



U.S. Offshore Wind Synthesis of Environmental Effects Research



OVERVIEW

This multi-year collaborative effort facilitates knowledge transfer for offshore wind (OSW) research around the world to synthesize key issues and disseminate existing knowledge about environmental effects, inform applicability to U.S. waters, and prioritize future research needs.

PROJECT OBJECTIVES

- Succinctly summarize the understanding of environmental effects, monitoring tools, assessment methods, and mitigation strategies for OSW development on the U.S. Atlantic and Pacific Coasts based on existing research from around the world
- Examine which of the state-of-the-art methods and technologies are relevant to OSW environmental issues specific to the U.S. industry
- Identify knowledge and research gaps based on the: 1) diversity of species, habitat use, and stressors in U.S Atlantic and Pacific Coast waters, 2) U.S. environmental legal/regulatory structure, and 3) OSW technological trends and innovations
- Collaboratively develop outcomes together with existing science entities and regional working groups to fully leverage community expertise.





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RESEARCH TOPICS

Through significant stakeholder outreach and engagement efforts, a set of research topics was identified that cover a range of stressor/receptor interactions, technology considerations, and cross-cutting themes that are pertinent to OSW development on both the U.S. Atlantic and Pacific Coasts.



Bat and Bird Interactions with Offshore Wind Energy



Presence of Vessels: Effects of Vessel Collision on Marine Life



Risk to Marine Life from Marine Debris and Floating Cable Systems



Underwater Noise Effects on Marine Life



Introduction of New Structures: Effects on Fish Ecology



Electromagnetic Field (EMF) Effects on Marine Life



Benthic Disturbance from Foundations, Anchors, and Cables.

OUTCOMES

The outcomes from SEER are available from the project webpage at <https://tethys.pnnl.gov/seer>. Outcomes from the project include:



Research Briefs

Review state of the knowledge on stressor/ receptor interactions, provide evaluation of technical considerations, monitoring methods and technologies, mitigation measures, and cumulative impacts



Research Recommendations

Summarize information gaps, barriers, and current challenges for U.S. Atlantic and Pacific Coasts to inform or guide future development efforts



Webinar Series

Disseminate findings presented in Research Briefs and Research Recommendations to the OSW industry through webinars and workshops

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