

January 2020 OES-Environmental Meeting of Country Analysts

Online Meeting Notes

Meeting Attendees

January 9, 2020 (8:00-9:30am PST)	January 7, 2020 (3:30-5:00pm PST)
<ul style="list-style-type: none">• Andrea Copping (US, PNNL)*• Anna Redden (Canada)*• Dan Hassleman (Canada)• Nolwenn Quillien (France)*• Teresa Simas (Portugal)*• Anne Marie O'Hagan (Ireland)*• Raeanne Miller (UK)*• Erin Trager (US, BOEM)• Dana McCoskey (US, DOE)• Mikaela Freeman (US, PNNL)• Lysel Garavelli (US, PNNL)• Lenaig Hemery (US, PNNL)• Dorian Overhus (US, PNNL)• Hayley Farr (US, PNNL)	<ul style="list-style-type: none">• Andrea Copping (US, PNNL)*• Mark Hemer (Australia)*• Daisuke Kitazawa (Japan)*• Takero Yoshida (Japan)• Vicky Coy (UK, Catapult ORE)• Mikaela Freeman (US, PNNL)• Dorian Overhus (US, PNNL)• Lenaig Hemery (US, PNNL)• Hayley Farr (US, PNNL)• Levy Tugade (US, PNNL)

*Country Analysts

Agenda

- Portugal Update
- State of the Science 2020 Updates
- OES-Environmental Australia Workshop
- Risk Retirement Guidance Documents
- *Tethys* Peer Review
- Data Transferability Matrix
- OES-Environmental Activities
- Roundtable

Portugal Update

Update presented by Teresa Simas (WavEc)

- Three main projects are being installed or prepared to be installed
 1. WindFloat project was successfully tested until 2015. The next step is a pre-commercial project that is already installed in north Portugal that consists of 3 platforms (25 MW each), which started producing electricity to the grid at the beginning of January 2020. WavEc is conducting part of the environmental monitoring activities, especially on marine mammals and acoustics. Baseline assessments have been completed and the monitoring plan will run for 3 years.

2. WaveRoller has had several technologies tested. The latest project (350 kW), developed by Finnish AW Energy, was installed in Peniche at the end of 2019 and is already producing energy to the grid. There are a number of videos available that show installation. The device is deployed close to shore in an important area for surfers, which has been the biggest problem they have faced, but conflict has been resolved.
 3. Hywave Project, developed by Swedish Corpower, will have its first device installed at the Agucadoura test site in 2020, with 3 more devices added in 2023 (300 kW) and each will be grid connected.
- Currently writing a proposal to continue WESE project in Spain and Portugal, involving several other technologies (including the Hywave project) and monitoring environmental effects of these devices (EMF, underwater noise, and habitat changes (including seabed integrity)).

State of the Science 2020 Updates

Entire SoS will go out for review end of Jan until the 3rd week of February. Please email us with reviewers for the SoS. We need more reviewers for collision risk and environmental monitoring technologies.

- Vicky offered to review the SoS
- Mark – haven't had time to review the last round of chapters. Number of people who would be good as reviewers – Beth (who we met in Sydney) would suggest as a reviewer. Will send a list of people to review.
- Andrea – hope that Daisuke and Takero will review the fish chapter
- Daisuke – reading the draft of the papers now. Asked colleagues to review some chapters, such as MSP, but has not received their review yet.

OES-Environmental Australia Workshop

- Mark – Australia is moving more towards offshore wind projects, which goes along well with MRE
- Andrea – yes MRE can learn from offshore wind, but need to be careful as can be delicate

Risk Retirement Guidance Documents

No comments

Data Transferability Matrix

Once the Matrix has been fully developed, a link will be sent to all OES-Environmental Analysts to provide feedback. We are hoping to send out the link towards the end of January.

- Vicky – clear demonstration
- Mark – the Matrix looks useful

- Teresa – is the available information only the description of the data collected or also raw data and results?
- Mikaela – we won't be hosting raw data, but are providing contacts for each dataset and when possible links to the research or reports that include the data
- Andrea – we can also provide a link to a website where raw data would be available for download, but the main way to access the data is through the contact
- Nolwenn – great progress since ICOE 2018, it looks great. Are receptors based on what is available on *Tethys* or on a selection made by the team?
- Mikaela – we took a lot of time to figure out what variables to use for each stressor, such as the receptors listed are those that are most likely to be affected which is different for each stressor
- Andrea – we tried to keep things relatively broad and not eliminate anything that is likely to be affected, but it can always be refined or updated based on more/new information

Tethys Peer Review

- Mark – is the emphasis on environmental or more general?
- Andrea – only environmental, but we will also be doing the process for *Tethys* Engineering
- Nolwenn – how many questions are there to warn people ahead of time?
- Andrea – 4-5 questions, which will take about 30 minutes

OES-Environmental Activities

- Mark – How many names of Australian regulators did you receive?
- Mikaela – non yet, Will reach out to Mark, Kim, and Beth for regulators in the next few weeks.
- Mark – offered to tentatively present at the September meeting
- Anne Marie – how do you handle the different levels of government (e.g., US and UK)
- Mikaela – the surveys are at a general level (one survey for the UK) and are specific to each country (different agencies/levels of government), but results can be analyzed at various levels of government. For the US survey we looked at the results in terms of federal and state regulators and actually saw some interesting differences between the two.

Roundtable

Japan

- Daisuke – three government MRE projects (one wave, one tidal, and one ocean current) that are developing and progressing. Commercially offshore wind is progressing, many companies are interested in developing projects in Japan. Hope that MRE will follow offshore wind.

Australia

- Mark – Australia Ocean Energy Group held a Market Summit in December (following the OES-Environmental workshop), really useful and valuable meeting in the Australian context. This meeting was from the industry side and trying to start the discussion about the market pull and there was a wide variety of sectors represented (aquaculture, utilities, etc.). AUSTEn project is coming to a close in June 2020, last field campaign and retrieved instruments successful –

working on closing the project now. Wave Swell floating water column project at King Island is under construction and expected to be deployed in the next few months. Victorian state government has released a draft MSP, which is the most mature work done in Australia, and will include ocean renewable energy sector as one of the possible industries in the offshore environment – nice to see that level of attention given to this emerging sector. MRE starting to get more profile due to offshore wind coming up. Blue Economy Cooperative Research – first call for proposals in November, due by the end of this week, short-term scoping projects for 1st phase; another call open for proposals due in 1st week of Feb for general projects up to 3 years.

Norway

- Lars - No big news from Norway. Significant public resistance to land-based wind industry. Less for offshore, but fishers are mobilizing some opposition. ICES has just formed a working group on offshore wind and fisheries, WGOWDF. I am appointed as representative from Norway. US and UK seems to be chairing it. First meeting in March/April.

France

- Nolwenn – a tidal turbine by HydroQuest is now operating at Paimpol-Bréhat that was installed last spring. 40 MW have been produced to the grid. There are several other deployments planned. Sabella will install 2 turbines in Ushant Island again. Another turbine, 1 device, that will be installed in Brittany. More activity with offshore wind farm, even if it is less of a focus in France – a project submitted in 2011 got the last green light from the government and should be operating in 2023 (500 MW). Some papers out from SPECIES projects, which is dedicated to studying the effect of electric cables on benthic communities, including reef effect, reserve effect, and EMF on benthic communities. Two new papers by Bastien Taormina are published, a methodology paper to characterize the reef effect of cables and another paper on the effect of EMF on juvenile lobsters, which showed there are no significant effects on these species at that stage. Project about pollution by cathodic anodes, which while not a big concern internationally is a big concern for regulators in France who are concerned about the potential release of metals like aluminum from anodes on the environment. A post doc at FEM has recently published an interesting paper quantifying the potential release of aluminum – results shows that a wind farm would release 4kg/hr of aluminum, which was much less than 18-50 ton/hr for other uses.

Ireland

- Anne Marie – Nothing to update as still waiting on new legislation. But there is now a climate action plan that calls on everyone to ramp up renewables and will hopefully increase offshore and stimulate ocean energy.

UK

- Vicky – TIGER project won EU grant, which is the biggest European. It will include 5 tidal energy development projects in the Channel region (England and northern France). The environmental aspect includes looking at Ramsey Sound in Wales collecting significant amount of environmental data with instruments for tidal energy. The base will be reused for continued data collection – should be quite a bit of data coming in the next year or so, project is 4 years in total. Will be presenting results at conferences (maybe ICOE). Talking to National Research Center in Canada and their Arctic program that has an environmental element (glacial melt and

sea-level rise) – talking about effects and coastal adaptation and looking at how it'll effect their project and offshore wind. Want to add more science into Catapult projects (since mostly engineering focused). Glasgow COP26 is at the end of the year, lots of discussion around technology – if anyone looking for contacts or anything, Vicky can help. There are about 370 projects and not a single considered climate change – want to change that in the future.

- Raeanne – no updates, just waiting until Brexit on Jan 31st. EIMR is shaping up to be a good program with exciting workshops. Encourage everyone to submit an abstract by January 13th. Added a bit around social and economics, policy and planning, and what the different offshore industries can learn from each other.

Items for your input:

1. Please send recommendations for peer reviewers to review the complete draft of State of the Science to Andrea (andrea.copping@pnnl.gov) or Lenaig (lenaig.hemery@pnnl.gov) by January 17th.
2. Please continue to review the State of the Science chapters that have been sent to you and look out for the full draft document which will be sent out towards the end of January.
3. If you have not already presented during an Analyst meeting, please sign up to present at one of our future meetings. We need 1-2 presenters for the March and June meetings.
4. Please nominate 3 experts from your country to help us review the *Tethys* website and send their name and email to Jonathan (jonathan.whiting@pnnl.gov).
5. Please email us with any metadata updates, ideas for webinars or *Tethys* Stories or social media, and continue to fill out the Google Drive [Analyst Activities spread sheet](#).
6. Please let Mikaela (mikaela.freeman@pnnl.gov) know if you are interested in distributing the regulator survey in your country.

The next Analyst meeting is tentatively scheduled for March 24, 2020 – please let us know ASAP if this date does not work for you. Depending on who will be attending ICOE 2020 in May, we may also try to coordinate an in-person Analyst meeting during the conference.