Tethys Blast

October 31, 2014

Welcome to another October edition of the Tethys Blast! A new Tethys Blast will be sent to you every 2 weeks, unless you choose to unsubscribe; instructions to unsubscribe are at the bottom of this email.

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 Articles on Tethys

A total of 12 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:

Reference Model 6 (RM6): Oscillating Wave Energy Converter – Bull et al

> In this report, a conceptual design for an Oscillating Water Column Wave Energy Converter (WEC) device appropriate for the modeled reference resource site was identified, and a detailed backward bent duct buoy (BBDB) device design was developed using a combination of numerical modeling tools and scaled physical models.

Strategic Environmental Assessment (SEA) for Wind Energy Planning: Lessons from the United Kingdom and Germany – Phylip-Jones & Fischer

> This paper reports on SEA applied in the wind energy sector in the UK and Germany. Based on a review of 18 SEAs, it is found that the quality of SEA documentation is variable, with over a third of them being deemed unsatisfactory. Furthermore, SEA processes are conducted to varying degrees of effectiveness, with scoping a strength but impact prediction and mitigation weaknesses.

Source Levels of the Underwater Calls of a Male Leopard Seal - Rogers

> Leopard seals (Hydrurga leptonyx) are top predators in the Antarctic ecosystem. They produce stereotyped calls as part of a stylized underwater vocal display. Understanding of their acoustic behavior is improved by identifying the amplitude of their calls.

Numerical Modeling of the Effect of Tidal Stream Turbines on the Hydrodynamics and the Sediment Transport – Application to the Alderney Race (Raz Blanchard), France – Thiébot et al

> A regional 2DH hydrodynamic model is used to estimate the tidal stream resource of a site located in a macrotidal environment with extreme tidal velocities. The study site is the Alderney Race (Raz Blanchard in French) which is a straight located in the English Channel between the Alderney Island and La Hague cape (France). The estimation of the resource is used to build two realistic tidal energy extraction scenarios consisting in placing a 290 MW tidal turbine array in two different areas.

Mitigating Wind-Turbine Induced Avian Mortality: Sensory, Aerodynamic and Cognitive Constraints and Options – May et al

> Development of effective and practical measures to reduce bird mortality related to offshore and onshore wind energy is therefore paramount to avoid any delay in consenting processes. The expected efficacy of post-construction mitigation measures for wind-turbine induced avian mortality can be expected to be species-specific with regard to audible, optical and biomechanical constraints and options.

Current News

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

Iberdrola's First Offshore Wind Farm Goes Online Early

> Iberdrola has announced that West of Duddon Sands, the company's first offshore wind farm, is now fully online - and more than two months ahead of schedule. The 389 MW offshore project is a joint venture between Iberdrola's ScottishPower Renewables subsidiary and Dong Energy in the Irish Sea.

U.S. Navy Awards $8m for Tidal Energy

> The U.S. Navy has committed to get half of its energy from renewable sources by the year 2020. One element of that strategy will be looking to extract energy from tides, currents and waves. The University of Washington (UW) is helping to reach that goal with an $8 million, four-year contract from the Naval Facilities Engineering Command, or NAVFAC, to develop marine renewable energy for use at the navy's facilities worldwide.

Scottish Power May Cut Size of Offshore Wind Farm

> British energy company Scottish Power, owned by Spain's Iberdrola, said it might scale back the capacity of an offshore wind farm it plans to build off the English east coast because the government's subsidy budget is too low.

Van Oord Trials Tidal Energy Platform

> The platform will be moored near Texel in the Wadden sea off the Netherlands and used as a trial for remote locations worldwide, such as islands in Indonesia, Philippines or the Pacific. It is of a modular design and uses a new type of permanent mooring lines. It will be the first time that a floating tidal platform is used for electricity production into the Dutch grid and will be operational in the first half of 2015.