



NYSERDA



Offshore Wind Energy Development and Seabirds:

Informing Decision Making With Expert Stakeholder Engagement

Ed Jenkins

Avian Biologist, Biodiversity Research Institute (BRI)

Ed Jenkins, Julia Gulka, and Kate Williams, BRI,

Mark Severy, Pacific Northwest National Laboratory, Rebecca Green, National Renewable Energy Laboratory,

Caleb Spiegel, U.S. Fish and Wildlife Service, Tim White, Bureau of Ocean Energy Management,

Kate McClellan Press, New York State Energy Research and Development Authority

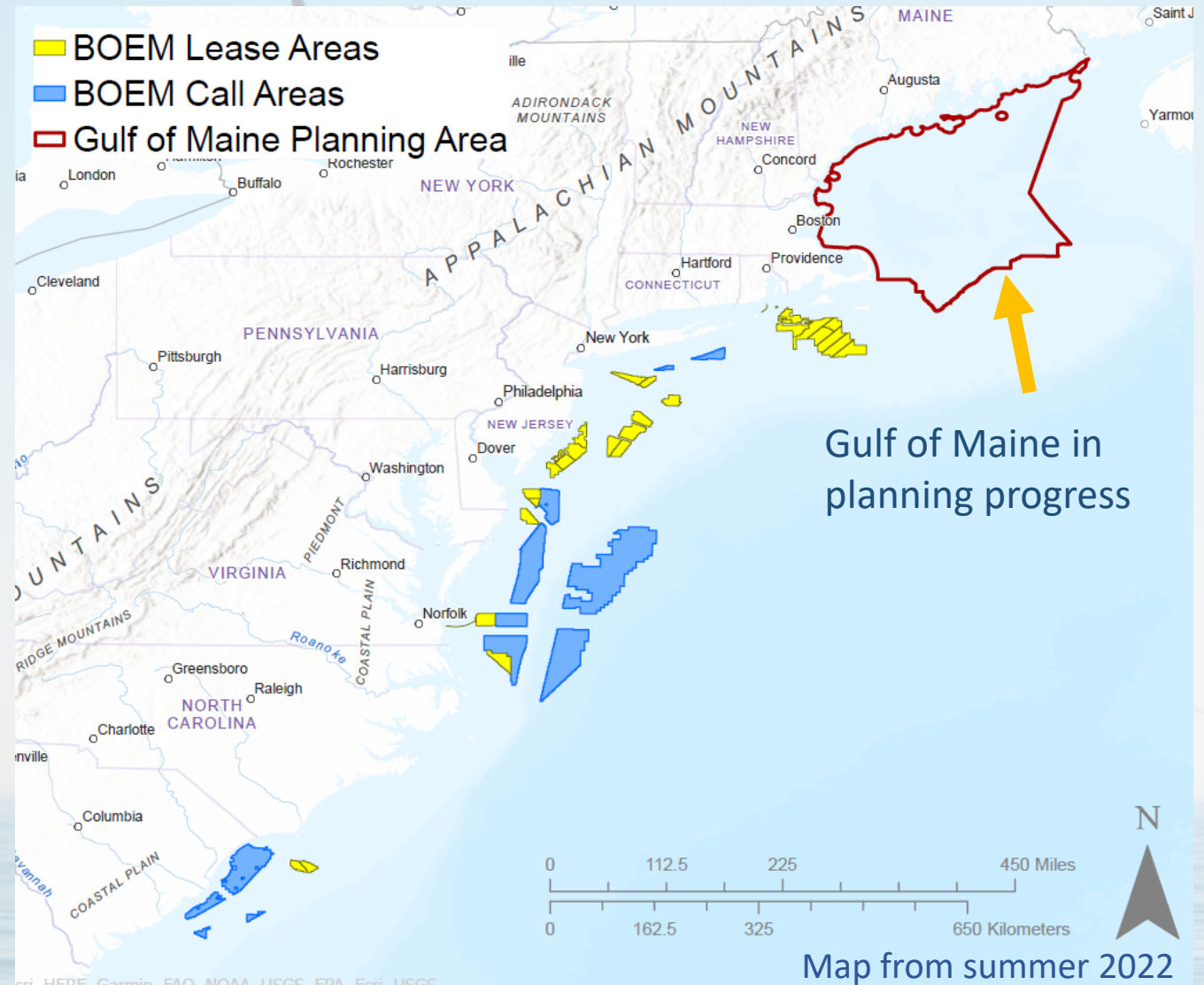
© Nicholas Doherty



Offshore Wind in North America: Atlantic Region

Overview

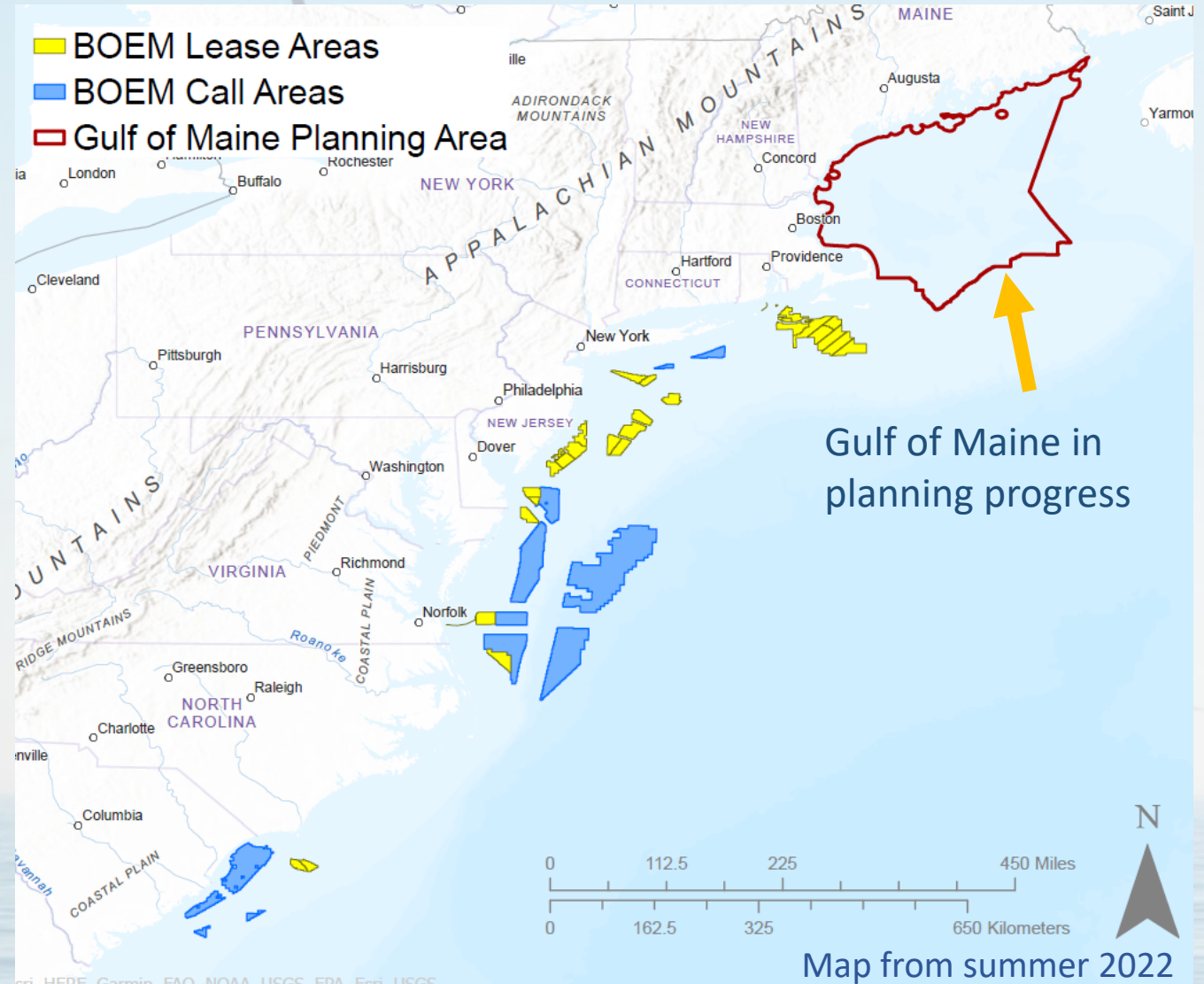
- Key component of state and federal plans to minimize climate change
- Target of >39 GW by 2040



Offshore Wind in North America: Atlantic Region

Overview

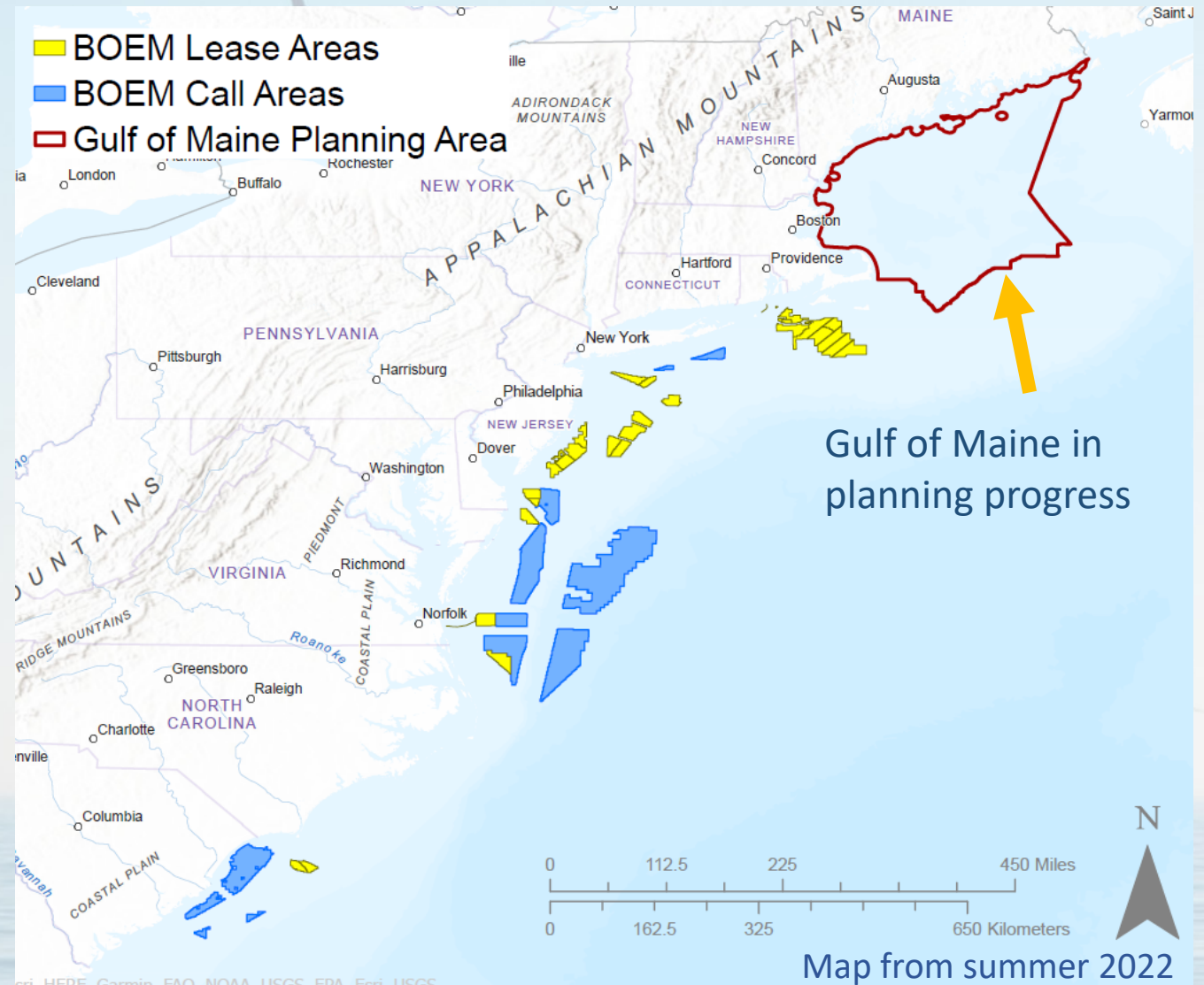
- Key component of state and federal plans to minimize climate change
- Target of >39 GW by 2040
- 10 lease sales and 27 active commercial wind leases so far
- Developers planning on 10.3 GW by 2026
- Two commercial-scale projects under construction with installation beginning 2023



Offshore Wind in North America: Atlantic Region

Overview

- Key component of state and federal plans to minimize climate change
- Target of >39 GW by 2040
- 10 lease sales and 27 active commercial wind leases so far
- Developers planning on 10.3 GW by 2026
- Two commercial-scale projects under construction with installation beginning 2023
- Fixed-foundation design



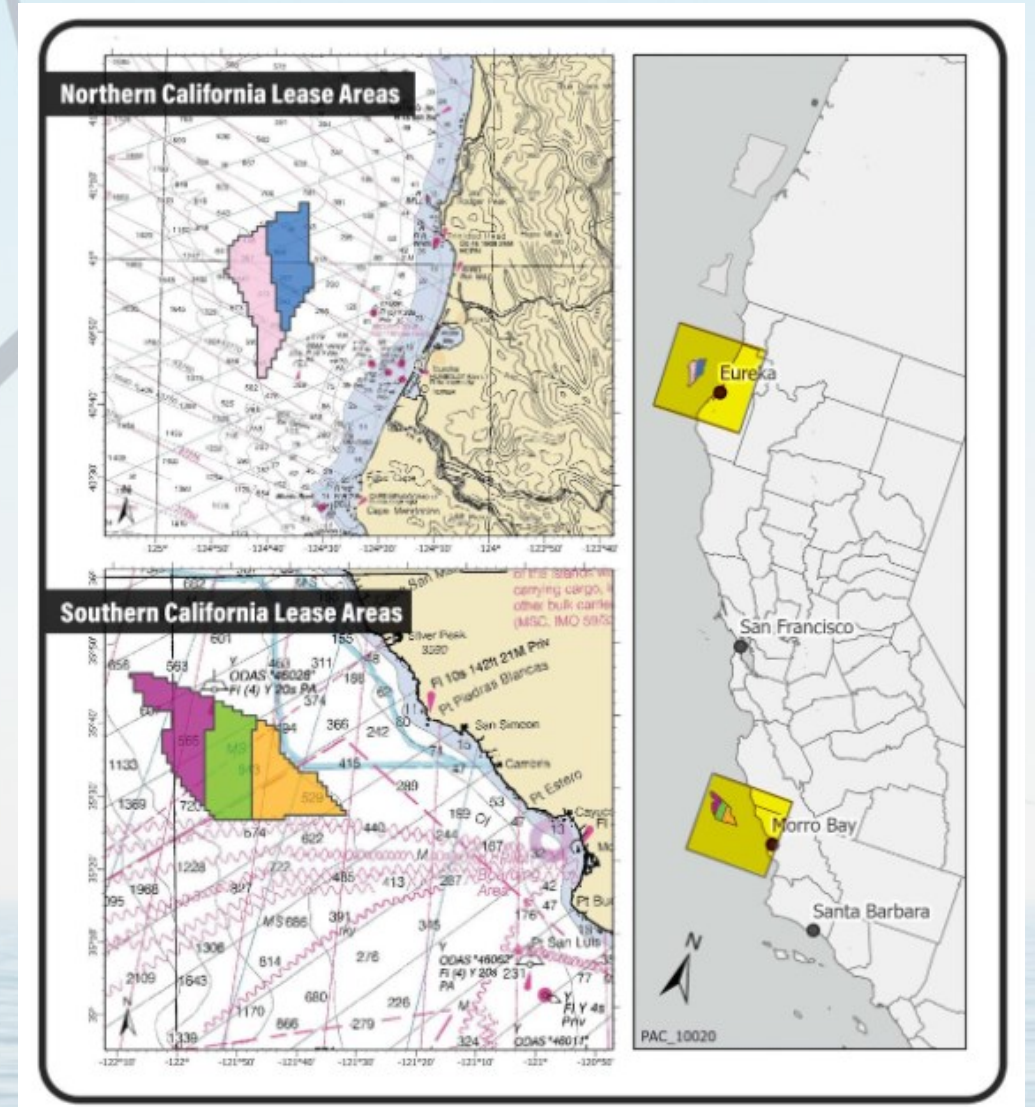
Offshore Wind in North America: Pacific Region

Overview

- Goal to produce 2-5 GW in California by 2030, and ≥ 25 GW by 2045.
- Lease sale took place December 2022



© Ed Jenkins



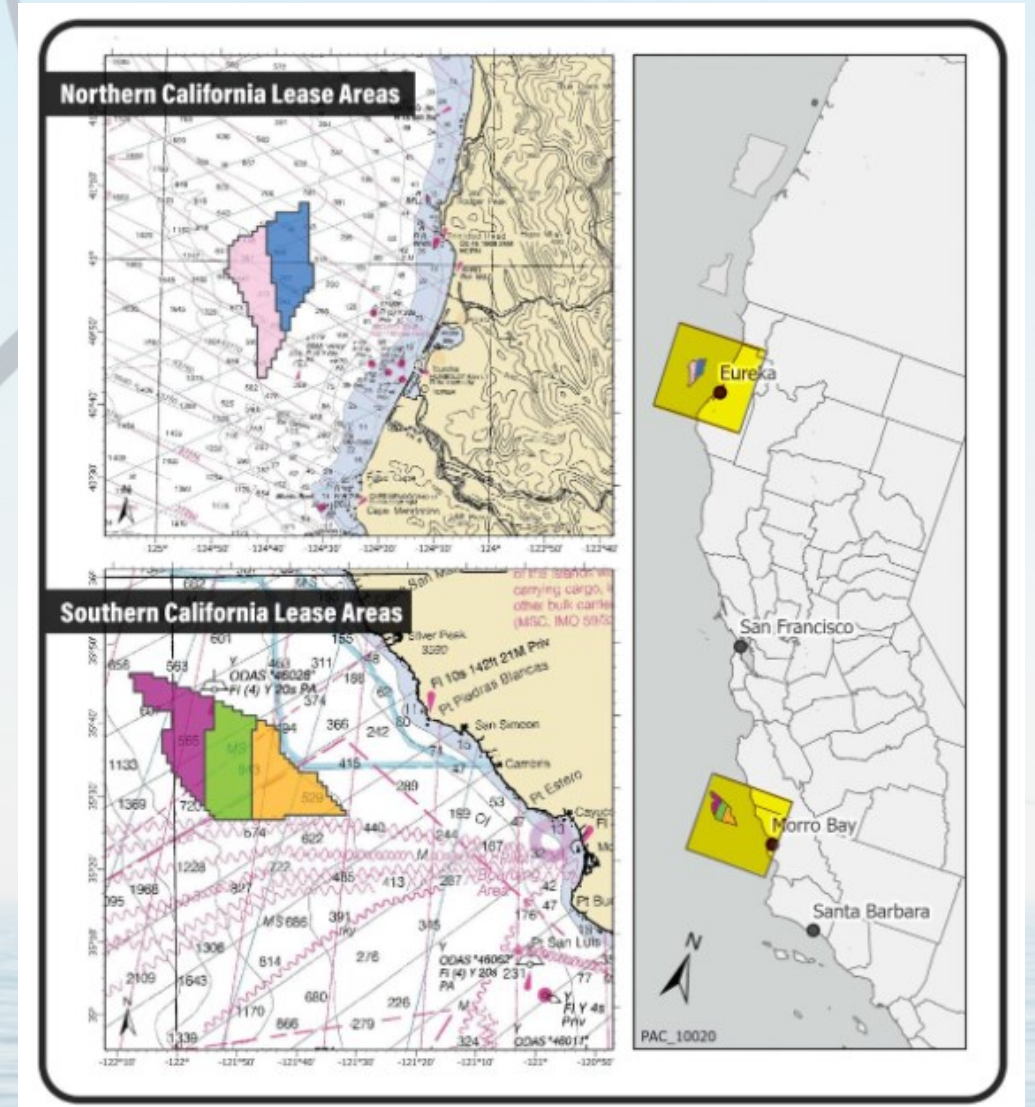
Offshore Wind in North America: Pacific Region

Overview

- Goal to produce 2-5 GW in California by 2030, and ≥ 25 GW by 2045.
- Lease sale took place December 2022
- Five lease areas across two sites
 - Humboldt Wind Area (207 sq mi)
 - Morro Bay Wind Area (376 sq mi)
- Combined potential to produce >4.5 GW



© Ed Jenkins



Potential Effects to Seabirds from Offshore Wind Development

Attraction

Species may be attracted to wind farms due to increased foraging or perching opportunities



Potential Effects to Seabirds from Offshore Wind Development

Avoidance

Changes to daily or migration movements at wind-farm scale (macro), turbine-scale (meso), or immediate blade-scale (micro)

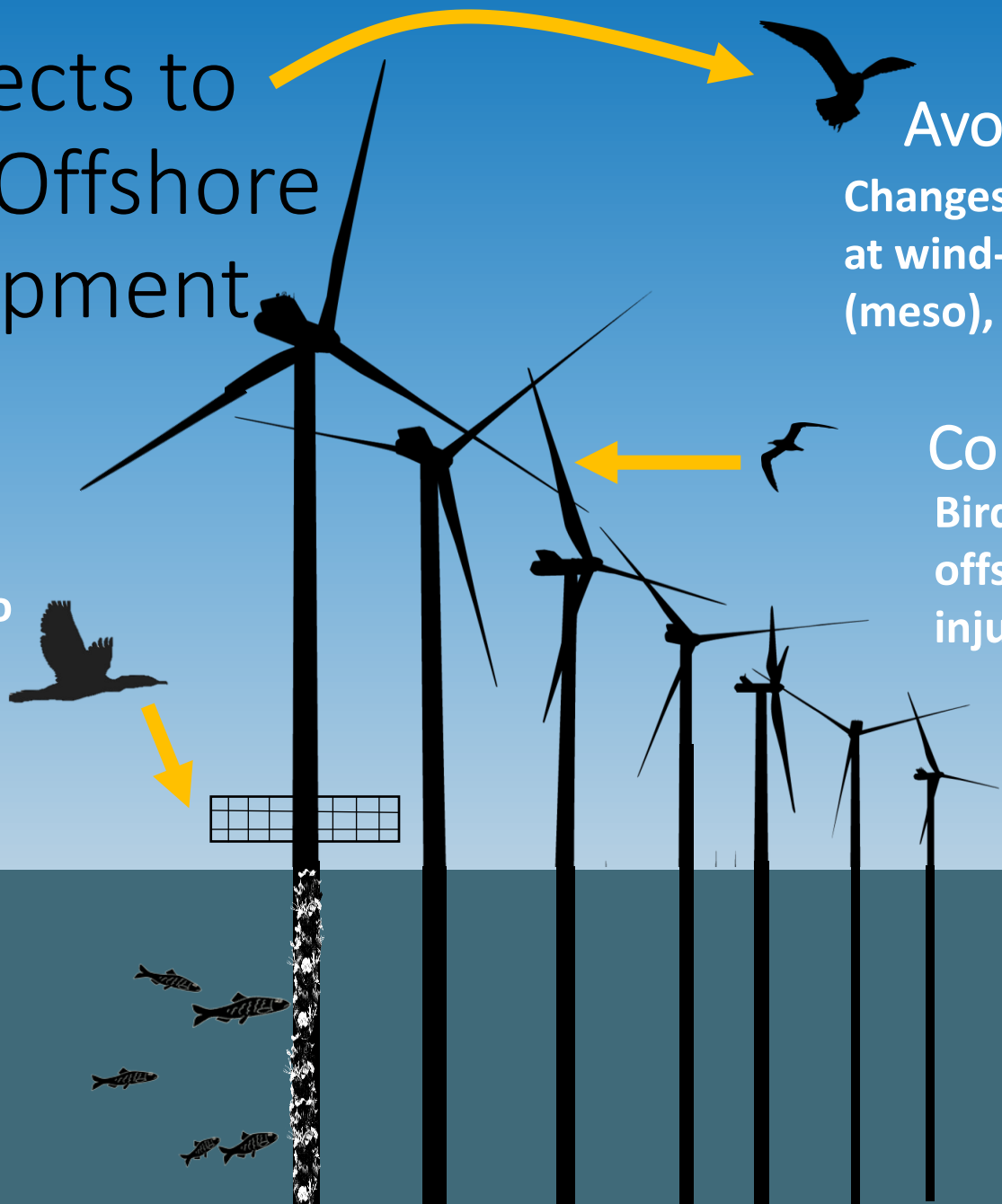
Attraction

Species may be attracted to wind farms due to increased foraging or perching opportunities



Potential Effects to Seabirds from Offshore Wind Development

Attraction
Species may be attracted to wind farms due to increased foraging or perching opportunities



Avoidance

Changes to daily or migration movements at wind-farm scale (macro), turbine-scale (meso), or immediate blade-scale (micro)

Collision

Birds are at risk of colliding with offshore wind turbines resulting in injury or mortality

Potential Effects to Seabirds from Offshore Wind Development

Avoidance

Changes to daily or migration movements at wind-farm scale (macro), turbine-scale (meso), or immediate blade-scale (micro)

Collision

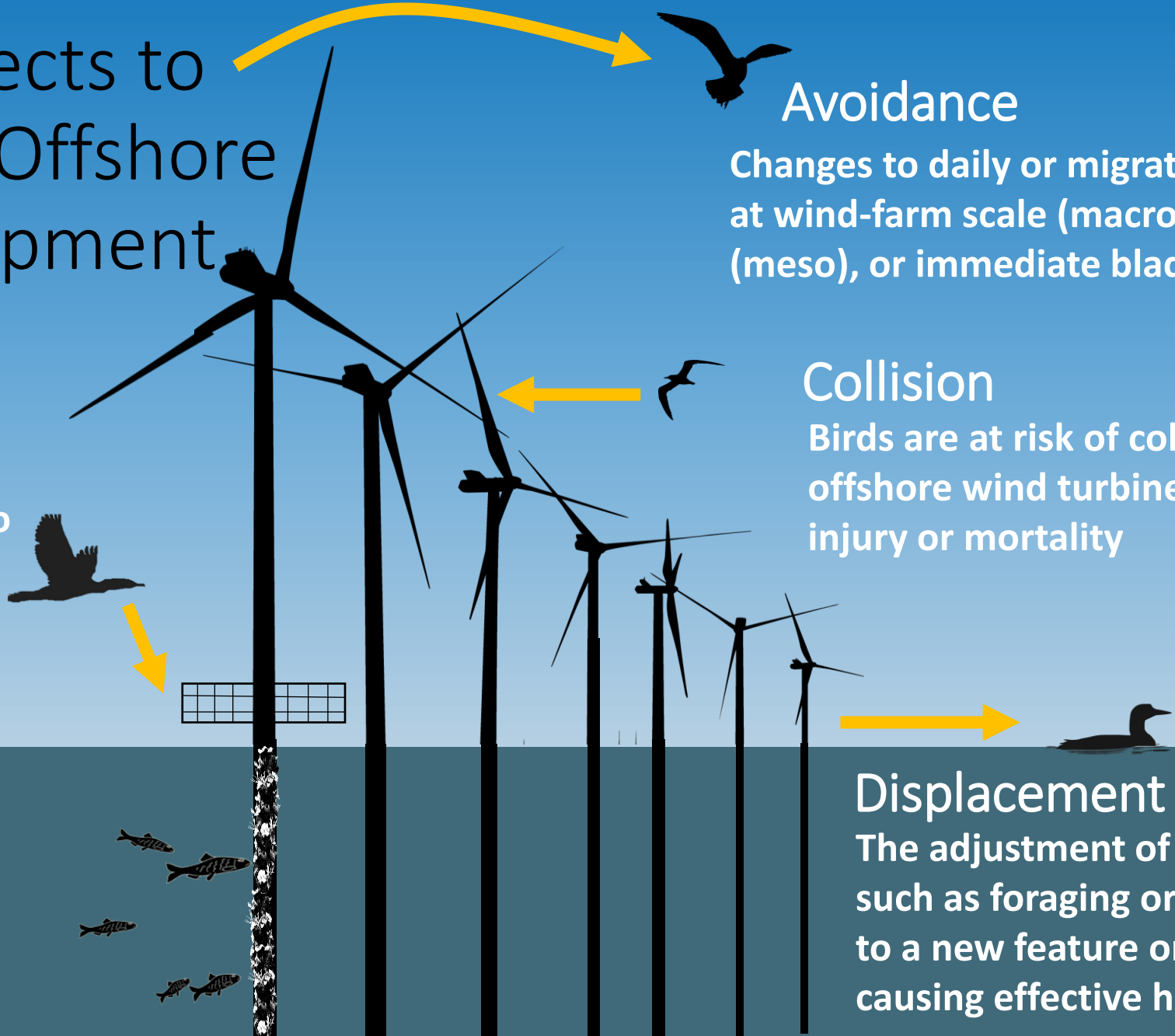
Birds are at risk of colliding with offshore wind turbines resulting in injury or mortality

Attraction

Species may be attracted to wind farms due to increased foraging or perching opportunities

Displacement

The adjustment of habitat use, such as foraging or breeding, due to a new feature or disturbance, causing effective habitat loss.



Potential Effects to Seabirds from Offshore Wind Development

Avoidance

Changes to daily or migration movements at wind-farm scale (macro), turbine-scale (meso), or immediate blade-scale (micro)

Attraction

Species may be attracted to wind farms due to increased foraging or perching opportunities

Collision

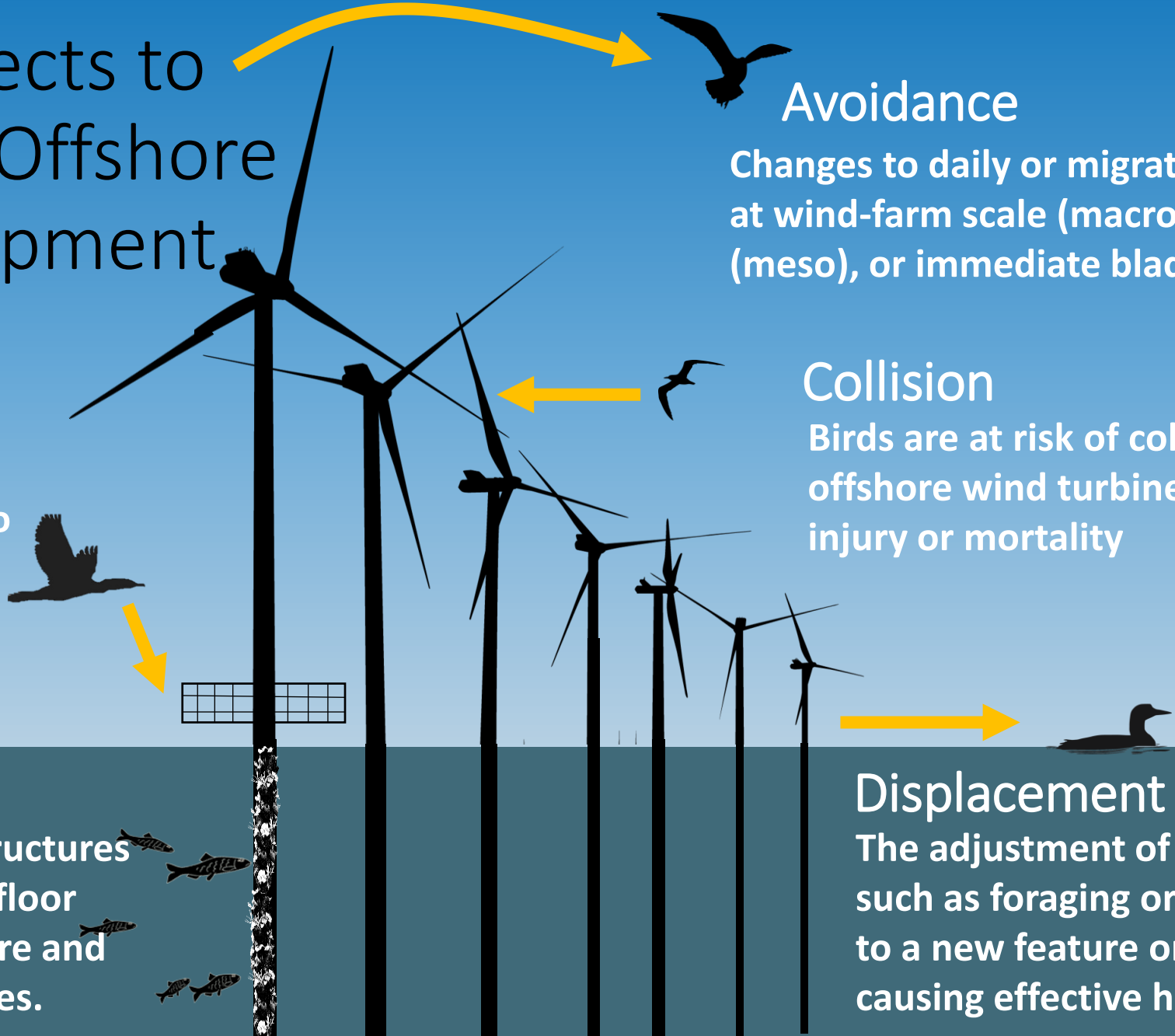
Birds are at risk of colliding with offshore wind turbines resulting in injury or mortality

Habitat Change

The introduction of hard structures and disturbance to the sea floor can alter ecosystem structure and result in changes in resources.

Displacement

The adjustment of habitat use, such as foraging or breeding, due to a new feature or disturbance, causing effective habitat loss.



Informing Decision Making With Expert Stakeholder Engagement

Clear need for collaborative approaches to:

- Standardize data collection methods
- Ensure that monitoring is designed to have the power to answer effects questions
- Pursue research and monitoring activities to a), detect effects from offshore wind development, and b) understand impacts to populations and ecosystems
- Identify where further development of monitoring tech is needed
- Identify mitigation approaches

There are several efforts underway



Environmental Technical Working Group (ETWG)

Goal

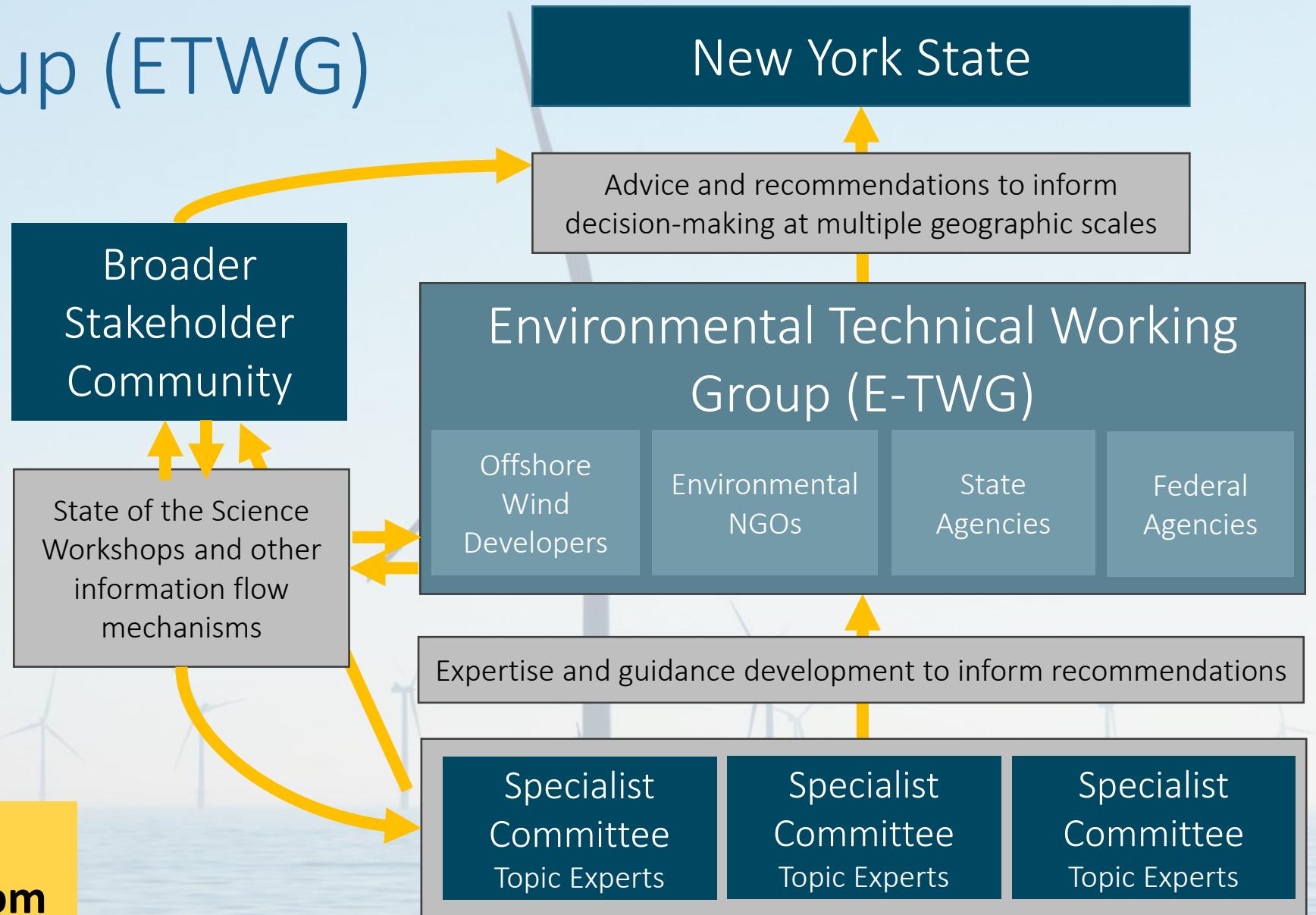
Inform the environmentally responsible development of offshore wind energy



SCAN ME



E-TWG website:
www.nyetwg.com



Environmental Technical Working Group (ETWG)

Goal

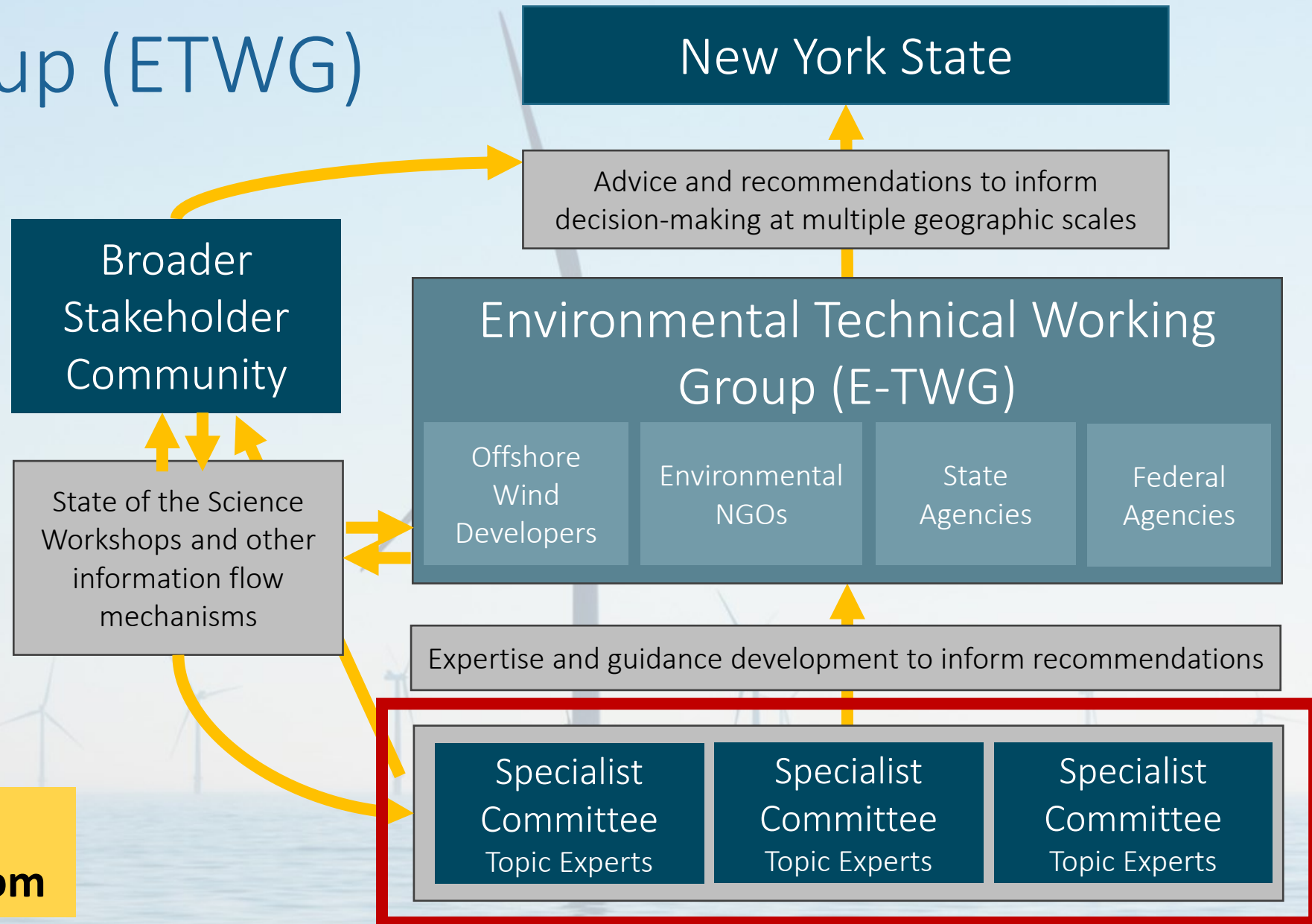
Inform the environmentally responsible development of offshore wind energy



SCAN ME



E-TWG website:
www.nyetwg.com



Workgroup for Synthesis of Regional Research Recommendations

Goals (2021-2023)

- Inform immediate decision-making by states, developers, and others about research activities to pursue
- Help feed into Regional Wildlife Science Collaborative efforts



Workgroup for Synthesis of Regional Research Recommendations

Goals (2021-2023)

- Inform immediate decision-making by states, developers, and others about research activities to pursue
- Help feed into Regional Wildlife Science Collaborative efforts (RWSC.org)

Primary products

- Database of research needs and data gaps compiled and synthesized from existing sources
- Interim guidance for regional-scale research to complement the database

Process

- Monthly workgroup meetings supported by BRI and SEER
- Public feedback opportunities/webinars



U.S. Atlantic Offshore Wind Environmental Research Recommendations

Database of data gaps and research needs

- Researchers and funders can easily access, sort, and prioritize research recommendations
- Public feedback process
- Available on Tethys

Pacific Offshore Wind Environmental Research Recommendations database also accessible



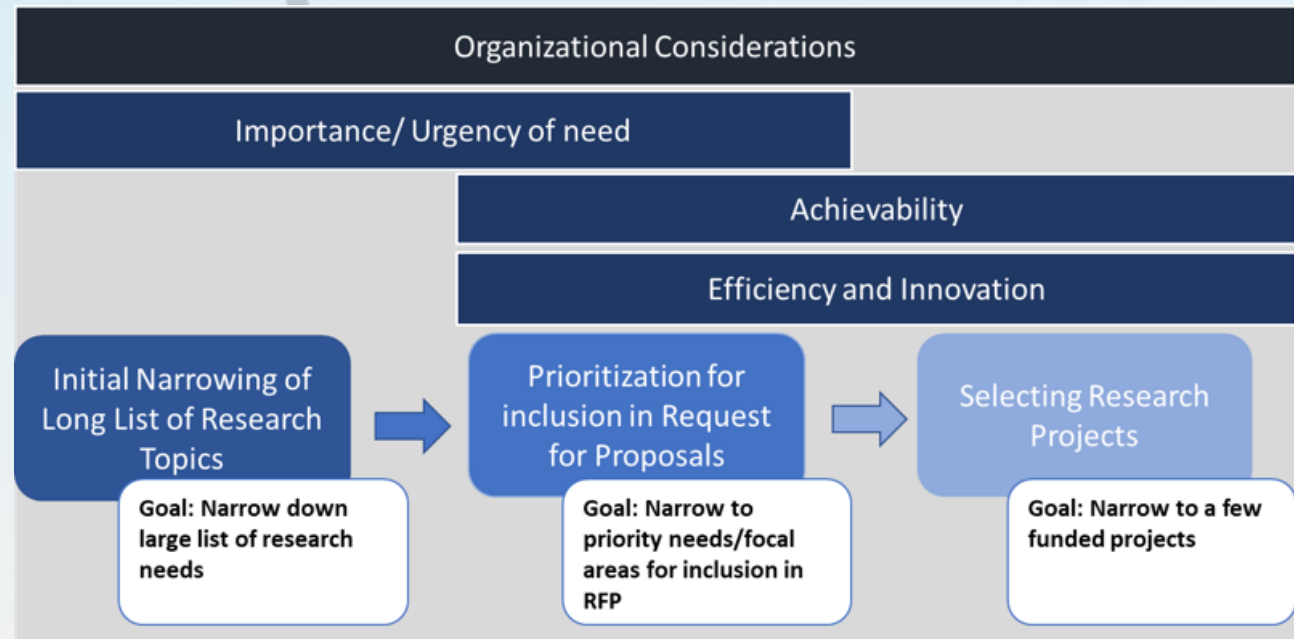
Workgroup for Synthesis of Regional Research Recommendations

Key aspects of guidance document

- How to prioritize regional research
- Study design and methodology
- Data consistency and transparency

Public webinar and period for input in early May, please sign up for ETWG mailing list if interested.

E-TWG website: www.nyetwg.com



Hypothetical example for how to prioritize research and monitoring related to offshore wind energy development and wildlife and ecosystems using the criteria defined below, including: Importance/Urgency of need (Tier 1), Achievability (Tier 2), and Efficiency and Innovation (Tier 3). Organization-specific considerations may play a role in decision making throughout this process.



**This figure is a work in progress
Please don't share!**

Avian Displacement Guidance Specialist Committee

Goal

- Inform pre- and post-construction monitoring and research approaches for detecting and characterizing displacement, attraction, and macro- to meso-avoidance of marine birds at OSW facilities in U.S. waters

Co-chaired by



Avian Displacement Guidance Specialist Committee

Goal

- Inform pre- and post-construction monitoring and research approaches for detecting and characterizing displacement, attraction, and macro- to meso-avoidance of marine birds at OSW facilities in U.S. waters

Primary products

- Initial guidance document that identifies questions and the appropriate methodologies to address those questions
- Interim recommendations for using existing avian baseline data for offshore wind site characterization

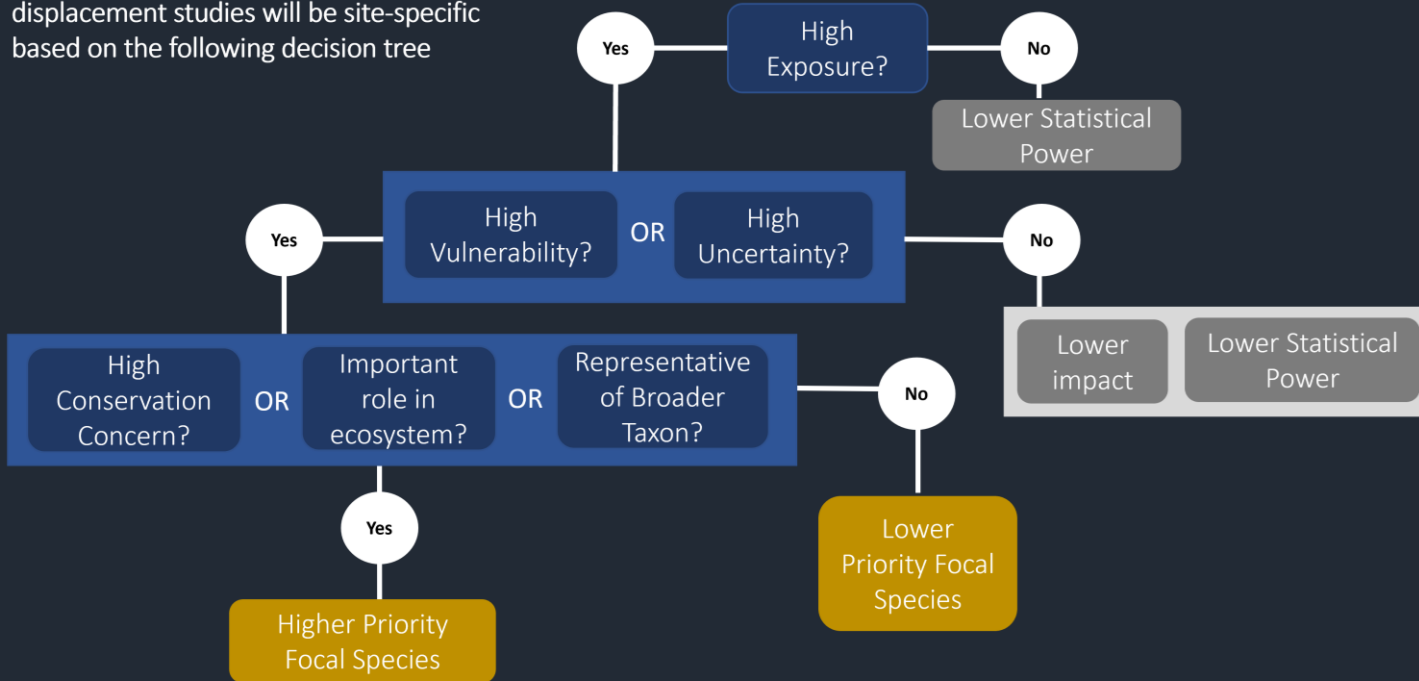
Co-chaired by



Avian Displacement Guidance Specialist Committee

The choice of focal species for displacement studies

The choice of focal species for displacement studies will be site-specific based on the following decision tree



Key aspects of guidance document

- Identifies displacement/attraction and avoidance-related questions
- Identifies appropriate methodologies to address those questions
- Informs study designs for boat/aerial surveys
- Identifies focal species



**This figure is a work in progress
Please don't share!**

Lessons Learned for Effective Stakeholder Engagement

Importance of effective collaboration and communication

- 1) Accommodate stakeholder involvement in a variety of ways based on knowledge and expertise



Lessons Learned for Effective Stakeholder Engagement

Importance of effective collaboration and communication

- 1) Accommodate stakeholder involvement in a variety of ways based on knowledge and expertise
- 2) Ensure specific technical expertise is brought in to inform targeted discussions



Lessons Learned for Effective Stakeholder Engagement

Importance of effective collaboration and communication

- 1) Accommodate stakeholder involvement in a variety of ways based on knowledge and expertise
- 2) Ensure specific technical expertise is brought in to inform targeted discussions
- 3) Communicate regularly with relevant groups



Lessons Learned for Effective Stakeholder Engagement

Importance of effective collaboration and communication

- 1) Accommodate stakeholder involvement in a variety of ways based on knowledge and expertise
- 2) Ensure specific technical expertise is brought in to inform targeted discussions
- 3) Communicate regularly with relevant groups
- 4) Promote transparency



Lessons Learned for Effective Stakeholder Engagement

Importance of effective collaboration and communication

- 1) Accommodate stakeholder involvement in a variety of ways based on knowledge and expertise
- 2) Ensure specific technical expertise is brought in to inform targeted discussions
- 3) Communicate regularly with relevant groups
- 4) Promote transparency
- 5) Focus efforts at appropriate geographic scales



Lessons Learned for Effective Stakeholder Engagement

Challenges and solutions

- Stakeholder fatigue: members are volunteers
 - Mitigated to some extent by the funding of administrative, technical, and facilitation support from NYSERDA

Lessons Learned for Effective Stakeholder Engagement

Challenges and solutions

- Stakeholder fatigue: members are volunteers
 - Mitigated to some extent by the funding of administrative, technical, and facilitation support from NYSERDA
- End goals not always shared by members
 - Mitigated by refocusing discussion, or members spending effort on other topics

Conclusions

- Offshore wind is a regional resource, and regional stakeholder engagement is key
- We need to continue to identify guidance, research, and other needs and fulfill them

E-TWG website: www.nyetwg.com



Conclusions

- Offshore wind is a regional resource, and regional stakeholder engagement is key
- We need to continue to identify guidance, research, and other needs and fulfill them
- Stakeholder advisory groups such as the E-TWG can help to:
 - Maintain regional collaboration and communication
 - Inform state (and regional) decision making and improve outcomes

E-TWG website: www.nyetwg.com





Thank you!

Edward.Jenkins@briwildlife.org

