



Pacific Northwest  
NATIONAL LABORATORY

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# Annex IV Meeting of Country Analysts

## online meetings

### January 24th and 29th 2018

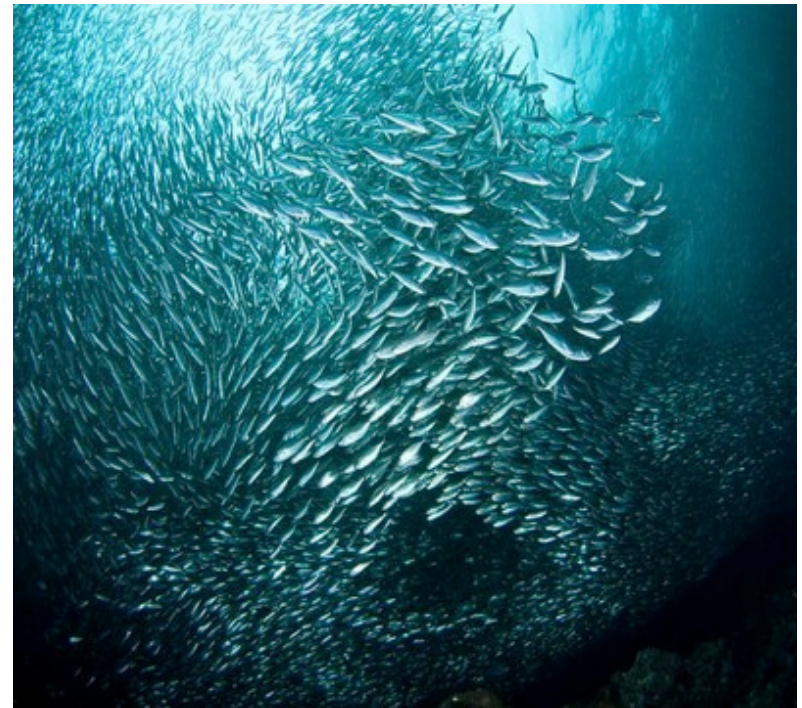


# ANNEX IV



# Today...

- ▶ Catch up on Annex IV activities
- ▶ Regulator Survey
- ▶ Data Transferability
- ▶ Annex IV Ambassadors
- ▶ EIMR, ICOE Workshops, AWTEC
- ▶ *Tethys* Stories + Metadata
- ▶ Roundtable



- ▶ Position paper for OES on status of environmental studies and consenting
  - technical paper
  
- ▶ November 2017 OES meeting
  - Regulator survey
  - Asian focus
  
- ▶ Interview for OES annual report
  
- ▶ Use of OES funds in 2017
  
- ▶ Budget for 2018 OES funds

# Use of OES Funds for Annex IV - 2017

Activity	Cost
Workshop: Management Measures, scheduled before All Energy conference	€2,500
EWTEC Sponsorship	€2,500 + 23% VAT = €3075
Workshop: Social and Economic Data for Consenting	€2,500 + 23% VAT = €3075  €10,000 to contractor for planning, attendance, reporting
Short Science Summaries	€2,850
Metadata Collection	€8,500
Total	€ 30,000

# Budget for OES Funds for Annex IV - 2018

Task	General Activities	OES Funds
Workshop at EIMR on social and economic data for consenting	Planning, scheduling speakers and workshop participants, reporting/information dissemination	€2,500 + 23% VAT = €3075 €6,000 to contractor for planning, attendance, report
Workshop at ICOE on Data Transferability and Collection Consistency	Planning, scheduling speakers and workshop participants, reporting/information dissemination	€2,500 + 23% VAT = €3075 €6,000 to contractor for planning, attendance, report
Regulatory Survey in other Annex IV nations	Coordination and assistance in survey inputs and outputs	€2000 to Annex IV analyst for coordination
Short Science Summaries	Provide support for preparation and dissemination of technical documents.	€3,350 to contractor for writing and production.
Metadata Collection	Collect new and update existing data housed in <i>Tethys</i> .	€4,500 to contractor for assistance in data collection
Total		€30,000

- ▶ Survey of US regulators
  - Received 35 complete responses (out of 200)
  - Gained better understanding of regulator knowledge and where we can best work with regulators
  - See last Annex IV analyst meeting slides for survey results
  
- ▶ OES strongly encourages other Annex IV countries to conduct survey
- ▶ Can you do this survey in your country?
- ▶ We can provide support:
  - Questions (can be modified)
  - Survey Monkey process
- ▶ Annex IV analyst needs to:
  - Provide contacts
  - Modify questions as needed,
  - Assist with implementation, interpretation



**Call for Annex IV country input**

We invite you to participate in our survey on regulatory needs for environmental effects of marine renewable energy (MRE) development. This survey is designed for and tailored to regulators involved in permitting marine renewable energy developments, largely wave and tidal development.

The purpose of this survey is to understand how federal and state regulators view the risks and conflicts associated with potential environmental effects of MRE. We are interested in how you believe we can reduce risks and ensure that devices do not cause harm to marine animals or habitats. Please do your best to answer every question. We look forward to your responses as they will help inform the ongoing efforts of the international Annex IV initiative.

This survey should take approximately 30 minutes or less to complete.



For the following four questions, the first two questions (Questions 9-10) will address **single** MRE devices, while the next two questions (Questions 11-12) will address multiple MRE devices (**arrays**).

9. Please rank the following challenges for permitting developments of **single** MRE devices on a scale of 1 (most important) to 7 (least important).

⋮	⬇	Effects of underwater sound emissions from devices on animals
⋮	⬇	Entanglement of animals with lines and cables
⋮	⬇	Risk of animals colliding with underwater devices
⋮	⬇	Chemical releases and water quality degradation
⋮	⬇	Electromagnetic field (EMF) effect on animals
⋮	⬇	Energy removal and effects of changes in flow on the ecosystem
⋮	⬇	Avoidance, attraction, and/or displacement of animals
⋮	⬇	Benthic/habitat disturbance

13. Can data collected from other locations be applied towards environmental permitting within your jurisdiction? Please answer based on your top priority for Questions 9 and 11.

- Never
- Maybe
- Absolutely

Please explain your answer.

14. Which of the following approaches best describes your vision of how the MRE industry should develop? (Choose one)

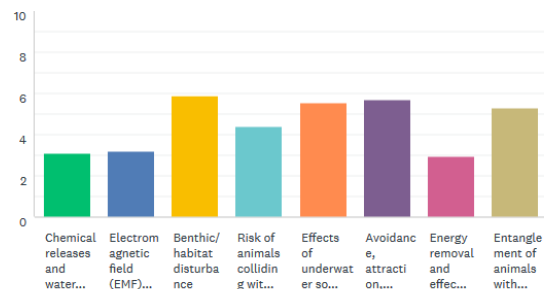
- Precautionary principle.** There is a high degree of uncertainty and potentially negative outcomes associated with MRE deployment and operation. Measures should be taken to avoid the negative outcome by proceeding very cautiously or not pursuing projects at all.
- Mitigation hierarchy.** Impacts or risks should be systematically limited by taking actions to avoid, minimize, mitigate and/or compensate for risks through siting and/or mitigation measures.
- Phased approach.** Single devices should be deployed first, followed by slowly ramping up to array scale after potential risks are better understood and managed.
- Adaptive management.** A learning-based management approach should be applied that includes adapting monitoring and mitigation over time to understand risks, decrease uncertainty, and mitigate for impacts.
- Survey, deploy, monitor.** The area of a proposed project should be surveyed before deployment, coupled with monitoring around the device before deployment can proceed.
- Just do it.** Risks to the marine environment are almost certainly low, so development should be able to move forward.

Q9

Customize Export

Please rank the following challenges for permitting developments of single MRE devices on a scale of 1 (most important) to 7 (least important).

Answered: 36 Skipped: 7



- ▶ Data transferability white paper complete
  - Please review white paper, in particular outreach plan, and provide feedback
- ▶ US regulator focus groups
  - Bring regulators together to discuss data transferability and to understand regulator's needs and willingness to transfer data
  - Use sample datasets on:
    - collision risk
    - noise
    - EMF
    - benthic habitat changes, and
    - physical systems
- ▶ Gather their feedback on data transferability framework
- ▶ ICOE Workshop
  - Bring together MRE community to discuss data transferability and collection consistency
  - Go through lessons learned from regulators
  - Steps to work toward data transferability and collection consistency, best practices
- ▶ Final paper
  - Data transferability framework
  - Lessons learned from regulator focus groups
  - Feedback from focus groups and workshop
  - Pathway for collection consistency



**Call for Annex IV country input**



- ▶ Need to more formally track activities for all Annex IV nations
- ▶ Asking analysts to act as “ambassadors” for Annex IV
- ▶ Tracking what you are already doing

## Purpose:

- ▶ To increase awareness of work of Annex IV
  - Understanding status of environmental effects of MRE development
  - Explaining how risk of effects/uncertainty affects consenting, monitoring
  - Describe pathway forward to ‘retiring” risks
- ▶ Also, to increase awareness of Annex IV/*Tethys* and conduct outreach activities in all Annex IV countries

- ▶ Tracking activities:
  - Promote the work of Annex IV/*Tethys*
  - Conduct outreach activities in your nation
- ▶ We will develop google doc to track activities
- ▶ Work with analysts to ensure we have reasonable activities, can track
- ▶ Will make all outreach materials available for easy download
  
- ▶ Keep track of activities and develop outreach goals for each country
  - Webpages
  - Newsletters
  - Mailing list to organizations
  - Presentations
  - Conferences, workshops, symposium, forum presentations on Annex IV-related activities
  - Webinars on Annex IV-related activities
  - Internal network (calls, interfaces, etc.)
  - Media Outreach
  - Other



**Call for Annex IV country input**

# Example of doc. for ambassador activities

WREN Ambassador Activities ☆ 📄

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	A	B	C	D	E	F	G	H	I	J	K
1	WREN Countries	France	Ireland	Netherlands	Norway	Portugal	Spain	Sweden	Switzerland	United Kingdom	United States
2	Web pages (site s aimed largely at gove rnmnt)				<a href="http://www.nina.no/Projekt/Forskning/WREN">http://www.nina.no/Projekt/Forskning/WREN</a>				No government webpage		
3	Web pages (fo use d mainly on the publi c or industry)				<a href="http://www.nina.no/Projekt/Forskning/WREN">http://www.nina.no/Projekt/Forskning/WREN</a>				Description of the project on our website (in German and French, see link below); in addition, we regularly publish news about WREN on our website  <a href="http://wretec.ch/de/projekt/landeschaft/43oundesamt-fuer-energie-leistungs-34-wren">http://wretec.ch/de/projekt/landeschaft/43oundesamt-fuer-energie-leistungs-34-wren</a>		
4	New stette rs				None				We forward emails and reminders about upcoming webinars (only when topic focuses on onshore wind) and we send news about recently published WREN materials (White Papers, 2-pagers, etc.) to our mailing list.  Distributed approximately 3-4 times a year		
5	Mailing list to organizations		Yes 160 contacts on email list and growing. List includes academics, wind farm companies, government agencies, planning authorities, utility companies, relevant NGOs etc. Emails are sent out on an ad hoc basis with 6 sent out since March 2017		None, ad hoc contact with industry contacts re:ding to specific input required				About 20 contacts, mainly wind energy developers, some representatives of NGOs		
6	Presentations (to target audience s like agencies, public, etc.)		Presentation on 22/9/2017 on WREN at BirdLife Europe Birds and Habitats Directives Task Force Meeting in Copenhagen. Presentation on Bird Wind Sensitivity mapping and WREN given at Workshop on Good Practices on Reconciling Wind Energy Development and Biodiversity Conservation. This workshop was hosted by the Ministry of Environment and Energy in Greece and held in Athens on December 2017.		None				Several presentations about WREN in general;  Several presentations on the Adaptive Management WP #2: - At the "Suisse-Eole Kantonsseminar", audience mainly planning authorities (16/11/18) - Presentation for representatives of the Swiss Federal Office for the Environment (17/11/21) - Presentation for wind energy developers (17/11/23)		
7	Conferences, workshop, symposium, forum presentations on WREN-related activities				None				None.		
8	Webinars on WREN-related topics				<a href="https://ethz.ch/en/governance/ai-and-energy/ai-and-energy">https://ethz.ch/en/governance/ai-and-energy/ai-and-energy</a>				None.		
9	Internal network (could be cells, interfaces...)				Ad hoc contact and information flow with colleagues at NNA.				Member of a national task force on Birds and Wind energy with NGOs representatives;  Member of a national Task force on Birds and Wind energy with wind energy developers		
10	Media outreach				None				None.		
11	Other								We featured WREN on some of our company's marketing material (~ 150 recipients)  We translated the 2-pager on Adaptive Management in French to help reach out more people (German translation ongoing); we will translate future 2-pagers when the topic is relevant for Switzerland.		
12											

# 2018 Annex IV Workshops

- ▶ EIMR (April 23-27, 2018 in Kirkwall, Scotland)
  - Workshop on April 23<sup>rd</sup> (Monday)
  - Annex IV/ORJIP sponsored socio-economic workshop
  - Builds on EWTEC 2017 Annex IV/ORJIP workshop on social and economic risks/benefits of MRE development
  
- ▶ ICOE (June 12-14, in Normandy, France)
  - Annex IV Workshop, likely on June 11<sup>th</sup>
  - Data transferability and collection consistency workshop
  - Builds on US regulator focus groups
  - Bring together MRE community
  
- ▶ AWTEC (September 9<sup>th</sup> – 13<sup>th</sup>, in Taipei)
  - Session on science supporting MRE development
  - **Abstract deadline February 1<sup>st</sup>**
  - Possibility for meeting, workshop....??

Please try to attend  
one or more events.

- ▶ Need some MRE *Tethys* stories
  - <https://tethys.pnnl.gov/tethys-stories>
  - Most recent MRE stories:
    - Artificial reefs
    - EMF impacts from DC cables
  
- ▶ Looking for new metadata for MRE project sites and research studies
  - Options:
    1. Fill out metadata form and send to [mikaela.freeman@pnnl.gov](mailto:mikaela.freeman@pnnl.gov);
    2. Establish a contact for the site/study and ask them to fill out a metadata form; or
    3. Email [mikaela.freeman@pnnl.gov](mailto:mikaela.freeman@pnnl.gov) with contact information and site/study details for Mikaela to establish a contact



**Call for Annex IV country input**

# Future Meetings

- ▶ February 28<sup>th</sup> 2018
- ▶ March 29<sup>th</sup> 2018
- ▶ Meet in-person at EIMR or ICOE...?

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