Workshop:
Monitoring Datasets
Discoverability Matrix

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Today’s Workshop

• Introduction
• Overview of data transferability process
• Monitoring datasets discoverability matrix
  ▪ Demonstration
  ▪ Examples
• Questions / Feedback
• Next Steps
OES-Environmental

- International initiative under Ocean Energy Systems (OES)
- 15 countries currently participating:
  - Australia, Canada, China, Denmark, France, India, Ireland, Japan, Norway, Portugal, South Africa, Spain, Sweden, United Kingdom, United States
- Environmental effects of marine renewable energy (MRE)
- Major themes: data transferability and risk retirement
Environmental Effects of MRE

• Stressors:
  - Collision Risk
  - Underwater Noise
  - Electromagnetic fields (EMF)
  - Habitat Changes
  - Changes in Flow
  - Displacement

• Receptors:
  - Marine animals
  - Habitats
  - Oceanographic conditions
Barriers to Consenting/Permitting

• MRE industry perceptions:
  ▪ Long time to get projects in the water
  ▪ Complex, extensive consenting requirements (baseline and post-installation)

• We perceive that the regulatory community:
  ▪ Faces many challenges
    ✓ Novel technologies
    ✓ Uncertainty of environmental effects
  ▪ Mandate to protect environment and uphold regulations
  ▪ Key for getting devices deployed

OES-Environmental is working to bridge these gaps
Data Transferability

• Data transferability
  ▪ Using data from an already consented MRE project or analogous industry to be “transferred” to inform potential environmental effects and consenting for a future MRE project
  ▪ Data that might be “transferred” need to be collected consistently for comparison

• By “data”, we mean
  ▪ Data and information
    Could be raw or quality controlled data
    More likely analyzed data and information, synthesized data to reach some conclusion, reports, etc.
Data Transferability

- Framework – classifies stressor/receptor relationships
- Data collection consistency table – outlines parameters for comparison of data between projects
- Best management practices – suggest four practices for implementation
- Monitoring datasets discoverability matrix – catalogues relevant datasets
Risk Retirement

- For certain interactions, potential risks need not be fully investigated for every project for small developments (1-2 devices)
- Rely on what is already known from consented projects, research, or analogous industries
- A “retired risk” can be re-examined in the future as more information becomes available for larger arrays
- Assessed underwater noise and EMF
Monitoring Datasets Discoverability Matrix

• The monitoring datasets discoverability matrix (matrix) is an interactive tool to guide data transfer
  ▪ Makes datasets from existing projects accessible for regulators, developers, and MRE community to transfer data to future projects

• Categorized by six stressors:
  - Collision
  - Underwater Noise
  - EMF
  - Habitat Change (water column and benthic)
  - Changes in Flow
  - Displacement
How it works

• Classifies existing monitoring datasets and research studies by defined characteristics:

  - Stressor
  - Receptor
  - Site Conditions
  - Technology Type
  - Project Size

• Datasets come from OES-Environmental metadata for MRE project sites and research studies
• The matrix filters this information and allows users to sort through the stressors and characteristics to retrieve relevant datasets for future projects
OES-Environmental Metadata

https://tethys.pnnl.gov/oes-environmental-metadata

- Provides information on activities exploring the potential environmental impacts of MRE devices
- Categorized by project sites and research studies
- Includes project or research progress, associated reports, and key findings or environmental monitoring data/information

Forms to complete are available on Tethys and can be sent to tethys@pnnl.gov. If you have updates on existing or new metadata, we would appreciate hearing from you!
Demonstration of the Matrix

https://tethys.pnnl.gov/monitoring-datasets-discoverability-matrix
Discussion and Feedback

• What are your thoughts on “data transferability”?

• Could you make use of the matrix for transferring data to consent MRE projects?

• General feedback on the matrix: usefulness, organization, accessibility?
Next Steps

• Recording will be available on Tethys shortly

• For more information on data transferability and risk retirement:
  ▪ [https://tethys.pnnl.gov/data-transferability](https://tethys.pnnl.gov/data-transferability)
  ▪ [https://tethys.pnnl.gov/risk-retirement](https://tethys.pnnl.gov/risk-retirement)

• Continue risk retirement efforts:
  ▪ Webinar in September
  ▪ Guidance documents
    ▪ To provide guidance on risk retirement in an accessible format for the entire evidence base that regulators can use
    ▪ Developed for each stressor
Thank you!

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