

## Annex IV Meeting Country Analysts

May 25, 2017

<b>1500 GMT Meeting Attendees:</b>	<b>0000 GMT Meeting Attendees:</b>
Jan Sundberg (Sweden)*	Daisuke Kitazawa (Japan)*
Juan Bald (Spain)*	Andrea Copping (US – PNNL)*
Samantha Eaves (US DOE)	Jonathan Whiting (US – PNNL)
Andrea Copping (US – PNNL)*	Mikaela Freeman (US – PNNL)
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\*Country analysts

The regular bimonthly meeting of the Annex IV analysts focused on a report of the management measures workshop held in Scotland in early May, discussing the upcoming EWTEC workshop and OES position paper on environmental effects status, check in about webinars and *Tethys* stories, and reminders about updating both metadata forms and regulatory information on *Tethys*. The first meeting was held to engage the European, North American, and African representatives, while the second meeting engaged the Asian representatives. The US representative was on both calls.

Andrea presented slides (attached) on the following topics:

- Management measures workshop – report
- Workshop at EWTEC
- OES position paper on environmental effects status
- Webinars
- Updates on: metadata forms, regulatory info

### Management measures workshop – report

- Jan: please send the workshop spreadsheets again, too small to look over on the screen but can do so later
- Daisuke: suggested AWTEC might be a good venue to hold a similar workshop
- Andrea: yes others at the workshop suggested presenting at AWTEC as well, maybe next year

### Workshop at EWTEC

- Andrea: not sure if we are ready to address transferability
- Jan: still worthwhile to have initial discussion, but you may be right – may not reach gold with this at EWTEC. Might be good to open up the questions and get people to think about them.
- Andrea: we should talk offline and figure out a way to approach this since I have been having difficulty formulating how we find a path forward

- Jan: problem is, we will never be able to have the authorities on board to the extent that we get good feedback, but we should open up the topic
- Andrea: Ok let's still consider that. We could go with another topic (or no workshop). One suggestion would be a socio-economic workshop. Workshop will be ½ a day (4 hours) on the last day after the workshop has finished, so there is an opportunity to invite others who aren't attending EWTEC.
- Juan: good idea and more realistic to work on socio-econ than transferability. In Spain, it is difficult to have strong contact with stakeholders in the administration, and we need to measure what their feelings are.
- Andrea: there is a socio-econ track at EWTEC, we could find out who is in charge.
- Jan: Great idea to have socio-econ as main topic.
- Andrea: I think we have some real socio-econ knowledge among the Annex IV participants so will talk with other analysts, but we know there are other countries who are interested. Had a call with Anne Marie, Teresa, and Arantza (Juan's colleague from Spain) about addressing socio-econ that was very helpful. I will look at European colleagues for help with leading this since we don't address socio-econ as much in the US. Anne Marie and I discussed putting together a survey for the Annex IV analysts to figure out what we should address with socio-econ (what's most useful for each country) – once we decide on those topics, we can have Aquatera pull information together from licenses and consenting agreements that have happened around the world.
- Jan: I have been in charge of two biggest consenting processes on Swedish coast so I have lots of insight on that process and could provide a short introduction (have slides already) on the Swedish case.
- Andrea: That's a great offer. We may also put you up on a webinar as well.
- Daisuke: We are currently concerned with collecting data for socio-econ issues and would like to develop a questionnaire to be passed around regulators in Japan, summarized, and translated into English. We have metadata forms for environmental impacts, but do we have metadata form for socio-econ?
- Andrea: no we don't, Annex IV has focused on environmental so far, but it is very clear that socio-econ is a part of this; likely something we can add to current metadata forms and/or create others. That is a really good idea.
- Daisuke: I am concerned with how to think of these questions for the regulators
- Andrea: Are you coming for EWTEC?
- Daisuke: I can't come to EWTEC, but last year we had an assistant professor join us who will go to EWTEC. I can ask him next time if he can join these meetings
- Andrea: send us his contact information and we can invite him.

### **OES position paper on environmental effects status**

- Andrea: OES has asked for a position paper. They want a complete draft by the end of August, my goal is to get a draft by the beginning of August so can get reviewed by the countries. I think this will be quite short, 2 succinct pages followed by 8-10 pages of supporting material. Thoughts?
- Juan: I agree, our current knowledge is based on single devices or prototypes and thinks this is too soon to have a strong understanding on impacts of arrays. As far as we know, the impacts

seem to be low with single devices, but we are not able to say the same thing for arrays. For fish, we can expect attraction or avoidance, but to measure this we need to develop quite complicated methodologies not currently seen in papers. Have some limitations with methodology to be able to measure impacts. Need to continue with project research, but in general agree with the main conclusions you are saying.

- Andrea: Agreed. Timing is unfortunate due to summer holidays, but they want final by their next meeting in October.
- Juan: regarding the timing that will be fine, but don't know if will be able to review the paper in July.
- Jan: I am not as skeptical as Juan for single units: unless they are really badly sited, it is not a big issue at all. At medium scale the risk is higher for tidal and still very low for wave energy. What we don't know at all is large scale cumulative impacts. We want to go through with small scale test parks and projects and that should be more or less a green light, with the best of our knowledge that we can agree with no impacts on small projects.
- Andrea: I will send these slides out, please look at the outline and let me know if you have any comments. Might try to get something around earlier so can get more feedback – with luck will send something around in late June. Can anyone help with the first draft and feedback?
- Jan: I should be able to help out a little with it.
- Andrea: You are better versed with wave, so that would be nice.
  
- Daisuke: This is a very difficult problem
- Andrea: Yes it is, and it could be politically difficult as well. We need each of the countries to give feedback and be comfortable with where we are, so has to be facts out of the *State of the Science* or what has been published since.
- Daisuke: In Japan, we believe that single devices have very little effect, and I can provide the information as much as possible for Japan
- Andrea: We will probably all have to take this to individual OES reps and brief them as to why we have said what we said. We need the OES reps to agree that this is right and be comfortable with it. Probably don't want to send it directly to OES executives, but run it through our respective countries first.

### **Webinars and *Tethys* Stories**

No comments

- Daisuke: what kind of stories are you looking for?
- Andrea: I suggest you go on the website and take a look, they are short blog type stories – interesting occurrence, process, programs, research project, test centers, etc. – about what is happening with MREs. Some of the things you have going on around the country would be really interesting, especially since we don't often hear much about what is happening in Asia.
- Daisuke: Ok, think I can get a story to propose from Japan

### **Updates: metadata forms, regulatory info**

No comments

- Daisuke: I am working on a form for a small project. I need the Ministry of the Environment to look over it.

## Future meetings

- Andrea: will it be too hard to meet up in July/over the summer?
- Jan: I think for some countries that is difficult...
- Andrea: Ok, then will look at some smaller groups instead of having a meeting over the summer. Is it fair to say you both can play a role with getting the EWTEC workshop together
- Both: Yes

## Roundtable

- Juan: The good news is that will have the first device working in BiMEP. OCEANTEC wave device (oscillating water column) connected to land and has been working for 4-5 months now. It seems to be working well and seems like it is a promising technology. Has lasted through the storms in the winter with no damages. Will be deployed at BiMEP for 2 years. Currently have small turbines that are being evaluated and this summer will be replaced with bigger ones. They have done some of the first trials with the turbines on the Mutriku plant. At this point, the electricity production is very small, but OCEANTEC devices are doing a good job. Now working on offshore wind developments in BiMEP and have done EIA since BiMEP is in a special area for protection with important species, so we will have to look at environmental impacts. Now in the consenting process and expect will have OK from the regulators to move forward so maybe next summer we will see the first offshore wind development in BiMEP. We have a company SITEC (?) that is developing a floating offshore wind platform, who are very interested in demonstrating the technology in BiMEP.
- Andrea: Are you monitoring any marine animals?
- Juan: We have proposed a project for monitoring to the government around OCEANTEC. We have baseline data and want to do some monitoring work, especially on EMF and impacts on seabed/sediment/benthic communities of mooring lines.
- Andrea: We look forward to keep hearing about it.
- Juan: If we are lucky we will get money from Basque country and will start monitoring work this summer or next summer.
  
- Daisuke: Our fiscal year began in April so the situation has changed from when last reported. I am disappointed to report that the Ministry of Economy reduced the budget (30 mill to 6 mill) for MRE development, an 80% reduction. Some companies will continue to develop with their own money and thinks some environmental impact assessments will continue. One company bought the OPT point absorber. IHI is developing an ocean current turbine and has already manufactured the turbine, but the money for installation has been cut – will install now with their own money hopefully next year. The good news: the Ministry of Environment, whose mission is to reduce CO2 emissions, will continue development of MRE. Started offshore floating wind project 5 years ago and tidal turbine 2 years ago, and funded Mitsubishi and Kawasaki Industries. Currently the Ministry of Environment funds tidal turbine in the Western part of Japan and have a plan to install the device off the Nagasaki Island. I think the project from the Ministry of Environment will continue, otherwise each company will be paying.
- Andrea: Why is the government cutting funding so drastically?
- Daisuke: I think the major reason is related to Fukushima accident, as they have to invest lots of money there.

- Andrea: But this doesn't necessarily show a policy shift turning away from MREs, just need for the money elsewhere?
- Daisuke: That is correct.