



# Tethys Blast

August 8, 2014

Welcome to the August edition of the Tethys Blast! A new Tethys Blast will be sent to you every 2-4 weeks, unless you choose to unsubscribe; instructions to unsubscribe are at the bottom of this email.

Tethys Blast 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.

This Tethys Blast also contains the first of two attachments about “Tips for Tethys”. Learn how to effectively use the tools available on Tethys. [See the whole article on Tethys.](#)

## New Articles on Tethys

A total of 31 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:

[Assessing the Impact of Underwater Sounds on Fishes and Other Forms of Marine Life](#) – Hawkins and Popper

While most concerns have been focused on effects on marine mammals, similar issues arise with other marine life including fishes, turtles, and invertebrates. While the basic principles we discuss, however, are applicable to all marine groups, the focus of this paper will be on fishes since that is our particular area of research interest.

**Tidal Technology Development and Deployment in the UK: Tidal Technologies: Key Issues Across Planning and Development for Environmental Regulators** – Bell and Side

Renewable energy technologies are commonly seen as a panacea for the environmental problems associated with power generation, not just in terms of greenhouse gas emissions but also by virtue of other impacts such as pollution and habitat destruction. This may well be true of wave and tidal energy developments, but the fact is that there are few direct observations from which to judge the nature and scale of impacts.

**The Potential of Offshore Wind Farms to Act as Marine Protected Areas** – Ashley et al.

As offshore windfarm (OWF) construction in the UK is progressing rapidly, monitoring of the economic and ecological effects of these developments is urgently needed. This is to enable both spatial planning and where necessary mitigation in an increasingly crowded marine environment.

**Using Medaka Embryos as a Model System to Study Biological Effects of the Electromagnetic Fields on Development and Behavior** – Lee and Yang

The electromagnetic fields (EMFs) of anthropogenic origin are ubiquitous in our environments. The health hazard of extremely low frequency and radiofrequency EMFs has been investigated for decades, but evidence remains inconclusive, and animal studies are urgently needed to resolve the controversies regarding developmental toxicity of EMFs. Furthermore, as undersea cables and technological devices are increasingly used, the lack of information regarding the health risk of EMFs to aquatic organisms needs to be addressed.

**Underwater Hearing Sensitivity of Harbor Seals (*Phoca vitulina*) for Narrow Noise Bands Between 0.2 and 80 kHz** – Kastelein et al.

The underwater hearing sensitivities of two 1.5-year-old female harbor seals were quantified in a quiet pool built specifically for acoustic research, by using a behavioral psychoacoustic technique. The animals were trained to respond when they detected an acoustic signal and not to respond when they did not ("go/no-go" response).

# Most Recent Blog Article

A new blog post will be available on *Tethys* every 2-4 weeks, so please rate and comment on the blog to engage with your colleagues. If you are interested in submitting a blog article, reply to [tethys@pnnl.gov](mailto:tethys@pnnl.gov). Check out our most recent article:

## [Seals and Windfarms in the North Sea](#)

A recent article in *Current Biology* entitled *Marine mammals trace anthropogenic structures at sea* highlights how marine mammals may interact with offshore windfarms... The results were conclusive: the seals are using the wind farm structures to forage. In addition to showing foraging behavior near the wind turbine towers, about half of the seals moved in a grid pattern through the windfarm, efficiently navigating between structures.

# Current News

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

## [PGCIL to Feed Offshore Wind Energy Generated Power to National Grid \(India\)](#)

India state-run transmission utility PGCIL plans to set up a system to feed electricity generated from offshore wind energy projects to the national electricity grid, a top official said on Tuesday.

## [Wales Welcomes One of the World's First Tidal Energy Generators at Ramsey Sound in Pembrokeshire](#)

Up to nine tidal devices could be installed off St Davids Head in Pembrokeshire to form a 10 megawatt array which will generate enough power for around 10,000 homes. The first full-scale tidal energy generator in Wales has been unveiled.

## [Cape Wind Inks Deal for Wind Farm Builders](#)

Cape Wind has announced it has signed a contract with a joint-venture company to build the proposed Nantucket Sound wind farm, supplanting an announcement two years ago that the offshore wind energy developer had selected three other companies for the job.

## [\\$125M Tidal Energy Project Proposed for Cobscook Bay](#)

Halcyon Tidal Power, an Augusta-based company, will be meeting with state and federal regulators in Bangor this week to discuss the technical aspects of a proposed \$125 million tidal energy project in Cobscook Bay. A separate meeting also will be held with local residents in the Pembroke town office on Friday from noon to 2 p.m.