



Tethys Blast

November 14, 2014

Welcome to the first 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.

Annex IV Partnering with EWTEC 2015

We are pleased to announce that Annex IV will partner with EWTEC 2015 – the **European Wave and Tidal Energy Conference** – to be held in Nantes France, September 6-11 2015.

By joining with EWTEC, Annex IV has the opportunity to enhance the environmental track at a major international conference, and further the work of Annex IV by bringing together additional researchers to help solve some of the environmental questions surrounding wave and tidal development.

If you wish to contribute, abstracts are due for EWTEC by **December 1st**. Information on the conference can be found at: <http://www.ewtec.org/ewtec2015/>.

New Articles on Tethys

A total of 25 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:

[Accessing the Underwater Acoustics of the World’s Largest Vibration Hammer \(OCTA-KONG\) and Its Potential Effects on the Indo-Pacific Humpbacked Dolphin \(*Sousa chinensis*\)](#) – Wang et al

Anthropogenic noise in aquatic environments is a worldwide concern due to its potential adverse effects on the environment and aquatic life. The Hongkong-Zhuhai-Macao Bridge is currently under construction in the Pearl River Estuary, a hot spot for the Indo-Pacific humpbacked dolphin (*Sousa chinensis*) in China. The OCTA-KONG, the world’s largest vibration hammer, is being used during this construction project to drive or extract steel shell piles 22 m in diameter.

[EMEC Billia Croo Wave Test Site: Wildlife Observations Project Annual Report](#) – Marine Scotland

A key concern expressed by policy makers, regulators and environmental stakeholders about deployment of marine energy devices in open waters relates to the possibility of negative impacts they may have on marine mammals and diving birds. The potential for direct collision with such devices, or harmful effects caused by their presence, including the potential for displacement of marine wildlife from habitual waters, are issues which need to be addressed.

[Applicability of the “Frame of Reference” Approach for Environmental Monitoring of Offshore Renewable Energy Projects](#) – Garel et al

This paper assesses the applicability of the Frame of Reference (FoR) approach for the environmental monitoring of large-scale offshore Marine Renewable Energy (MRE) projects. The focus is on projects harvesting energy from winds, waves and currents. Environmental concerns induced by MRE projects are reported based on a classification scheme identifying stressors, receptors, effects and impacts.

[Understanding Bird Collisions at Wind Farms: An Updated Review on the Causes and Possible Mitigation Strategies](#) – Marques et al

Bird mortality due to collisions with wind turbines is one of the major ecological concerns associated with wind farms. Data on the factors influencing collision risk and bird fatality are sparse and lack integration. This baseline information is critical to the development and implementation of effective mitigation measures and, therefore, is considered a priority research topic.

[Investigation of Spatial Variation of Sea States Offshore Humboldt Bay, CA Using a Hindcast Model](#) – Dallman et al

Spatial variability of sea states is an important consideration when performing wave resource assessments and wave resource characterization studies for wave energy converter (WEC) test sites and commercial WEC deployments. This report examines the spatial variation of sea states offshore of Humboldt Bay, CA, using the wave model SWAN.

Current News

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

[A 4 MW Tidal Energy Array could be Deployed by 2015 in Canada](#)

A newly formed joint venture called Cape Sharp Tidal intends to deploy a 4 MW tidal array in the Bay of Fundy in 2015, on of world's first multi-megawatt arrays of interconnected tidal turbines.

[Blades for World's Most Powerful Offshore Wind Turbine to Build in UK](#)

Denmark's Vestas has chosen the Isle of Wight to build the blades for the world's most powerful offshore wind turbine. The 260ft blades will be made for the eight-megawatt (MW) V164 wind turbine, which is being produced by MHI Vestas Offshore, a joint venture between Vestas and Japan's Mitsubishi Heavy Industries.

[£38,000 Prize Offers Opportunity for Marine-Energy Researchers](#)

Marine-energy developers have been offered the chance to compete for a week of free testing – worth £38,000 (\$61,000) – with what is said to be the world's most sophisticated ocean simulator. The FloWave Prize, or FPrize, is aimed at researchers studying for postgraduate degrees or beyond, who must put forward their very best new ideas to be tested at scale. Edinburgh University's FloWave research facility is an 82 feet circular pool that can recreate complex waves and fast currents for projects in the UK, North America and elsewhere.

[Massive 660 MW Walney Offshore Wind Farm Extension Approved](#)

The UK Government has just approved the Walney Extension offshore wind farm, an extension of the existing 367 MW Walney Offshore Wind Farm, which could add another 660 MW — and up to 750 MW — making it one of the largest offshore wind farms, and perhaps tripling its capacity.