ROSA
Responsible Offshore Science Alliance

ROSA Advisory Council

September 26, 2024

Agenda

9:00am Welcome, Introductions, Agenda Review

9:10am ROSA Updates

9:30am Partner Updates

10:30am Break

10:45am Research Gaps Analysis

11:15am ROSA Data Governance Program

11:45pm Action Items, Next Steps, & Other Business

12:00pm Adjourn

ROSA

Leading Regional Research on Offshore Wind & Fisheries

Inception:

Formed in early 2019 as a 501(c)3 through partnership between RODA and OSW developers

Mission:

The Responsible Offshore Science Alliance (ROSA) is a nonprofit organization that **advances research, monitoring, and methods on the effects of offshore wind energy development on fisheries across US federal and state waters**. We serve as an objective resource for all sectors and facilitate the coordination of regional scientific research to collaboratively and efficiently deepen understanding.

ROSA

ROSA AC Executive Committee

Current Executive Committee includes representatives from:

- **Commercial Fishing**
  - Peter Hughes
  - Eric Reid
- **Recreational Fishing**
  - Mike Waine
  - Willy Goldsmith
- **OSW Development**
  - Jennifer Daniels
  - Ruth Perry
- **State representative**
  - Julia Livermore
  - Nominee for selection by ROSA Board
- **Regional Organizations**
  - Andy Lipsky
  - Bob Beal

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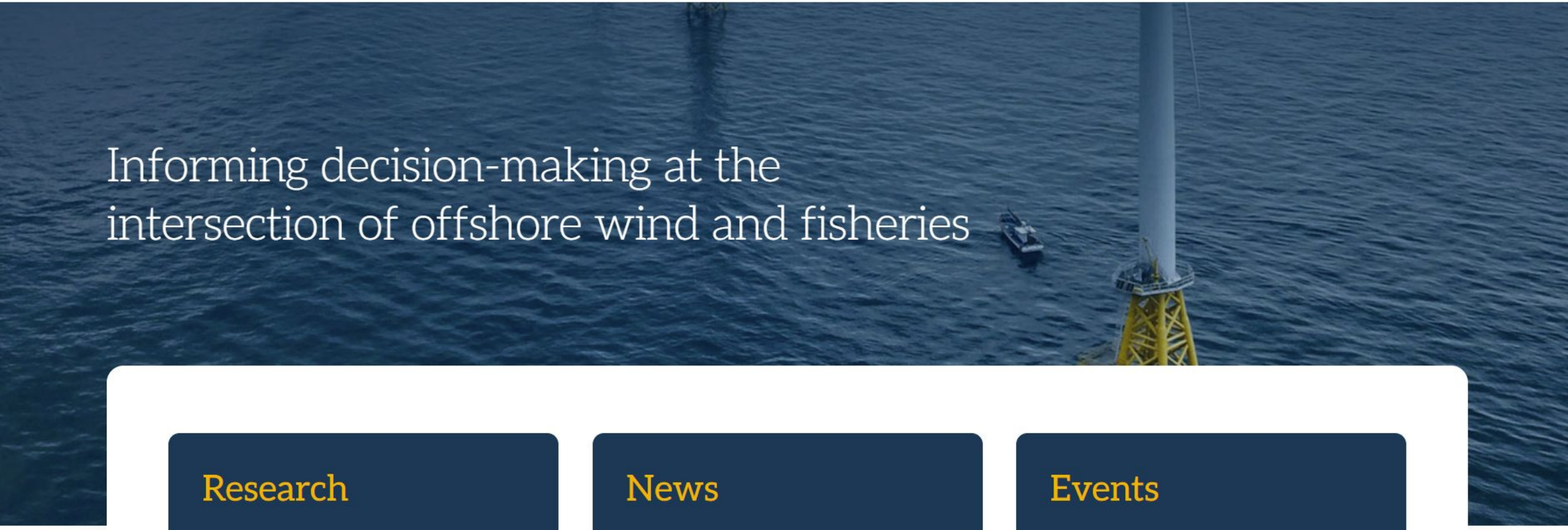
ROSA Updates



Informing decision-making at the intersection of offshore wind and fisheries

Research

- OSW Project Monitoring Framework & Guidelines
- Fisheries Resource Data Report

News

- **Spotlight:** ROSA launches latest phase of FishFORWRD
- ROSA, RSWC, and ACT collaborate

Events

- Next Advisory Council Meeting: September 26 @ 9am ET

Acoustic Telemetry Committee Update

Mike Pol

Acoustic Telemetry Committee - 5 September

secoora.org

- Update from Jordan Katz on RWSC activities
  - New webpage: https://rwsc.org/acoustic-telemetry/ - what's new, deployment map, resources
  - Loss of receivers continues to be a problem
- Update from Beth Bowers on telemetry practices guide/document
  - May address some of the terms of reference for ROSA committee
    - definition of metrics, potential for site conflicts, tradeoffs for equipment expense and sample size
    - ROSA guidance may point to final document (long timeline)
- FishFORWRD check
  - Several avenues for possible additional AT projects
- Progress on ToRs/Monitoring guidelines revision
  - Data sharing continues to be an issue
  - Request to continue to raise the issue at ROSA
- Next meeting TBD in November

Engineering Co-Existence - Project Update

Mike Pol

Engineering Co-Existence: Co-design of floating offshore wind, longlining, and recreational fishing

Presented by:
Mike Pol, Responsible Offshore Science Alliance
Everett Rzeszowski & Damian C. Brady, University of Maine Darling Marine Center
Matt Hall & Ericka Lozon, National Renewable Energy Laboratory

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1865 THE UNIVERSITY OF MAINE

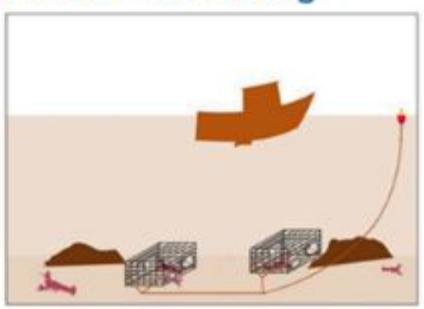
NREL

THE QUESTION

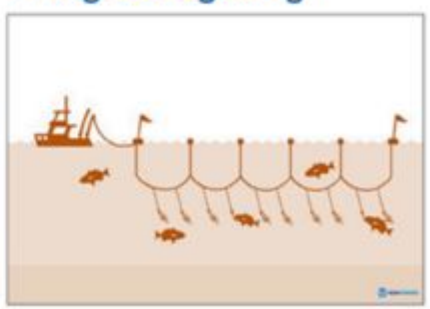
Can floating offshore wind (FOSW) engineering designs be modified economically to enhance co-existence with commercial and recreational fishing?

We are engaging with U.S East Coast recreational and commercial fishermen in an iterative design process to share spatial needs with FOSW engineers in an effort to promote co-existence.

Lobster Pot Fishing



Pelagic Longlining

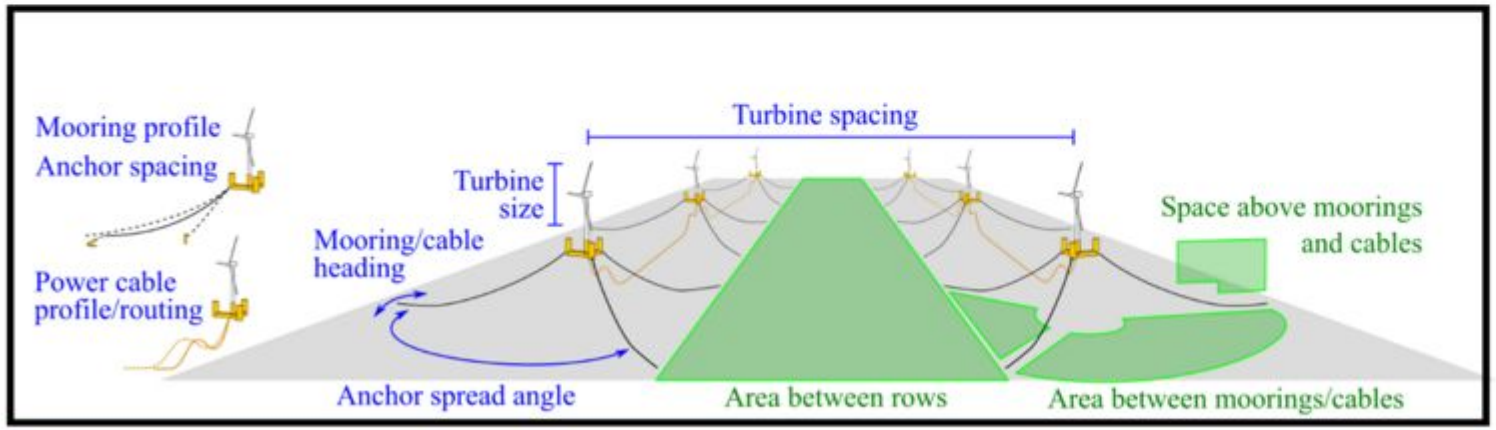


Source: NOAA Fisheries

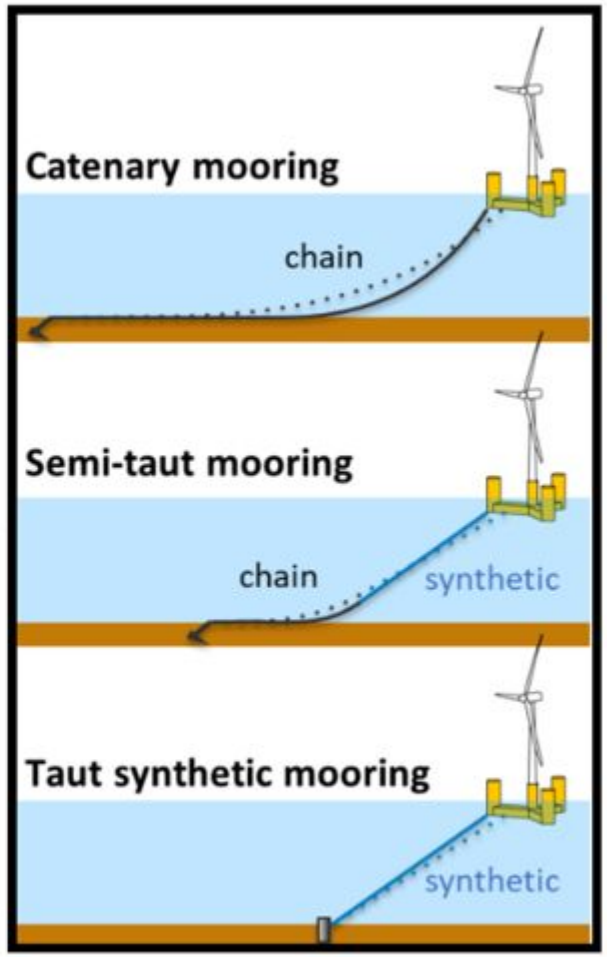
DESIGN OPTIONS

Possible array design adjustments include:

- Mooring systems
- Power cables
- Turbine size
- Substructure class
- Mooring system configuration
- Intra-array power cabling
- Overall farm layout



Floating Wind Array: Green areas illustrate possible areas of design adjustment. *Source: NREL*



Mooring designs for FOSW turbines. *Source: NREL*

APPROACH

Semi-structured interviews began in August and will continue through September 2024 with experienced fishermen in the Gulf of Maine lobster fishery and pelagic longline and recreational highly migratory species fisheries. Questions were reviewed and vetted with interviewees and other experts. Opportunities for other gear types are potentially available.

NEXT STEPS

- Collate and summarize results from interviews for engineers
- Alternative designs are evaluated using Levelized Cost of Energy (LCOE)
- Alternatives are reviewed by interviewees and other experts using the test case gear types
- Report including recommendations as final product

This project is funded by National Offshore Wind Research and Development Consortium (NOWRDC) and this poster was developed based upon funding from the Alliance for Sustainable Energy, LLC, Managing and Operating Contractor for the National Renewable Energy Laboratory (NREL) for the U.S. Department of Energy.

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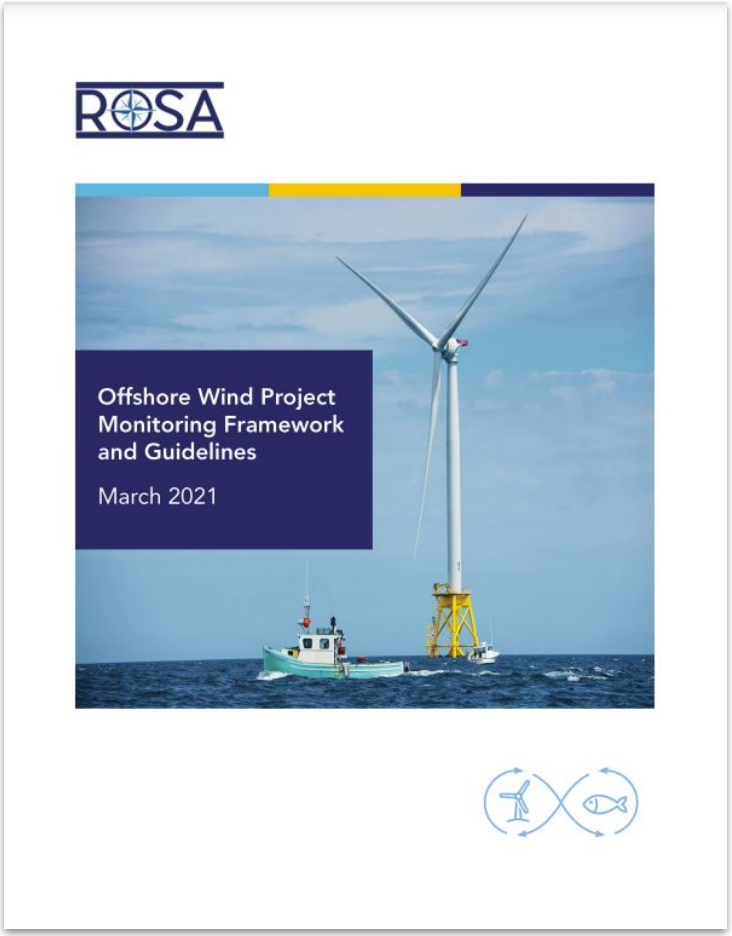
FOR MORE INFORMATION:
Email Mike Pol: mike@rosascience.org

Offshore Wind Project Monitoring Guidelines

Reneé Reilly

ROSA Project Monitoring Framework & Guidelines



1) Benthic Habitat/EFH Monitoring Studies Chapter
   - Literature review complete
   - Presentation to RWSC Habitat & Ecosystem Subcommittee
   - Draft for distribution to reviewers Q4 ‘24
2) Socioeconomic Studies Chapter
   - Literature review complete
   - Draft for distribution to reviewers Q4 ‘24
3) Existing chapters
   - Updates underway
   - Full draft for distribution to reviewers Q1 ‘25

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Partner Updates

BSEE Statement on Vineyard Wind Offshore Incident

WASHINGTON – The Bureau of Safety and Environmental Enforcement today issued the following statement regarding an incident involving blade damage on a Vineyard Wind offshore turbine.

"Following the July 13, 2024, blade failure incident at Vineyard Wind, **BSEE has issued a Suspension Order to Vineyard Wind to cease power production from all its wind turbine generators until it can be determined whether the blade failure affects any other VW turbines.** The Suspension Order suspends power production on the lease area and suspends installation of new wind turbine generator construction: Those operations will remain shut down until the suspension is lifted. BSEE has also issued a Preservation Order to safeguard any evidence that may be relevant to determining the cause of the incident.

As of this date, there are no reported injuries or harm to any marine resources or mammals from the incident. BSEE is onsite with Vineyard Wind as investigations are underway. BSEE will conduct an independent assessment to ensure the safety of future offshore renewable energy operations."

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ROSA Advisory Council Meeting

We are on a short break. Please return at 10:40am ET.

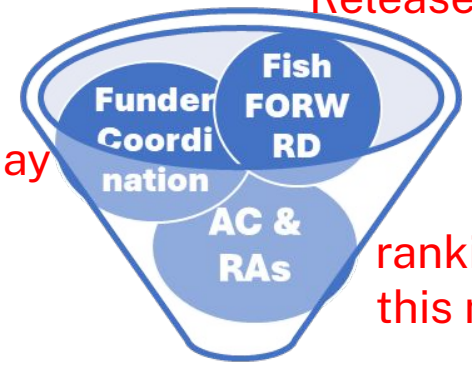
Regional RFP Update

Tricia Perez

ROSA RFP Development Process

Released in July

Held in May



ranking survey this month

RFP Development Plan → Research Topic Areas → Draft & Publish RFP → Review Concept Papers & Full Applications → Select Final Projects & Negotiate → Project Start & Management

Submitted July

CURRENT STEP

ROSA

FishFORWRD | Fish and Fisheries OffshoRe Wind Research Database

Objective

increase awareness of ongoing work

avoid duplication of efforts

create a common understanding of research needs

Contents

Research Projects

- Research projects funded by federal agencies, state agencies, non-profits, etc.
- Implemented Developer Fisheries Monitoring Plans

Research Needs

- Individual research needs from 17 different published documents by federal agencies, states agencies, and public-private partnerships

Research Gaps Analysis (in development)

Research Categories

- Habitat Fragmentation/Modification
- Socioeconomic Impact
- Cumulative Impacts
- Sound/Vibration Impacts
- Species Distribution/Composition
- EMF
- Fisheries Access & Gear Modification
- Fisheries Engagement & Capacity Building
- Survey Adaptation
- Data Management
- Resource Monitoring

FishFORWRD | Fish and Fisheries OffshoRe Wind Research Database

rosascience.org/fishforwrd

Other Attributes
Developer Fisheries Monitoring Plan (Y/N)
Fixed or Floating
Wind Farm Development Phase
Spatial Scale
Location
Project Title
Lead Entity
Partner Entities
PI Name
Project Objectives
Methodology
Receptor
Project Start
Est. Project End
Funder
Funding Partners
Project Website

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FishFORWRD stats

- Views: 815
- Active Users: 337
- Views Per Active Users: 2.42

Download as CSV

Rsrch. Proj. Id	Proj. Title	Rsrch. Category	Proj. Objectives	Developer Fisheries Monitoring Plan
All	All	All		All
Ex-1	Benthic Monitoring During Wind Wind Turbine Installation and Operation at the Block Island Wind Farm, Rhode Island		understand the nature and potential spatial and temporal scales of ed alterations in benthic macrofaunal community characteristics of the long-term placement of the turbine foundations on the	No
Ex-2	Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England		nine if EMF impacts important fish species	No
Ex-3	Feel the Vibrations: Behavioral Response by Fishes and Invertebrates to Particle Motion and Substrate Vibration from Offshore Renewable Energy Development		ish appropriate methodologies to collect and analyze substrate-borne vibroacoustic disturbances from offshore wind construction activities that could potentially affect benthic ecological communities	No

All
Cumulative Impacts
Data Management
EMF
Fisheries Engagement & Capacity Building
Fishery Access & Gear Modification
Habitat Fragmentation/Modification
Resource Monitoring
Socioeconomic Impact
Sound/Vibration Impacts
Species Distribution/Composition
Survey Adaptation

FishFORWRD

323 Research Needs

Consolidate duplicative or species-specific Research Needs

101 Summarized Research Needs (SRN)

Complete list of RN still available in Database Center

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wsp

Research Gaps Analysis

Habitat Modification/Fragmentation
- SRN-1
- SRN-2
- SRN-3
- ...

Fisheries Access & Gear Modification
- SRN-1
- SRN-2
- SRN-3
- ...

Socioeconomic Impacts
- SRN-1
- SRN-2
- SRN-3
- ...

...

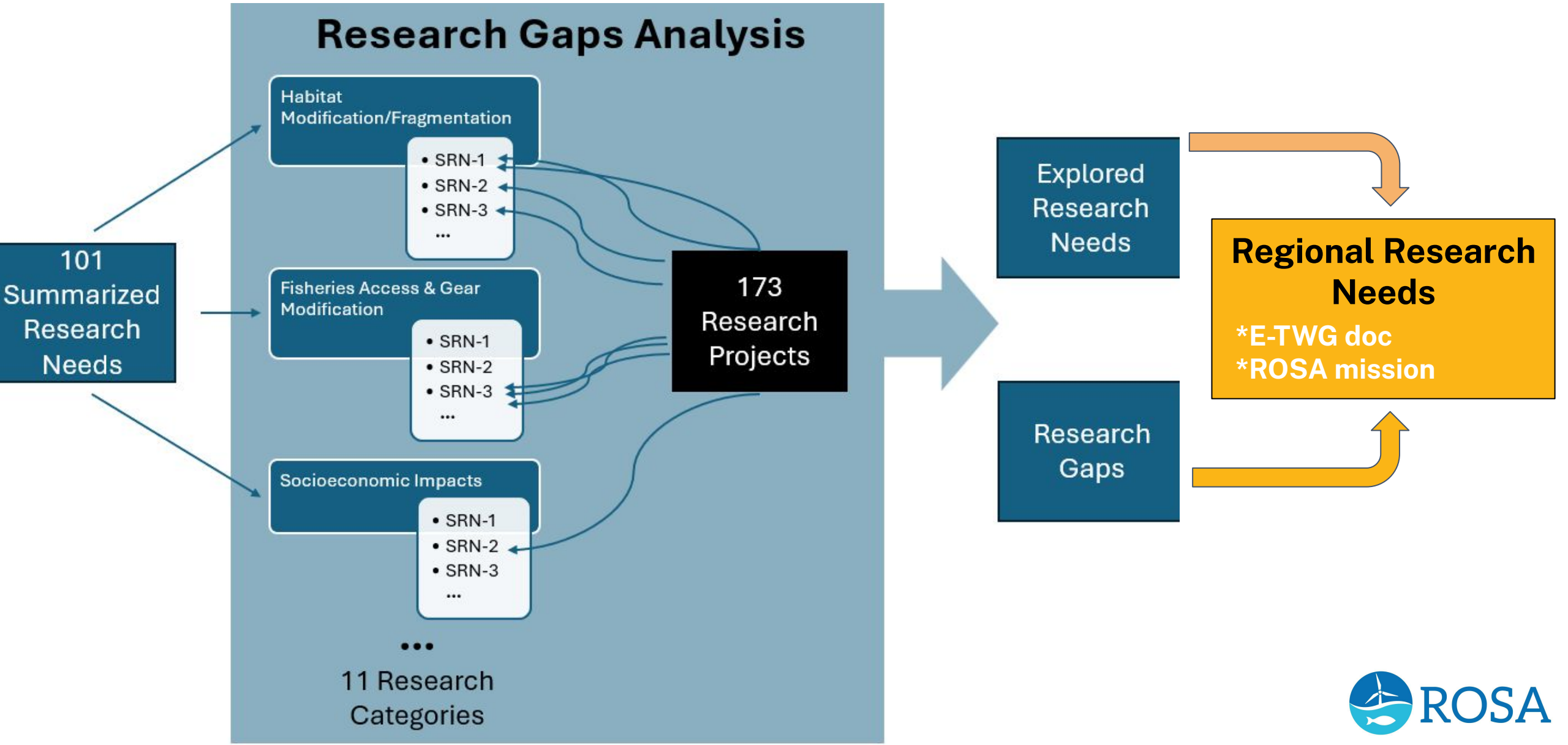
11 Research Categories

173 Research Projects

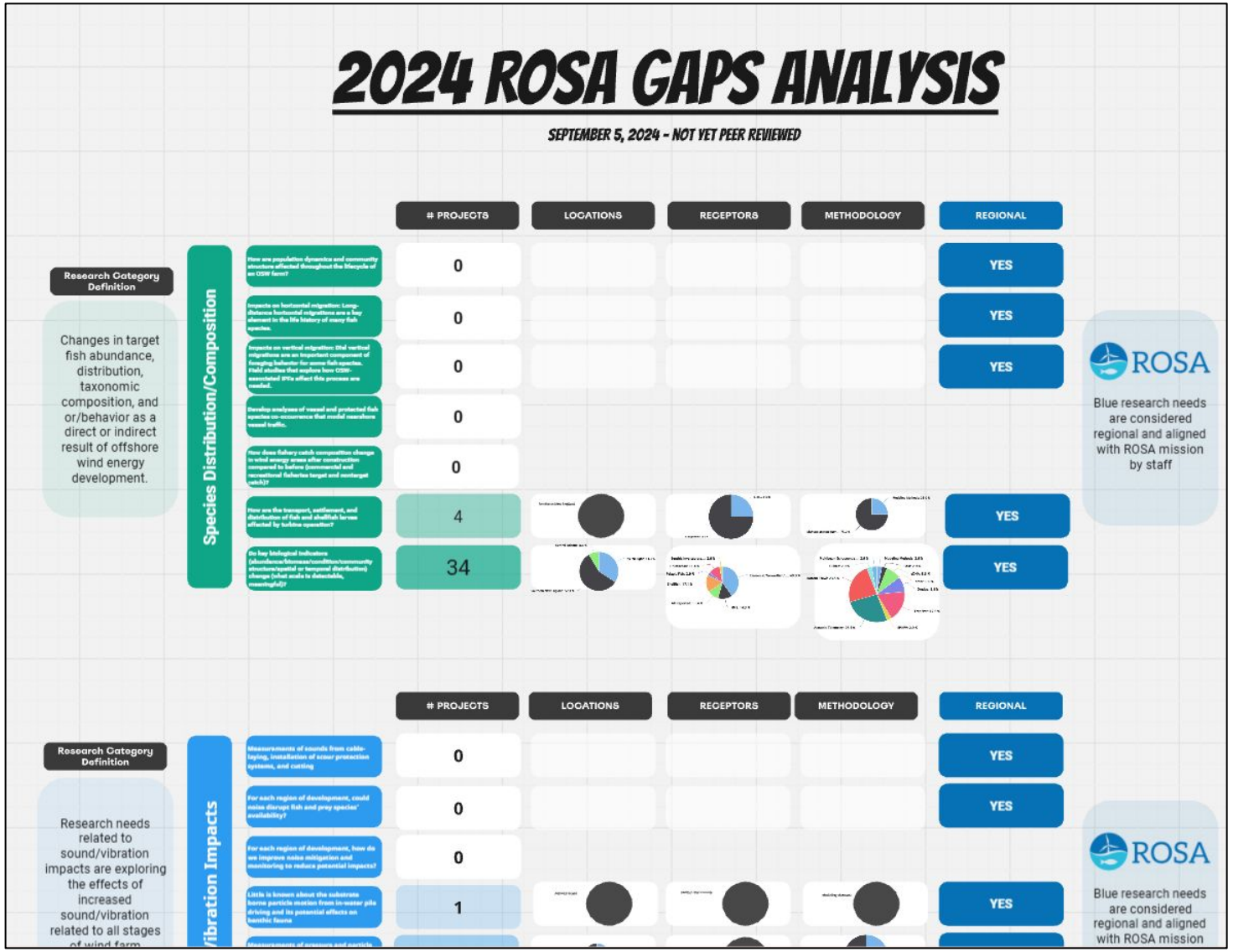
Explored Research Needs

Research Gaps

Filtered to Regional Needs for ROSA



Presentation Held September 20 for AC & RAs



Research Categories

- Habitat Fragmentation/Modification
- Socioeconomic Impact
- Cumulative Impacts
- Sound/Vibration Impacts
- Species/Distribution/Composition
- EMF
- Fisheries Access & Gear Modification
- Fisheries Engagement & Capacity Building
- Survey Adaptation
- Data Management
- Resource Monitoring

more information at
rosascience.org/resources/fishforwrd

quick walkthrough of miro board

2024 Gaps
ROSA Reg
Topic Area

Provide rankings and opini

OPPORTUNITY TO PROVIDE FEEBAC
1. Section 1 - High Level Ranking of
2. Section 2 - Ranking within Resear

Start now

1

Rank High Level Topic Areas - FISH BIO

drag a topic or use the arrows to order

- Species Distribution/Composition
- Sound/Vibration Impacts
- EMF
- Habitat Fragmentation/Modification
- Resource Monitoring
- Survey Adaptation
- Cumulative Impacts & Fisheries Management In
- Data Management

2

Rank High Level Topic Areas - FISHERI

drag a topic or use the arrows to order

- Socioeconomic Impacts
- Fisheries Engagement & Capacity Building
- Fisheries Access & Gear Modification
- Cumulative Impacts & Fisheries Management In
- Data Management

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EMF

You may provide a ranking of research needs below and/or provide written feedback on research needs in this topic area

drag a topic or use the arrows to order

- Laboratory measurements of energized HVCs are needed to generate spatiotemporal models of EMF emissions.
- A better understanding of the temporal variations in power levels and the resulting spatio-temporal variations in the emitted EMF are required.
- Expected and in-situ OSW EMF exposure intensities
- How do fisheries species respond to EMF-emitting cables? Responses include behavior, movement, navigation, physiology, foraging, egg development, hatching success, and larval fitness. Are EMF-sensitive species aggregating or avoiding energized cables?
- While research should continue to study how individuals respond to EMFs at different stages of their life cycle, the overarching concern is whether specific observed behavioral responses to EMFs are likely to result in population-level impacts

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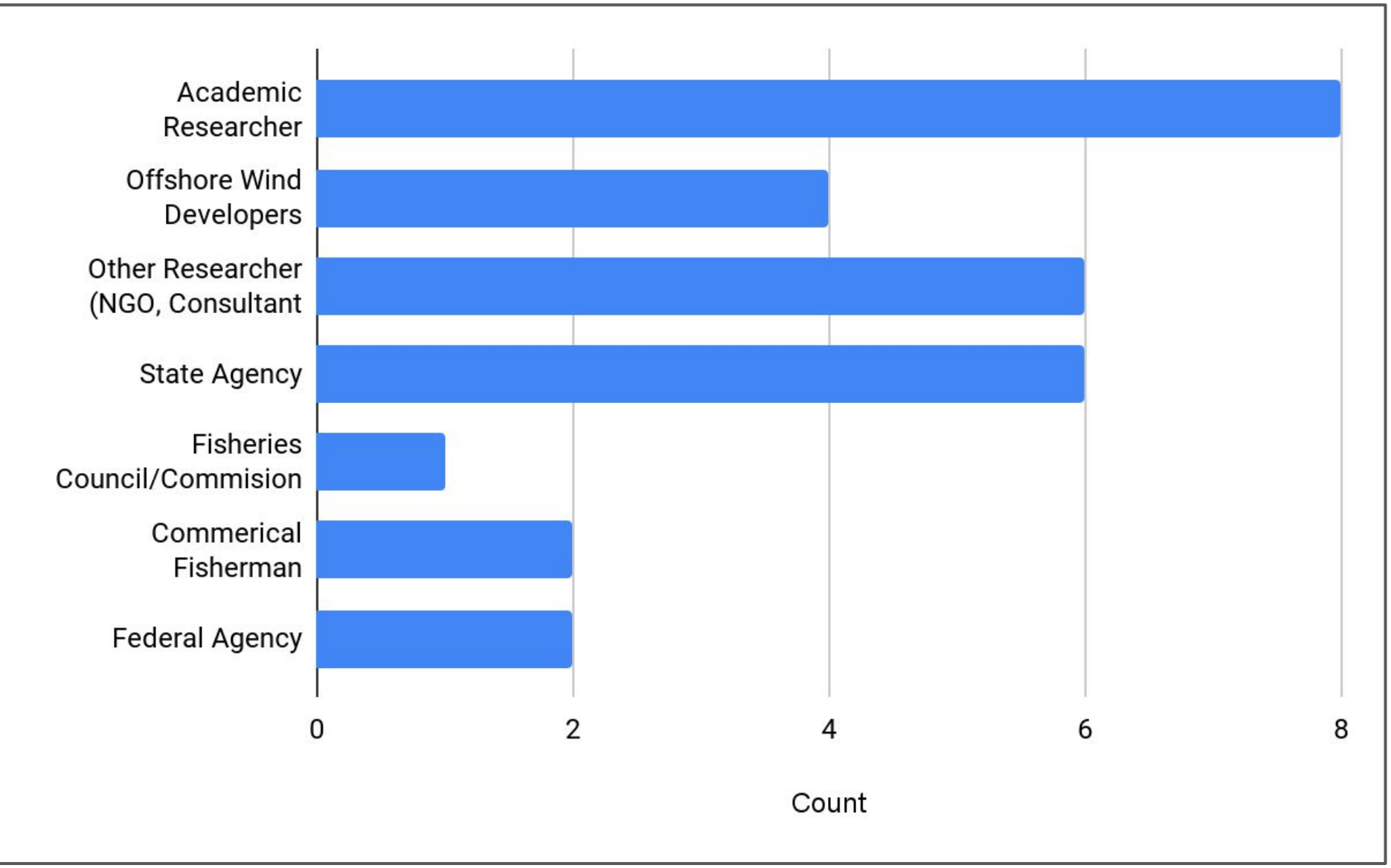
EMF

- Are the gaps in this research category: important, urgent, achievable today?
- Are there research needs missing from this list?
- What types of projects would produce the outcome to these research questions?
- What types of data and final products would advance our knowledge of these research questions?
- Provide any additional detail or feedback you'd like

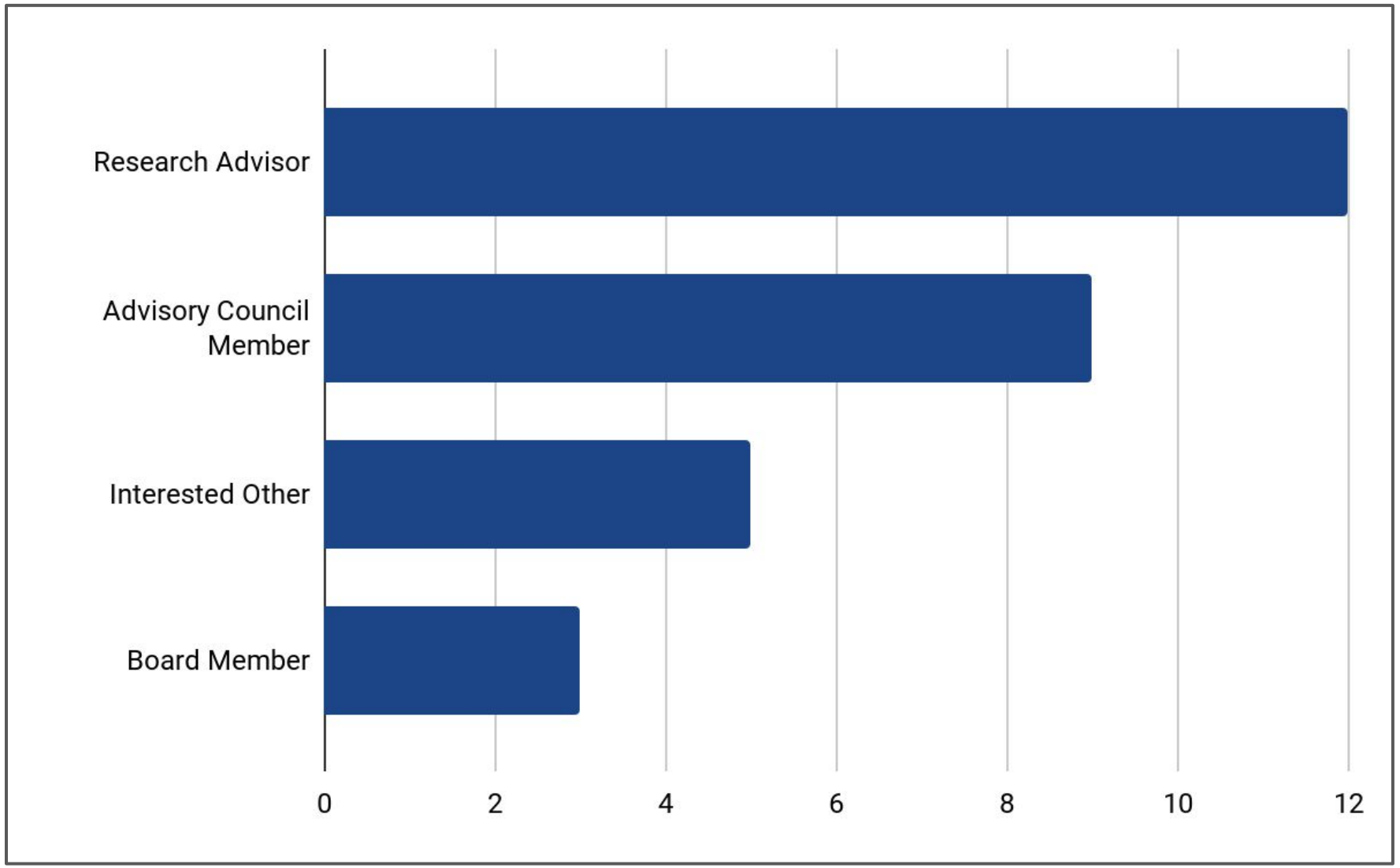
Enter your answer



29

respondents

missing input from recreational fishermen



interested other included:

state agency
developer
university
researchers

fish biology

1. **cumulative impacts & fisheries management**
2. **species/distribution and composition**
3. **habitat fragmentation/ modification**
4. sound/vibration impacts
5. survey adaptation
6. resource monitoring
7. EMF
8. data management

fisheries

1. **cumulative impacts & fisheries management**
2. **fisheries access & gear modification**
3. **socioeconomic impact**
4. fisheries engagement & capacity building
5. data management

all 29 responded

23 provided additional high level comments

section one: high level

response level varied for each research category

research category	ranking response rate	comment response date
habitat fragmentation/modification	28	14
resource monitoring	27	13
cumulative impacts/fisheries management implications	26	12
data management	15	13
EMF	28	10
fisheries access & gear modification	26	10
fisheries engagement & capacity building	25	7
socioeconomic impacts	26	9
species distribution/composition	25	10
survey adaptation	18	7

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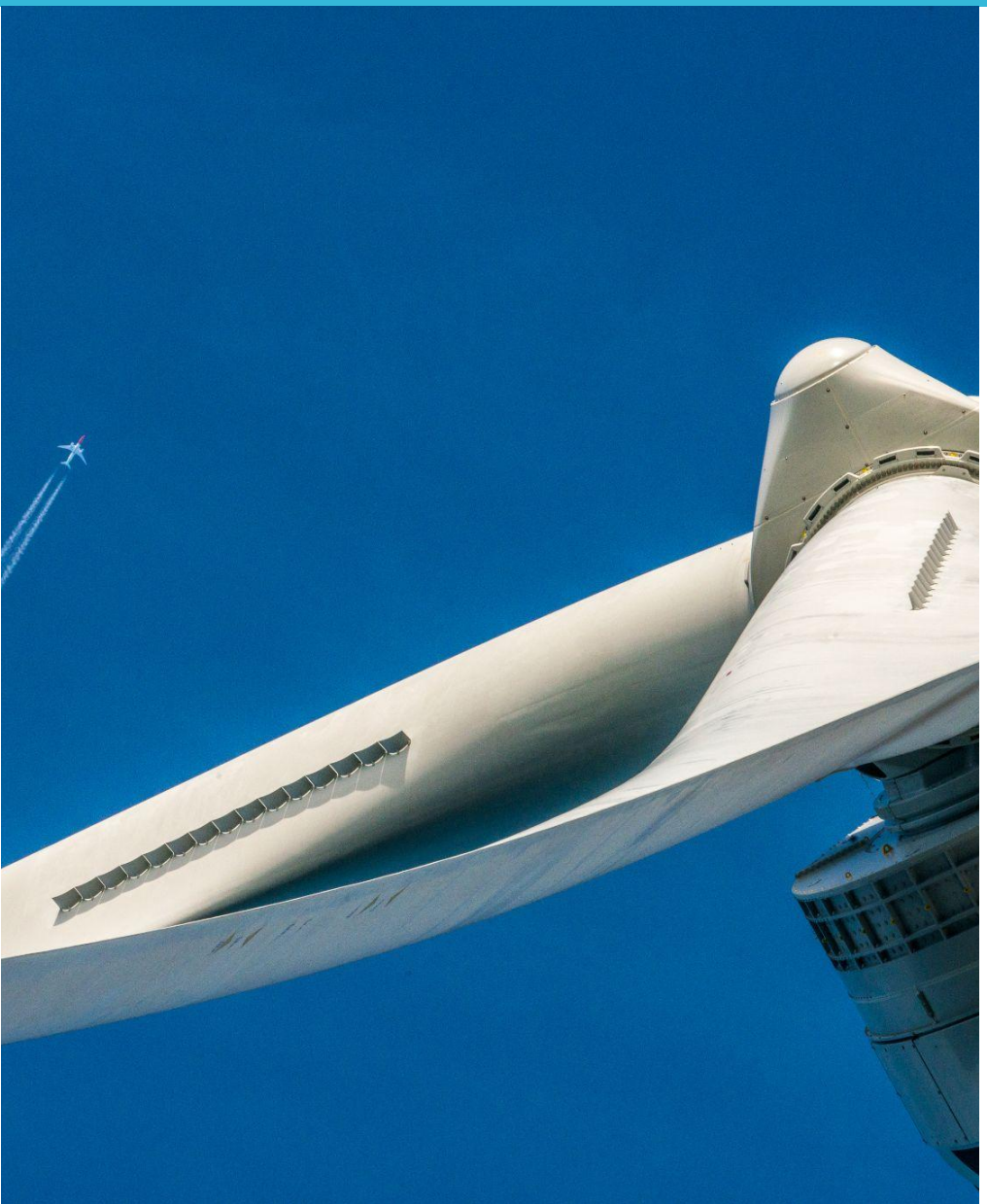
high level comments - developers



“Data management and data sharing are a high priority.”

“Any effects of sound and/or EMF on behavior/movement is also important and seems to be under-addressed in FMPs.”

“regional approaches to fisheries monitoring across developers to reduce duplicative efforts across lease areas and mitigate impacts to federal surveys.”

“I think cumulative impacts is probably the most important topic, but maybe it is a little premature to focus too much effort here, and I note that cumulative impacts may require more funding than what ROSA can offer in a single RFP.”

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high level comments - commercial fisherman

"Support regional survey method and fishery mitigation (pre-compensatory) consistency."

"continued diligence in understanding of ocean changes and distribution of fish which is having negative effects on the fishing community and markets and understanding that OSW is not at fault many difficult hurdles lie ahead for the commercial fishing businesses for multiple reasons."

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high level comments - federal agencies

"Help to prioritize project-scale monitoring, standard data submission fields/elements."

"Focusing research on cumulative impacts, whether biological, ecological, or social, across regions and coastlines."

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high level comments - state agencies

“I think cumulative impacts and fisheries management implications are huge but our ability to understand and assess these implications are a long way off, while other areas are achievable on shorter timeframes”

“ROSA should think about what are the right questions to answer and to stay away from "so what" science priorities.”

“fishing effort. fisheries economic impacts. species distributions and range shifts. impacts to fisheries resulting from habitat conversions.”

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high level comments - researchers

"The cumulative impacts is a bit difficult to rank in this exercise. I see it as of prime importance and a gap but it is really comprised of all other elements. For example, we need to know the cumulative impacts of habitat fragmentation, species distribution change, sound, EMF, etc.."

"Making regional monitoring a reality instead of an idea."

"how will the development of offshore structures affect larval distributions of highly valued commercial/recreational species? "

"OWF impacts are rarely considered at the dimensions that affect populations and communities of migrating animals. ... Evaluating these changes is challenging but tractable within the rapidly-improving capabilities of observing networks and synoptic oceanography.

"For socioeconomic data outside of data already collected by fishery managers (e.g., landings, fishing effort), there is little standardization in what is collected & how.

"The overriding problem is that operational need for the scientific information has not been articulated as far as I know."

"I would use as a filter for all projects the "so what" criteria, by which I mean, if the research was successful what specific action could be taken with the results that would improve future fishing. There are lots of interesting questions, but not all are equally actionable."

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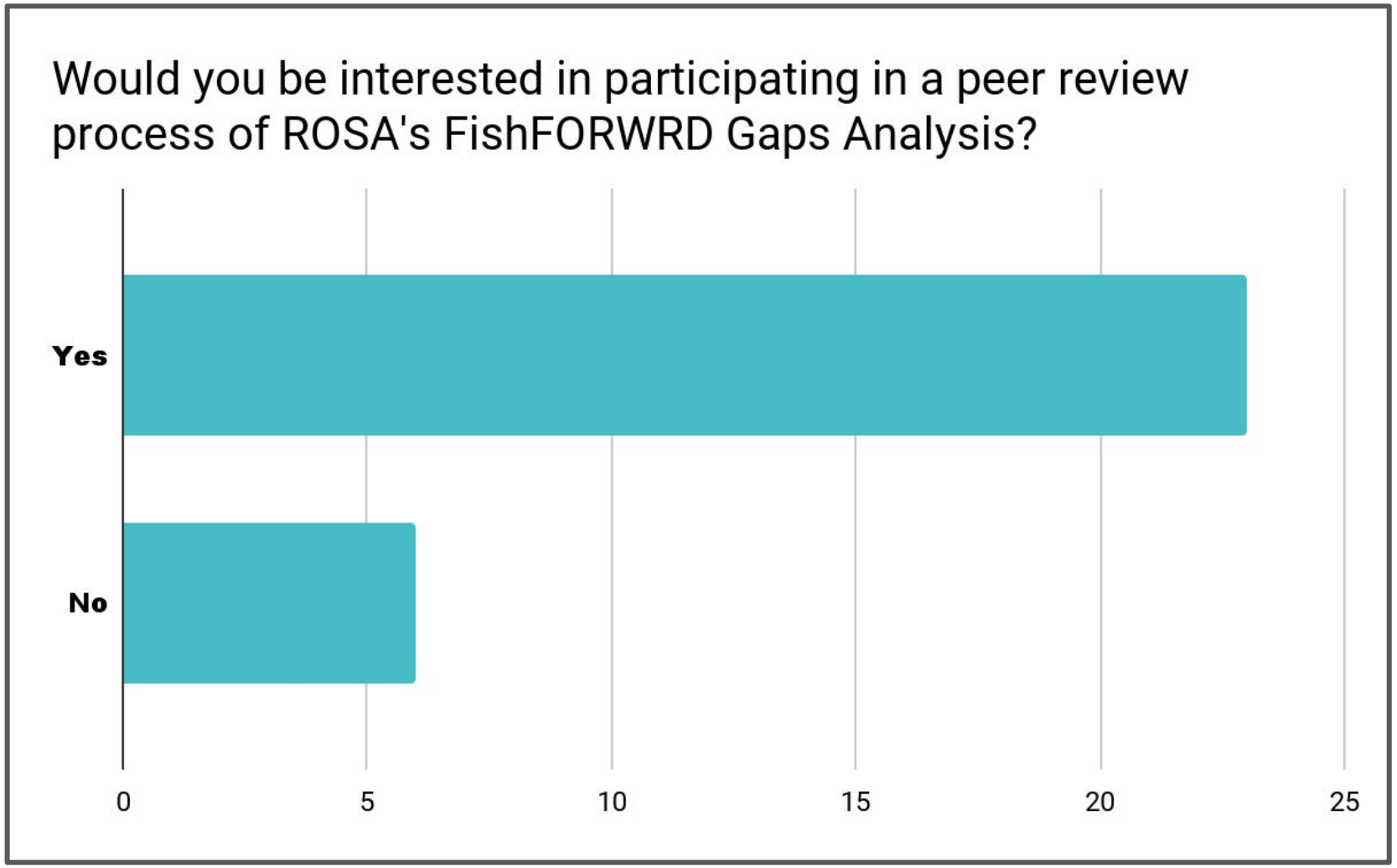
Peer Review of Gaps Analysis



if interested and did not complete ranking survey, email tricia@rosascience.org

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available through Friday (tomorrow) COB

rosascience.org/resources/fishforwrd
scroll to bottom

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Next Steps

FishFORWRD v2.2.0 Release

- routine biannual updates for new projects (next planned for Dec/Jan)
- peer review
- update webtool
- publication

ROSA Regional RFP

- Consider ranking results, insights from OSW Funder Coordination meeting, funding level, and mission to choose topic areas
- Expect RFP this fall/winter
- Will be looking for reviewers!

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ROSA Data Governance Program

Reneé Reilly and Mike Pol

Data Governance Program

- Long-standing call for data governance including sharing, security, and standardization
- Needed to assess impacts regionally
- Data governance is a multi-faceted, complex subject

Goal: To develop guidance for data on fisheries and offshore wind, in support of future regional or cumulative impacts assessments as well as interoperability and complementarity with other data efforts in the region, like RWSC.

Focus through data streams from methodologies used in monitoring plans and research

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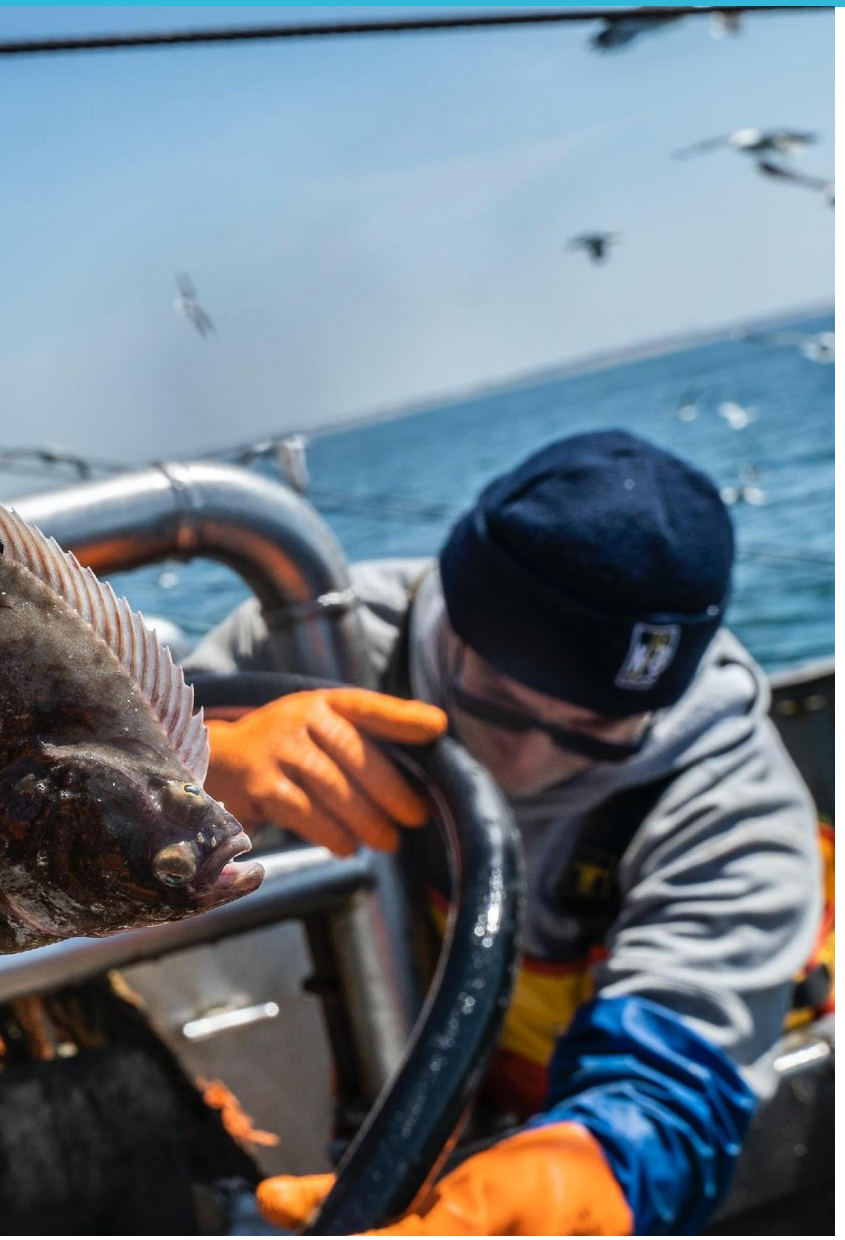
Data Governance Program



- Identified need to work with data experts and to coordinate regionally with RWSC
- Began working with Intertidal Agency in June
- IA works to make ocean data available and accessible
- Working with RWSC Data Governance Subcommittee
- Kate Wing (kate@katewing.net)

- Rachael Blake (Rachael@intertidal.agency)

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Data Governance Committee

Statement of Work

- Phase 1
  - Draft Terms of Reference for the Committee, initial work plan, recruit Committee
  - Draft definitions of data governance language
  - Review guidelines under development through specific interviews
  - Review data repositories and platforms from previous ROSA efforts
  - Make two example data journeys
- Phase 2
  - Committee launch – meet about 4x/yr
    - For each of most common monitoring methods, identify metadata standards and recommended repositories and develop sharing guidelines
    - Recommend preferred frameworks and methods for cumulative impacts
  - Cumulative impacts analysis work
    - Literature review
    - Design for data system and/or intermediary to facilitate flow of reuseable trusted data for cumulative impacts analyses

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Data Governance Committee - Progress

- Draft Terms of Reference for the Committee
- Initial work plan
- Recruit Committee
- Draft definitions of data governance language
- Review guidelines under development through specific interviews
- Review data repositories and platforms from previous ROSA efforts
- Make two example data journeys (trawl and ?)
- Committee launch
- Cumulative impacts analysis work

Data Governance Program

Interested? Recruiting Members Now

Qualities or experience that would be beneficial to the DG Committee

- Data management and strategy
- Subject matter expertise (e.g. a certain data collection method)
- Putting data to use (e.g. experience working on Fisheries Monitoring Plans)
- Working knowledge of ongoing and pending fisheries and offshore wind research
- Data licensing and sharing (including contracts)
- Data reuse
- Other relevant experience

Or email mike@rosascience.org

Interest in ROSA Data Governance Committee

Action Items, Next Steps, and Other Business

- Other business?
- Upcoming Events
  - BOEM Central Atlantic Public Meeting
    Atlantic City, NJ (Sep. 26)
  - Mid-Atlantic Fishery Management Council
    Dewey Beach, DE (Oct. 8-10)
  - Time for Turbines
    Atlantic City, NJ (Oct. 10-11)
  - Central Atlantic Marine Spatial Planning
    Columbia, MD (Oct. 16-17)
  - American Fisheries Society (NED, MAC) Meeting
    New Brunswick, NJ(Oct. 27-29)
  - ROSA's 5th Anniversary Celebration
    Atlantic City, NJ (Oct. 28)
  - American Clean Power Offshore Wind Power
    Atlantic City, NJ (Oct. 28-30)

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