TETHYS BLAST

August 5, 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.

2016 INORE North American Symposium

The International Network on Offshore Renewable Energy (INORE) is holding their annual North American symposium at the University of Maine from October 29 - November 2. Young professionals and students in offshore renewable energy are invited to attend and discuss technology engineering, environmental monitoring, resource assessment, and policy. Abstracts submission deadline is August 26. To apply, please visit www.bit.do/Inore2016NorthAmerica.

New Documents on Tethys

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:

Prognosis and Assessment of Bird Collision Risks at Wind Turbines in Northern Germany PROGRESS - Grunkorn et al. 2016

> The research project “Prognosis and assessment of collision risks of birds at wind turbines in northern Germany” (PROGRESS) deals with bird collisions, a central area of conflict between the development of further wind energy use and nature conservation. Since many bird and all bird of prey species are strictly protected by EU legislation, collisions present a legally important conservation aspect in the permission process. This research & development project focused on the extent of mortality at wind turbines.

Harbour Porpoise Distribution can Vary at Small Spatiotemporal Scales in Energetic Habitats - Benjamins et al. 2016

> Marine habitat heterogeneity underpins species distribution and can be generated through interactions between physical and biological drivers at multiple spatiotemporal scales. Passive acoustic monitoring (PAM) is used worldwide to study potential impacts of marine industrial activities on cetaceans, but understanding of animals' site use at small spatiotemporal scales (<1 km, <1 day) remains limited. Small-scale variability in vocalising harbour porpoise (*Phocoena phocoena*) distribution within two Scottish marine renewable energy development (MRED) sites was investigated by deploying dense arrays of C-POD passive acoustic detectors at a wave energy test site (the European Marine Energy Centre [Billia Croo, Orkney]) and by a minor tidal-stream site (Scarba [Inner Hebrides]).

Sveti Nikola Wind Farm 2010 Bat Surveys Report - RSK Environment Ltd

> This report provides details of bat surveys undertaken in 2010 at the Sveti Nikola Wind Farm in Kavarna, Bulgaria, on behalf of AES Wind Operations Europe. The report provides a comparison of the results of the 2009 (pre-operation but post-construction) surveys with the 2010 (during operation) surveys. It also provides recommendations for future survey work at the site.

Assessing Auditory Evoked Potentials of Wild Harbor Porpoises (*Phocoena phocoena*) - Ruser et al. 2016

> Testing the hearing abilities of marine mammals under water is a challenging task. Sample sizes are usually low, thus limiting the ability to generalize findings of susceptibility towards noise influences. A method to measure harbor porpoise hearing thresholds in situ in outdoor conditions using auditory steady state responses of the brainstem was developed and tested. The method was used on 15 live-stranded animals from the North Sea during rehabilitation, shortly before release into the wild, and on 12 wild animals incidentally caught in pound nets in Denmark (inner Danish waters).

Movements of seals from Rødsand seal sanctuary monitored by satellite telemetry. Relative importance of the Nysted Offshore Wind Farm area to the seals - Dietz et al. 2003

> This report documents the capture and tagging of ten harbour and grey seals from the Rødsand seal sanctuary, Southeast Denmark. The investigation provides information on site fidelity, migration and Kernel home range of the seals prior to the construction of the wind farm. It also serves as a baseline study for future determination of changes in habitat selection by seals during and after construction of the wind farm.

Current News

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

Wave-energy Tests Underway at Marine Base

> The Navy, the Marine Corps, representatives from energy companies and local lawmakers joined together Tuesday at a blessing ceremony for a wave-energy test site at Marine Corps Base Hawaii, Kaneohe Bay. The Navy and Marine Corps are testing different wave-energy conversion technologies that connect to the grid at a wave-energy test site (WETS) approximately 2.5 miles from shore.

Dong Energy Says Brexit Won't Affect Wind Power in U.K.

> Danish utility Dong Energy, part-owned by Goldman Sachs, said Thursday it expected the U.K. to continue supporting offshore wind power in the wake of the country's vote to leave the European Union, after the firm posted a second-quarter net loss despite strong underlying growth.

Australia's wave energy inventors look for a break

> Carnegie's "CETO 5" system of three submerged buoys off Garden Island in Western Australia has been pulled out of the water to be eventually replaced by CETO 6, the next iteration of the technology which is expected to be four times as powerful, from 240kW to 1000kW the company says. The previous deployment was slightly inside a reef but the next generation will be farther out, where the waves are bigger. One of the limitations of CETO 5 was having to pump water onshore, an obvious point of loss. Instead of pumping pressurised water on shore to drive a turbine the new device will generate power inside its buoyant actuator.

First offshore wind turbine installed in U.S. waters

> Deepwater Wind has installed the first offshore wind turbine off the U.S. coast near Block Island, Rhode Island, marking a major milestone in alternative energy and wind power. Miles Grant, a spokesman for the National Wildlife Federation, touted the installation as part of the 30-megawatt project as a pivotal moment in the development of offshore energy.

In-depth study on global and China wind turbine industry, 2016-2020 illuminated by new report

> The wind power market will continue to be buoyant during the 13th Five-Year Plan period (2016-2020). The global total installed wind power capacity is expected to surpass 700GW by 2020, of which, China will reach around 250GW.