent need for this knowledge for the U.S. Atlantic and Gulf of Mexico, we integrated 23 years of aerial and shipboard cetacean surveys, linked them to environmental covariates obtained from remote sensing and ocean models, and built habitat-based density models for 26 species and 3 multi-species guilds using distance sampling methodology.

**[Monitoring Bat Activity at the Dutch EEZ in 2014](#) - Lagerveld et al. 2015**

For quite some time there have been indications of bat movements over the North Sea. Observers of bird migration at the Dutch coast regularly report bats flying in from sea (Lagerveld et al. 2014b). Bats have also been observed during surveys at the North Sea and have been found on oil & gas platforms, ships and remote islands (Walter 2007, Boshamer & Bekker, 2008).

**[TeraWatt Position Papers: A "Toolbox" of Methods to Better Understand and Assess the Effects of Tidal and Wave Energy Arrays on the Marine Environment](#) - Murray et al. 2015**

The project consortium formed under the Marine Alliance for Science and Technology for Scotland (MASTS) consists of scientists from Heriot Watt University, University of Edinburgh, University of Strathclyde, University of the Highlands and Islands, University of Swansea and the University of St Andrews together with Marine Scotland Science.

**[Role of Benthic Habitat Distribution Data in Coastal Water Wind Turbine Site Selection](#) - Sahla et al. 2016**

Environmentally concerned coastal zone management and marine spatial planning should minimize the risk of damaging sensitive benthic habitats. Since reliable maps of the underwater nature are scarce, planners often have to work with inconsistent data. We compare the outcomes of three hypothetical planning schemes with dissimilar input benthic ecology datasets in order to define suitable sites for shallow water wind turbine placement.

**[The Turbulent Wake of a Monopile Foundation](#) - Rogan et al. 2016**

An experimental programme is presented, examining the turbulent wake of a monopile foundation in a current. Velocity was recorded across an extensive domain downstream of a model monopile in a 0.5 m deep basin, using an acoustic Doppler velocimeter array.

# Current News

Current news articles of international interest on wind and marine renewable energy include:

## [Scientists track down origin of bats killed by wind turbines using chemical fingerprints](#)

A new study tracks down the origin of bats killed by wind turbines in the Appalachian region using stable isotope and genetic analysis in hopes of better understanding the risks to affected populations.

## [Australia's Carnegie to build biggest wave energy project in UK](#)

Perth-based Carnegie Wave Energy says it is likely to build its biggest wave energy project to date in the UK, with a planned 10-15MW project to tap into generous government support on tariffs and grants in what is emerging as the biggest wave energy market in the world.

## [Waters Off New York Opened For Offshore Wind Farm](#)

The U.S. Department of Interior has created an 81,130 acre "wind energy area" in the open Atlantic about 11 miles south of Long Island. The move is part of the Obama administration's efforts to address climate change, in part by leasing federally-controlled waters off the East Coast for offshore wind power development.

## [New Design Methods for Wave Energy Technologies](#)

Arup has been commissioned by Wave Energy Scotland (WES) to examine the analysis tools and processes suitable for robust structural design of energy devices, providing recommendations and best practice for future projects.

## [TRIAXYS Wave Buoys selected for Rampion Offshore Wind Farm](#)

AXYS Technologies Inc. has announced that three TRIAXYS Wave & Current Buoys were selected by Partrac Ltd as part of their recent metocean support services contract for the Rampion Offshore Wind farm. Partrac has been contracted to manage the supply, deployment, maintenance and delivery of metocean monitoring buoys throughout the wind farm's construction phase.