



ROSA
Responsible Offshore
Science Alliance



2025-2029 STRATEGIC PLAN

Approved December 2024

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Acronyms

| | |
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| ACCSP | Atlantic Coastal Cooperatives Statistic Program |
| ACT | Atlantic Cooperative Telemetry Network |
| BACI | Before After Control Impact |
| BOEM | Bureau of Ocean Energy Management |
| CFRF | Commercial Fisheries Research Fund |
| DSMP | Data Sharing & Management Plans |
| FishFORWRD | Fish & Fisheries OffshoRe Wind Research Database |
| GARFO | Greater Atlantic Regional Office |
| MA DMF | Massachusetts Department of Marine Fisheries |
| MARCO | Mid-Atlantic Regional Council on the Ocean |
| RI DEM | Rhode Island Department of Environmental Management |
| RODA | Responsible Offshore Development Alliance |
| ROSA | Responsible Offshore Science Alliance |
| RWSC | Regional Wildlife Science Collaborative for Offshore Wind |
| NEFSC | Northeast Fisheries Science Center |
| NOAA | National Oceanic & Atmospheric Administration |
| NOWRDC | National Offshore Wind Research & Development Consortium |
| NYSERDA | New York State Energy Research & Development Authority |
| OSW | Offshore Wind |
| SMASST | University of Massachusetts Dartmouth, School of Marine Science & Technology |
| UMCES | University of Maryland Center for Environmental Science |
| VIMS | Virginia Institute of Marine Science |

Introduction

The purpose of this Strategic Plan is to define and share the direction that the Responsible Offshore Science Alliance (ROSA) will take in the next five years. It includes ROSA's [Vision](#) and [Mission](#) statements, and a [5-year Roadmap](#). The 5-year Roadmap specifically includes an explanation of how ROSA's [Guiding Principles](#) will help achieve strategic alignment and the three Key Strategic Objectives that the organization will pursue to achieve its goals.

This document is intended to summarize ROSA's past, present, and future, defining clear actions that the organization will take to fulfill its mission moving forward. The goals outlined in this document were presented to the ROSA community, including its Board of Directors, Advisory Council, the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, and underwent peer review. The organization acknowledges that to be successful, flexibility and responsiveness are needed; with a Strategic Plan in place, as OSW fisheries research evolves, so too can ROSA's work. Figure 1 illustrates the Strategic Planning Process. ROSA will continually revisit this process throughout the 2025-2029 period to ensure relevant and meaningful outcomes.

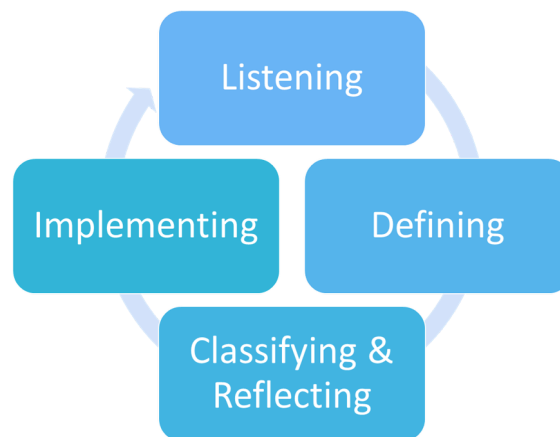


Figure 1. The Strategic Planning Process

The History of ROSA

In January of 2018, leaders from the Responsible Offshore Development Alliance (RODA) brought a novel idea to a group of Offshore Wind (OSW) Developers: *how can the two business sectors that are most affected by and involved in OSW development coalesce to create a means of supporting and advancing rigorous science in the realm of fisheries, habitats, and OSW development?*

Those industry leaders met in Providence, Rhode Island to bring forward the idea of transparency through science, and developed the framework to create ROSA.

Despite potential conflicting interests, the two industry sectors, along with several federal employees, worked over many months to bring the idea to fruition. Through countless revisions of a charter, engagement with the larger stakeholder community, final intensive negotiations around purpose, the foundation of the organization was created, and included a balanced Board of Directors and

representative Advisory Council. Financial start-up contributions came from OSW developers Ørsted, Equinor, Mayflower (Shell), Vineyard Wind, and Atlantic Shores (EDF Renewables/Shell).

ROSA's nonprofit incorporation process and subsequent 501(c)3 filing for nonprofit status in Washington, D.C. was officially launched in March of 2019. Since then, ROSA has been fulfilling its mission of advancing research, monitoring, and methods on the effects of OSW development on fisheries across US federal and state waters. ROSA is committed to serve as an objective resource for all sectors, fostering a community that will facilitate coordination of regional scientific research and increase understanding in this complex landscape.

Vision

Offshore wind (OSW) is expanding in the United States – deepening interest among those active in offshore waters to better understand the potential interactions between OSW development, ocean ecosystems, and ocean users. OSW projects span multiple states and many organizations are launching research into potential effects of development on natural resources. ROSA's coordinated approach is needed to ensure credible, relevant data are collected and shared in assessing these potential effects. **At the heart of ROSA's work is a community – of fishermen, offshore wind developers, academics, government representatives, and other ocean users – united behind a common goal: objective, collaborative science.** Together, we ally to coordinate and generate scientific data to support effective, responsible decision-making and policy.

ROSA aims to serve as an objective resource for all involved sectors and to facilitate the coordination of regional scientific research to collaboratively and efficiently deepen understanding. ROSA brings this vision to fruition through the creation and maintenance of coordination tools – such as the [Offshore Wind Project Fisheries Monitoring Framework and Guidelines](#) and the [FishFORWRD database](#) – that can be widely adopted across geographic areas. These tools offer powerful first steps to creating effective coordination. They 1) define common research frameworks and community guidelines, 2) identify research priorities and scientific questions, and 3) catalog completed and ongoing research, so as to identify research and data gaps.

To enhance the utility of these tools and further needed coordination efforts, ROSA will provide alignment around those research gaps as well as fora to facilitate how the research community will begin to effectively address them. ROSA is taking a leadership role in addressing these gaps, expanding into administration of regional research funding to generate the best available science to inform decision makers and fill critical data gaps in this rapidly evolving space.

Effective coordination of regional research requires the involvement of all sectors. With a balanced and expanding Advisory Council, alongside broad engagement across the field, ROSA is well-positioned to facilitate important conversations around standardization, cumulative impacts, and clear research policies. As ROSA continues to grow its network, it will provide platforms for solution-driven discussions and effective engagement with and between all sectors.

The current geographic scope of ROSA is focused on the Atlantic Coast from Maine to North Carolina. As additional OSW Wind Energy Areas are identified nationally, ROSA will continue to develop new

pathways to share the guidance, products, and services that have been created for the Atlantic Coast. Communities in both the Gulf of Mexico and Pacific Coast regions share belief in ROSA's core mission and ensuring that lessons learned are provided both to and from each region will be an important piece of the organization's next phase.

The long term vision for ROSA is to build a bridge across sectors, promote science-based discourse around the offshore wind and fishing industries' relationship, and support meaningful solutions to the challenges surrounding responsible ocean co-use to realize the important, albeit challenging, goal of equity among ocean users.

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 5-year Roadmap

This Roadmap offers an overview of ROSA's Guiding Principles, Strategic Goals & Objectives, and the general timelines for completion and metrics for success will be used in the next five years. ROSA has already achieved success in its short existence, creating tools such as the [Offshore Wind Project Fisheries Monitoring Framework and Guidelines](#), the [FishFORWRD database](#), as well as providing fora for coordination around offshore wind fisheries research and monitoring through its Advisory Council, and symposia at national and international fisheries and OSW meetings. These milestones are outlined and detailed in the [Year in Review reports](#), which are shared with the OSW fisheries research community through ROSA's newsletters and website.

Moving forward, ROSA will ensure further success by following its established Guiding Principles, increasing the interactions with and reliance on the guidance from its [Organizational Structure](#), and implementing targeted strategies that will allow it to achieve the goal of serving as an objective resource for all sectors involved in OSW fisheries research.

Guiding Principles

Four Guiding Principles form the foundation of ROSA to facilitate, execute, and promote regional research. The principles are for the organization to be Scientific, Objective, Collaborative, and Transparent. ROSA will continually assess and re-evaluate its actions against these guiding principles, and its leadership, stakeholders, and research community will ensure these principles remain central to the organization's mission and work.



SCIENTIFIC

ROSA, at its core, was created to facilitate the production of fact-based, scientifically rigorous data, analyses, and reporting on the potential impacts of OSW development on fish and fisheries. The associated data and data products ROSA creates or facilitates are intended to help identify, understand, avoid, minimize, and/or mitigate negative impacts, evaluate the effectiveness of mitigation efforts, and support ocean co-use during all phases of OSW development, including pre-construction, construction, operations, and decommissioning.



COLLABORATIVE

ROSA is, at its heart, a community guided by the nonprofit's board and council members and collaborative partners from multiple sectors who contribute their time to provide strategic guidance, advice on research, and expertise as members of area and topic specific committees. ROSA consults, partners, and maintains effective communication with both fishing industry and OSW developer industry representatives, other regional offshore wind and wildlife/fisheries groups, conservation organizations, and state and federal agencies to identify research priorities and timelines for products.



OBJECTIVE

By creating an objective process for the creation, coordination, and collaboration of OSW fish and fisheries research, ROSA endeavors to provide a forum for all stakeholders to make their voices heard. Credible science forms the bridge between ocean users to identify co-use solutions, build trust, and increase mutual understanding. To do that, ROSA seeks funding support across sectors and sources, will rely heavily on peer-reviewed scientific literature to inform its own work and decision making, and will employ inclusive research solicitation processes. The diverse composition of ROSA's Governance Structure will support and ensure objective processes are established and executed.



TRANSPARENT

ROSA openly develops and communicates its processes and decision-making. Implementation of work plans, priorities, and future competitive funding opportunities are conducted through continued and open communication with interested and affected parties. Transparency is also supported through publicly held Advisory Council meetings, annual financial audits, and the implementation of strong data-sharing agreements between ROSA, contractors, and stakeholders.

Strategic Goals & Objectives

ROSA's mission will be strengthened through the following goals:

Theme 1: Administer Regional OSW Fisheries Research

Theme 2: Facilitate Assessment of Cumulative Impacts

Theme 3: Build Coordination Through Engagement

For each of these goals, ROSA has developed a suite of objectives and strategies to guide its progress over the next five years.

Theme 1: Administer Regional OSW Fisheries Research

Effective coordination and shared knowledge are key to advancing the best available OSW fisheries research. Theme 1 focuses on ROSA's Regional Research Program, which has been developed using tools that will support collaboration across sectors, align research priorities, and identify critical gaps. These efforts are all aligned so that ROSA's Regional Research Program will focus on the highest priority regional research needs. By synthesizing ongoing research and priorities, ROSA aims to ensure not only its Regional Research Program, but the OSW fisheries research community as a whole is equipped with the resources needed to guide future funding opportunities and regional research assessments.

1.1 FishFORWRD Database and Web Tool

ROSA will continue to provide and support fora, databases, and visualization tools to increase coordination within and across sectors in the OSW fisheries research space. The first key tool created by ROSA to meet this goal is the **Fish and Fisheries OffshoRe Wind Research Database (FishFORWRD)**. FishFORWRD is a two-part database: part one compiles published research priorities and existing projects (both fish and fisheries research and developer project-level monitoring) being undertaken by programs along the East Coast. Part two synthesizes existing research priorities into summarized research needs and matches these summarized needs with existing projects. The union of these two compilations within FishFORWRD identifies gaps in research and informs research funding opportunities by ROSA and others.

FishFORWRD was initially released in September 2022. The [associated report](#) outlines the creation and use of Version 1.0.0 with input on missing priorities and research solicited through an online [form](#). Version 2.1.0 was released in July 2024 with updated research projects and research needs, as well as the launch of the webtool to better display this data. The associated executive summary of this launch and link to the live database can be found at rosascience.org/resources/fishforwrld. FishFORWRD version 3.0.0 will include an updated Research Gaps Analysis (part two mentioned above). The methods and results of this Research Gaps Analysis will be critically reviewed by each sector of the ROSA community and submitted for publication, in addition to being publicly available within FishFORWRD. By creating and maintaining an updated database, ROSA provides the essential service of collecting all of the

relevant ongoing OSW fisheries research priorities, studies, and related reports and publications to the broader community. To ensure continued relevance, ROSA plans to update FishFORWRD every 6 months. ROSA will continue to provide this database and other fora and databases for coordination within and across sectors in the OSW fisheries research space.

Timeline for Completion & Metrics for Success

FishFORWRD Version 3.0.0 including a new dashboard launch with key visualization tools should be completed in 2025. Biannual updates to the database itself are scheduled for 2025-2029. A summary of each biannual update, including what new projects and research needs were added and any further progress on research gaps, will be shared with the ROSA community through an article in the newsletter. These updates will include consultation with ROSA's OSW Fisheries Funder Coordination Forum (described below). Key metrics for success of this tool will be User Engagement, including the number of active users over time, and retention, i.e., how many of those users are continuing to use the database. Over time, these metrics may expand to include User Satisfaction Scores collected through surveys or feedback forms to gauge users' overall satisfaction with the database. The effectiveness of the tool will be measured by its ability to inform funding opportunities (e.g., Request for Proposals run by ROSA and others). Its use by other organizations will be an important metric for success.

1.2 OSW Fisheries Research Funder Coordination Forum

ROSA is convening an Offshore Wind and Fisheries Research Funder Coordination Forum. All east coast states, federal agencies, and other funding entities (e.g., ROSA, NOWRDC) who fund offshore wind and fisheries research are invited to participate. The main objectives of this group are to most effectively use the region's research dollars by avoiding duplication in released research funding opportunities, and focusing funding on highest priority research questions. This group will be formally introduced to the newly released webtool of FishFORWRD to ensure it captures updated and accurate representation of funded research and stated research needs. The group will also aid in each entity's respective research prioritization process, if they choose. The group is likely to meet once or twice a year. ROSA plans to offer this service as a means of regional coordination on releases of funding solicitations, and recognizes secondary coordination objectives such as: consistent solicitation standards and language (e.g. Required coordination with regional entities or Data Sharing Agreements), or creating the space to discuss cost sharing across organizations.

Timeline for Completion & Metrics for Success

The OSW Fisheries Research Funder Coordination Forum is slated to meet bi-annually in 2025, with the frequency and scope of future meetings to be determined by the group, but expected to continue through 2029. Metrics for the success of this effort will be participation by major OSW research funders such as NOWRDC, Sea Grant, RWSC, as well as broader participation across both public and private funding sources. Further measures include engagement in robust conversations with both depth and relevance to the objective of coordinating OSW fisheries research, and regional adoption of common solicitation languages and standards, particularly in data sharing. Targeted language for inclusion of newly funded research within the database for Atlantic Coast funders to include in future Requests for Proposals and other funding opportunities will be pursued.

1.3 Regional Fisheries Research Program

Assessing regional impacts from OSW on both fish and fisheries is of utmost importance. ROSA plans to create regional research programs that will assess impacts beyond the project-specific scale, and lead to cumulative impacts assessments. Support for the establishment of regional research programs is provided by several states that have included requirements for supporting regional research and monitoring as part of their competitive offshore wind solicitation processes.

Specifically, the States of New York, New Jersey, and Maryland, have created mechanisms for funding regional research. In [New York's second, third, and fourth competitive offshore wind solicitations](#), a requirement was included for awardees to provide financial and technical support to regional monitoring of wildlife and key commercial fish stocks through a minimum contribution of \$10,000 per megawatt of Operational Installed Capacity. Of this, \$5,000 per megawatt of Offer Capacity must be used by the awardee, in concurrence with NYSERDA, to support regional monitoring of key commercial fish stocks to better understand how offshore wind energy development is potentially altering the biomass and/or distribution of these stocks. ROSA is specifically identified as a potential administrator of those funds

As an awardee of New York's second competitive offshore wind solicitation, Equinor Wind Services, LLC and NYSERDA are intending to use these required contributions to establish a regional offshore wind fisheries research fund with ROSA as the selected administrator of that fund. ROSA has entered an agreement with Equinor Wind Services, LLC to complete all work necessary to develop and establish the administration, management, contracting, budgeting, and accounting of a research project funding program.

The funds from Equinor will support the first Regional Research Program of its kind for ROSA; as additional funding sources are added, a robust and longer-term monitoring initiative will be established. This Program will act as a model for other regions, should their states adopt similar policies. The successful establishment of a competitive research funding program will create a pathway for additional funding to address regional research and monitoring needs.

Finally, in light of current global change, the dynamics and uncertainty around timelines of offshore wind development have increased in recent years. By relying on organizations such as ROSA and the RWSC, the resilience of regional scientific programs will be further strengthened to adapt to such changes.

Timeline for Completion & Metrics for Success

ROSA aims to administer awards in early 2025 from its first Regional Request for Proposals (RFP), with research funds provided by the Empire Wind project. Future potential regional research funding sources are on the horizon through partnerships with other OSW Developers and states. The goal is to establish a fully formed Regional Research Program in the next five years, with at least one to three additional Regional Research fund sources, and for a clear plan for longer-term research planning to be developed by 2029. Metrics for success of this research program will include the administration of \$3,690,000 research dollars in an efficient, inclusive, and rigorous scientific manner that address the research gaps identified using FishFORWRD. ROSA will measure these outcomes along with the number of peer-reviewed publications, feedback from stakeholders, and additional funding sources secured to gauge success.

Theme 2: Facilitate Assessment of Regional & Cumulative Impacts

Many of the scientific questions around OSW fish and fisheries impact are only answerable at a scale larger than the OSW project lease level. The call for assessment of potential impacts over large geographic scales, and even through time, necessitates a regional-scale scientific framework. This theme is a second major area of focus for ROSA in the coming years. To ensure these regional and cumulative assessments are possible, the beginning phases of establishing this framework will focus on data standardization.

2.1 ROSA Data Governance Program

Data standardization should begin with the planning phases of any OSW fisheries work, and the OSW Project Monitoring Framework and Guidelines can and should inform that process. Regional efforts in data standardization are being undertaken by multiple entities, particularly NOAA Fisheries. ROSA seeks to support that work, and to support coordination of all OSW fish and fisheries data streams, by launching a [Data Governance Program](#). This Program is in partnership with Intertidal Agency, whose mission is to create and manage innovative strategies for sustainable coastal and marine ecosystems, focusing on community engagement, scientific research, and policy development.

Key topic areas will include assessment of the environment around data collection for OSW and fisheries, developing an understanding of the current status, and suggestions for improvement in the areas of:

- Data management
- Data & metadata standards
- Data warehousing/life cycles

ROSA will rely in this effort on the subject matter expertise of the existing Advisory Council Members and Research Advisors, and will expand to include support outside of the existing organizational structure, as well. Doing so will ensure that the capacity needed to adequately address the important questions around OSW fisheries data is developed. ROSA will also align and partner with the RWSC, on relevant projects to increase simplicity and accessibility to data and data products. The RWSC, also in partnership with Intertidal Agency, is beginning to develop important tools for the research community including standard Data Sharing and Management Plans (DSMPs) for offshore wind environmental research, a Research Planning Map, and an Offshore Wind and Wildlife Research Data Catalog. ROSA is in discussions with RWSC on how best to partner and leverage these tools for fish and fisheries data and research.

Timeline for Completion & Metrics for Success

ROSA staff will continue working across sectors (including commercial and recreational fishing industry partners, NOAA Fisheries, state agencies, offshore wind developers, interested tribal nations, and other regional OSW science organizations, such as the RWSC) to develop and implement the Data Governance Program. The first convening is scheduled for early 2025. Outcomes of a successful program include:

- Identification of metadata standards, recommended repositories, and development of data sharing guidelines for each of the OSW fisheries monitoring methods.
- Design for a data ecosystem and/or data intermediary that facilitates the flow of reusable, trusted data for cumulative impacts analyses.
- Recommending preferred frameworks and methods for cumulative impacts, including a published in-depth literature review.

2.2 OSW Project Monitoring Framework & Guidelines

[ROSA's OSW Project Monitoring Framework & Guidelines](#) ("Framework") is a key resource that the organization and its partners have developed. The original document outlines the fundamental elements to include in an OSW project's fisheries project monitoring plans. Building on existing Bureau of Ocean Energy Management (BOEM) guidance, the framework was developed by a ROSA work group/committee comprised of representatives from several sectors involved in fisheries and offshore wind development research, including representatives from the Commercial Fisheries Research Fund (CFRF), National Oceanic & Atmospheric Administration (NOAA) Fisheries, Northeast Fisheries Science Center (NEFSC) & Greater Atlantic Regional Fisheries Office (GARFO), Vineyard Wind, Rhode Island Department of Environmental Management (RI DMF), New York State Energy Research and Development Authority (NYSERDA), Equinor, University of Dartmouth, School of Marine Science & Technology (SMAST), Rutgers University, Ørsted, the commercial fishing industry, Virginia Institute of Marine Science (VIMS), the University of Maryland Center for Environmental Science (UMCES), Responsible Offshore Development Alliance (RODA), Bureau of Ocean Energy Management (BOEM), and the Massachusetts Division of Marine Fisheries (MA DMF).

Feedback from over 225 individual comments and questions that were submitted by 12 organizations during public review were incorporated into the resulting document. This Framework and Guidelines document has been widely referenced and has served as an initial coordination tool in the development of fisheries monitoring plans. The Framework was created to be a living document. Keeping the ROSA Framework and Guidelines up to date with all relevant resources will encourage the OSW research community to be unified in its goals, methods, and analyses - whether implementing a Regional Research Program, a Regional Fisheries Monitoring Plan, or aligning project-specific fisheries research and monitoring.

ROSA held sector-by-sector *OSW Fisheries Monitoring Plan Development, Implementation, and Evolution Sessions* to guide our revision of the Framework. Outcomes were shared with ROSA's community and beyond. These outcomes will be used for the next updates, supporting solutions that are developed not only among different perspectives within each sector, but across sectors, as well.

ROSA's Internship program was leveraged to also provide literature reviews, outlines, and draft text to facilitate expansion of sections of the Framework on benthic monitoring and socioeconomic impacts that were set aside for further development in the original Framework.

Timeline for Completion & Metrics for Success

Updates to the ROSA OSW Project Monitoring Framework and Guidelines are underway, with plans for the completion of the Socioeconomic and Benthic Habitat/Essential Fish Habitat sections scheduled first, and updates to the existing guidelines next, for a full update to be published by the end of 2025. A second regular update is planned to occur before 2029.

2.3 ROSA Listening & Coordination Sessions

One of the most direct ways that ROSA can provide coordination and promote collaboration across funding sources, researchers, developers, and various fishing industries is by providing fora for discussion. Examples of this type of forum that directly address the goal of facilitating cumulative impacts assessments include the *Fisheries Monitoring Plan Development, Implementation, and Evolution Sessions*, the joint *Acoustic Telemetry Workshop* hosted by the RWSC in partnership with ROSA and the ACT Network, and the OSW Fisheries Research Funder Coordination (1.2).

Listening sessions are designed to gather information and document concerns and outstanding questions, identify potential solutions, and encourage collaboration. ROSA strives to provide a neutral space for these types of discussions, in part to characterize challenges and solutions, and also to understand through what role ROSA will best serve the offshore wind and fisheries communities.

Both sector-specific and cross-sector sessions are important for these sessions to create useful results. Individual sessions with representatives from the fishing industry, OSW development industry, regulatory entities, as well as the science research community (including academic, private consulting, and non-governmental organizations) ensure open and candid discussions are possible. Documenting and then supporting inclusive discussion of the outcomes of those conversations is the next step towards operationalizing the regional coordination that seems to be broadly agreed upon as needed.

Timeline for Completion & Metrics for Success

Reports documenting conclusions, actions, and next steps allow ROSA to use these findings to inform future work plans to best coordinate ROSA's regional monitoring efforts. In the coming years, ROSA will continue to periodically hold listening sessions that may focus not only on the continued optimization of OSW Fisheries Monitoring Plans, but also to help inform future topic/area committees. Doing so will leverage and strengthen ROSA's organizational structure.

2.4 Regional Fisheries Monitoring Plan

The expansion of OSW development necessitates regional coordination around natural resource monitoring itself. The project-specific Fisheries Monitoring Plans in place by offshore wind developers thus far have been developed with BOEM, NOAA, and ROSA's guidelines in place, but with little monitoring designed for larger scale coordination. This has led to a major disconnect between the

proposed and current data being collected and the ability to understand and mitigate impacts of offshore wind to fish and fisheries. The opportunity - and need - to assess regional impacts from OSW on both fish and fisheries will be supported by regional research programs such as the [New Jersey Offshore Wind Research and Monitoring Initiative](#), or future regional research funds administered by ROSA. Specifically, however, fishing industry representatives, OSW developers, and agencies agree that working towards a regional fisheries monitoring plan is a practical means of further supporting coordination and enabling both regional and cumulative impacts assessments.

Currently, OSW developers are responsible for monitoring impacts to fisheries from their specific lease area with each OSW developer proposing a fisheries monitoring plan for each of their projects. While there are many similar fisheries monitoring methodologies across leases (e.g., trawl, pot, and acoustic telemetry), there are also key differences, particularly in sampling strategies such as sampling frequency and data collection, QA/QC, and management. Plans tend to focus on fish populations and ecology, but not many fishing industry-specific components (e.g., socioeconomic studies) are included in most plans. While NOAA Fisheries reviews fisheries monitoring plans, BOEM approves them. Some developers have instituted multiple years of pre-construction data within their plans, but BOEM currently requires one year of pre-construction data, creating the opportunity for inconsistencies between project monitoring timelines.

A recent paper ([Methratta, et al. 2023](#)) highlighted similarities as well as potential shortcomings of existing plans to detect population-level changes. The publication addresses whether currently proposed monitoring plans will sufficiently mitigate impacts to federal surveys and aims to assess plans' capacity for "addressing impacts at the population level, and for understanding interactions between fish stocks and habitat alterations." The conclusion is that a minimum of 3-5 years of baseline data would be needed to achieve such a goal, and even at that point may not be sufficient given the inherent variability in the systems being considered.

Additionally, unexpected delays in construction timelines can and have affected the integrity of Before-after-control-impact (BACI) designs. Monitoring plan funding is committed for a specific number of seasons, and if/when construction is delayed, research is directly impacted. Finally, with high frequencies of extractive sampling and the increased mortality and risk to protected species caused by these extensive individual monitoring plans, consideration to alternative approaches is being given at the state, regional, and federal regulatory levels. The balance between monitoring and protecting marine resources is also complex.

A Case for a Regional OSW Fisheries Monitoring Plan

A coordinated regional effort would increase efficiency and effectiveness in a number of OSW fisheries monitoring plan aspects:

- OSW developers' COP preparations: reduces the need for lease-specific monitoring plan development, creates more consensus in monitoring goals/consolidated requirements
- Mortality risk/exposure: a smaller number of samples are likely needed to achieve the same or greater statistical power, which inherently reduces the risk of exposure for protected species
- Control area demand: eliminates the need for multiple control areas, reducing redundancy
- Permit review: eases the regulatory review burden through streamlined plans
- Safety: potentially lessens the burden of safety requirements for cooperative research

- Capacity: reduced cost to OSW developers, reduced stakeholder engagement fatigue, burden on agency staff, and number of individual contracts being managed by the research community (both academic institutions and consulting firms)

Importantly, a Regional OSW Fisheries Monitoring Plan would also make regional-scale impact assessments possible. Disentangling the effects of OSW development on fish and fisheries from climate change impacts will be nearly impossible at the lease-specific scale (Methratta et al. 2023). Ensuring data compatibility across leases will also be a great challenge unless each lease-specific fisheries monitoring plan has the same experimental design, sampling strategy, data management, and data sharing policies in place.

Issues with the Status Quo

There are several key issues with the current approach to project-specific OSW fisheries monitoring plans.

- Lease-specific monitoring strategies are designed uniquely to each area, and thus can be problematic in assessing regional impacts.
- Current project-by-project plan development and implementation places a great deal of reliance on the availability, integrity and consistency of multiple researchers conducting the monitoring studies.
- Many plans rely on sampling methods with high frequencies of extraction, which when accumulated across multiple projects create a potential impact in and of themselves.
- High levels of extractive sampling methods also increase mortality and risk to protected species, creating inherent tension between monitoring the marine resources and protecting them.
- Risk to protected species triggers lengthy Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) consultation for each plan. The time necessary, and other issues, have created challenges around the timely receipt of necessary permits to conduct the work.
- Some projects have received approval for, or have only conducted, one year of pre-construction monitoring required, creating insufficient data to establish baselines for assessing future impacts.

Concept

ROSA will develop a comprehensive Regional OSW Fisheries Monitoring Program Plan by:

1. Convening listening sessions targeting topic areas to address regional monitoring plan designs. These sessions will be held in parallel to the ROSA Data Governance Program and will involve a broad range of stakeholders. Both sector-specific discussions (with the fishing industry, OSW developers, federal and state regulators, academics, and consulting firms), as well as cross-sector workshops to summarize and review resulting recommendations and seek common solutions will be held.
2. ROSA may issue a Request for Proposals (RFP) and invite regional researchers to develop a Regional OSW Fisheries Monitoring Plan.

3. The Draft Regional OSW Fisheries Monitoring Plan would be reviewed by NOAA, BOEM, and participating states to examine its ability to meet regulatory requirements.

Funding

Funding for a regional monitoring program could be supported through several mechanisms. One would be for participating OSW developers to opt into the program with the expectation that by supporting the regional plan their federal and state monitoring requirements would be satisfied. A similar concept is being implemented via the BOEM Environmental Studies Program's Contribution Authority, enabling BOEM to receive funds from industry that could be used to satisfy environmental monitoring requirements of offshore wind leases throughout the life of the project. Currently this authority is being exercised for a [Regional Passive Acoustic Monitoring](#) network. Another possible mechanism could be through the survey mitigation funds that developers provide to NOAA Fisheries.

Timeline for Completion & Metrics for Success

This concept relies on many of the other programs outlined in this plan to be completed before implementation is possible. Much of the work to identify the best approaches, methods, and designs for a regional monitoring program remains to be done. Establishing a regional monitoring program is a medium-term goal for the organization, with a goal of supporting existing efforts at the state, regional, and federal levels.

A successful regional monitoring program would provide relevant, useful data for the assessment of long term impacts of OSW development on fish and fisheries allowing for a deeper understanding and the opportunity for continued sustainable management of fisheries resources.

Theme 3: Build Coordination through Stakeholder Engagement

Collaboration and communication are at the heart of advancing OSW fisheries research and ensuring its effectiveness. Theme 3 focuses on strengthening stakeholder engagement through targeted initiatives that foster partnerships, enhance communication, and build capacity. From supporting gear-specific coordination committees to increasing engagement with Advisory Council members and Research Advisors, ROSA seeks to bring diverse voices together to co-create solutions for OSW fisheries challenges and ensure that stakeholder insights drive meaningful progress.

3.1 ROSA Staff Advisory Service

An inherent essential component of ROSA's Strategic Plan is to foster and build upon critical partnerships. ROSA staff participates on and will continue to support various Steering Committees, Project Advisory Committees, and state, federal, and international Working Groups in the OSW fisheries research community. By doing so, ROSA offers a unique regional perspective to discussions around priority and project development, implementation, data standardization, and more. A list of advisory roles in which ROSA staff participate can be found on our [website](#) under "Collaborative Engagement".

Timeline for Completion & Metrics for Success

In areas of engagement, the timelines for implementing new or increased levels of activity will be ongoing. The success of our regional coordination efforts through this mechanism will be reflected in formal adoption of co-created recommendations and the future implementation of both regional-scale OSW fisheries research and cumulative impacts assessments.

3.2 Committees of Practitioners: Gear-Specific Coordination

In response to calls from ROSA Advisory Council members, ROSA has begun to launch gear-specific coordination committees. The first of these is for [Acoustic Telemetry](#). The initial *OSW Fisheries Monitoring Plan Development, Implementation, and Evolution* sessions helped inform which other gear-specific coordination committees should be prioritized. Future committees, workgroups, and listening sessions may focus on specific methods/tools (e.g., eDNA), gear-types (e.g. trawl surveys), taxa, or data types (e.g., socioeconomics) to further coordinate both OSW fisheries research and monitoring. These efforts will be aligned with and compliment the ROSA Data Governance Program.

Timeline for Completion & Metrics for Success

The completion of both Terms of Reference created by the Acoustic Telemetry Committee is slated for the next 1 to 2 years. As additional gear-specific committees are created, their success will be measured against completion of the self-designated terms of reference.

3.3 Increased Engagement with Advisory Council, Topic Area Committees, Research Advisors, and the Public

During the listening portion of our Strategic Planning phase, ROSA staff received feedback that our engagement with Advisory Council members, topic/area-specific committees, and Research Advisors should be increased. In particular, communications on the current operations at ROSA, progress on initiatives and programs, and providing greater detail around when and where challenges or obstacles are being faced was recommended.

ROSA will continue to host virtual webinars (e.g., the April 2024 “Get to Know ROSA” webinar) with targeted outreach to the general public, as well, to broaden understanding of the role regional science organizations have in the OSW research process. These webinars will also highlight ROSA’s partnership work with other organizations that provide onramps for ROSA to reach those general audiences.

Timeline for Completion & Metrics for Success

As with goals 3.1 and 3.2, the timelines for implementing new or increased levels of activity will be ongoing. Metrics for the success of this goal will include continued participation of members throughout ROSA’s organizational structure, and broad adoption of the recommendations and guidance created.

3.4 Capacity Development: Internship Programs, Graduate Committees

ROSA provides a unique educational and professional experience to graduate students who have an interest in OSW fish and fisheries research. The Summer Internship Program matches highly qualified graduate students with topic areas that support ROSA's mission. In turn, supporting interns each year provides an opportunity for ROSA to build capacity in the OSW fisheries research community. Interns work remotely, so, ROSA supports the student's travel to one national conference and provides a stipend. A meeting allows an intern to leverage staff's wide networks and to make connections for career development. ROSA staff also serve on several graduate student committees, providing guidance to upcoming OSW fisheries scientists.

Timeline for Completion & Metrics for Success

The Internship program will continue to begin each year in June and run for 10 weeks through August, supporting 1 to 2 interns per year. Staff are encouraged to serve on graduate student committees at their discretion.

Each of the Strategic Goals and Objectives aligns with the others, highlighted below are the programs and initiatives mentioned in Theme 1 and 2 that also build coordination through OSW and fisheries stakeholder engagement:

- FishFORWRD Maintenance
- OSW Fisheries Research Funder Coordination
- Updates and maintenance of OSW Project-Specific Monitoring Guidelines
- Listening and Working Sessions
- Providing fora (e.g., Quarterly Advisory Council Meetings, convening science symposia)

Emerging Initiatives

Diversity, Equity, Inclusion, Justice, and Accessibility

ROSA recognizes the importance and value of building a diverse staff, governance structure, and community. ROSA is developing a statement for the organization to adopt which will be the organization's pledge to be as inclusive as possible when listening and incorporating information from partners and community members. ROSA endeavors to reflect our commitment to Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA) in all that we do, to address the needs of and to better support the entire ROSA community.

Tribal Engagement

In coordination with the Northeast Regional Ocean Council and the Mid-Atlantic Regional Council on the Ocean, ROSA is working to thoughtfully and meaningfully engage with Tribal Nations interested in participating in the coordination of OSW fisheries research. Though preliminary in its development, the plan for this initiative is to create value for those who are being asked to represent their Nations'

interests, to reflect a deep respect for traditional ecological knowledge, and to incorporate feedback from these important partners.

Research Collaborations

ROSA will continue to seek out and engage in research collaborations (e.g., “*Co-Design Solutions for US Floating Offshore Wind Farms and Fishing Compatibility*”). In doing so, it will deepen ROSA’s connection in the OSW fisheries research space. Other key collaborations in the near term include continued coordination around shared areas of interest with:

- RWSC, including further development of the [OSW Research Planning Map](#), implementation of the [Science Plan](#), especially through participation on the Protected Fish Species, Ecosystem and Habitat, and Data Governance Subcommittees
- NOAA Fisheries, including the forthcoming OSW fisheries research plan, survey mitigation plans, and OSW monitoring guidelines
- Marine Technology Society to support emerging fisheries monitoring technologies
- Integrated Ocean Observing System (IOOS) Regional Associations (RAs) on integration of oceanographic covariates in OSW-related experimental designs, data streams, and analyses
- Regional Fishery Councils and Commissions to streamline stakeholder engagement around OSW science initiatives

Data Warehousing

Useful data warehouses exist for many data streams within the OSW fisheries research space. ROSA is uniquely positioned to act as a neutral data steward, with the ability to provide robust data security and management options to various sectors.

To ensure ROSA-supported OSW fisheries data systems are integrated and reflect current best practices, ROSA Staff will continue its coordination with other regional entities, including NOAA, RODA, RWSC, IOOS RAs, Atlantic Coastal Cooperatives Statistic Program (ACCSP), Northeast Regional Ocean Council (NROC), Mid-Atlantic Regional Council on the Ocean (MARCO), ACT Network, NY Regional Synthesis Working Group.

As emerging data streams continue to grow in number and volume, ROSA will seek out the opportunity to serve as a data steward for interested parties. Doing so will allow for objective data management, dissemination, and protection of confidentiality, where appropriate.

Geographic Scope

Given the expansion of OSW development beyond the Atlantic Coast of the US to lease areas awarded in the Pacific Coast and Gulf of Mexico, it is critical to share and promote the mission of ROSA nationally. ROSA is currently gathering information and insight from its community on Pacific and Gulf Coast coordination and priorities. Through this process, ROSA seeks to redefine its own Geographic Scope, whether as a model for other organizations, or as a potential Multi-Chapter Organization with local

branches in multiple areas across the US that share the ROSA mission. While summarizing these areas' activities is beyond the scope of this document, the brief description of a multi-chapter model is provided below to promote discussion as planning for regional science entities in regions outside of the US Atlantic Coast is already underway. An important note is the value of personal relationships and the time necessary to foster the trust that leads to engagement and allows us to lead, and the fact that trust is not easily transferable from region to region.

ROSA: A model organization for regional OSW fisheries research

Funding Structure

If ROSA is to be used as a model for the formation of analogous organizations across the US, important considerations should be taken, particularly with respect to funding. Incorporating lessons learned, ROSA plans to recommend, or personally execute, a different funding mechanism for other regional chapters. As it stands, the in-kind contributions of fishing industry, OSW developer, state, federal, and other representatives' time to ROSA is not captured in ROSA's current operating budget and should the current ROSA organizational model be adopted elsewhere, formal membership, preemptive regional research fund creation, and/or other funding mechanisms ought to also be considered. While there are separate challenges presented in such "pay-to-play" models, there are also benefits such as longer-term financial stability and the ability to readily pool resources across sectors.

Multi-Chapter Organizational Model

In this model, the parent ROSA organization would copyright its name and create a licensing agreement with other regional chapters, who will then work to carry out ROSA's mission, identify new members, and conduct other day-to-day operations.

ROSA regional chapters would be established under the umbrella of the parent ROSA organization. Each would have its own Board of Directors and operate independently, remaining its own entity. However, the parent ROSA organization will have oversight in the way these activities are handled. For example, recommending similar regional product development and helping to appoint new Chapters' Board of Directors, etc.

Benefits of the multi-chapter model include systemic consistency at a broader spatial scale, optimizing efficiencies (i.e., making use of organizational structures, work plans, strategic plans that have already been created and successfully employed, leveraging existing relationships with offshore wind developer companies), and ensuring longevity of the organization through its increased acceptance as a solution. While geographic scope is a relatively new topic for ROSA, intentional planning in the early phases will allow for more meaningful and effective discussions moving forward.

Conclusion

As an emerging leader in the OSW fisheries research space, ROSA is setting precedents on the Atlantic Coast and nationally. The establishment of the organization is symbolic of the collective understanding that the best decision making is rooted in sound science and collaboration, and that stakeholders can

work together even with opposing viewpoints. Implementation of the 5-year Roadmap and this Strategic Plan will support the creation and increase the value of the best available OSW fisheries science.

While all organizations evolve with time, ROSA is at a critical juncture in its development. This crucial period matches the urgency of both industries we intersect. The offshore wind industry faces economic challenges, a need for community support, and pressure to meet state and national offshore wind targets. Meanwhile, our fishing industries, which have stood the tests of time and weathered innumerable ecological, economic, and technological changes, are at an important point in their survival. The biological, physical, and socioeconomic research needed to responsibly develop offshore wind can only be effectively created through collaborative, inclusive, regional science. The need for our organization to facilitate and coordinate that research is paramount.

We are building capacity within our organization and trust among our partners, but the work has only just begun. Relying on the community that is ROSA means that the necessary resources and solutions are co-created, and - though challenging - we will continue to bring together all of our community members to achieve our mission. We are grateful and honored that you choose to be part of that community.

Appendix

Organizational Structure

Figure 2 reflects the organizational structure of ROSA. The organization is led by an Executive Director and guided by a Board of Directors that is currently composed equally of commercial fishing industry leaders and OSW energy developers, representing ROSA's founders. The Board of Directors is responsible for mission and fiduciary oversight. Bios for staff can be found on the ROSA [Staff page](#) and bios for board members can be found on the [Board of Directors page](#).

ROSA Advisory Council & Executive Committee

The ROSA Advisory Council and Executive Committee have diverse sector representation and provide strategic guidance for the organization and define key initiatives for Staff and Area/Topic Committees. Advisory Council members are appointed by their respective agency, council, or company, with individual fishing industry representatives invited to either apply or be nominated for membership. OSW developers must hold federal leases to serve on the Advisory Council. Advisory council members are listed on the [Advisory Council](#) page.

Visit the [Advisory Council Priorities and Meetings page](#) to learn more about the Advisory Council's work.

ROSA Research Advisors

ROSA's Research Advisors provide independent, scientific input to the Advisory Council and Area/Topic Committees. A list of current Research Advisors can be found on the [Research Advisors](#) page. To date, Research Advisors have: conducted peer review of sections of the Synthesis of Science report, served on Advisory Council Area/Topic Committees, participated in Advisory Council meetings, facilitated coordination of local research efforts, presented their work in meetings coordinated by ROSA, and provided critical rankings of research gaps to inform ROSA's Regional Research Program RFP.

The Research Advisors provide important additional connections to the regional fishery management councils (e.g., via Scientific and Statistical Committee representation) that members also bring to this ROSA advisory body.

Area/Topic Committees

Area or topic specific committees conduct ROSA's core projects or guide contractors and/or ROSA staff in executing initiatives. Committees are members of ROSA's advisory bodies who have interest and expertise in the given area/subject matter. Outside experts may also be recruited to participate or volunteer.

Visit the [Advisory Council Committee Projects page](#) to learn about committee projects and review a list of individuals serving on each committee.

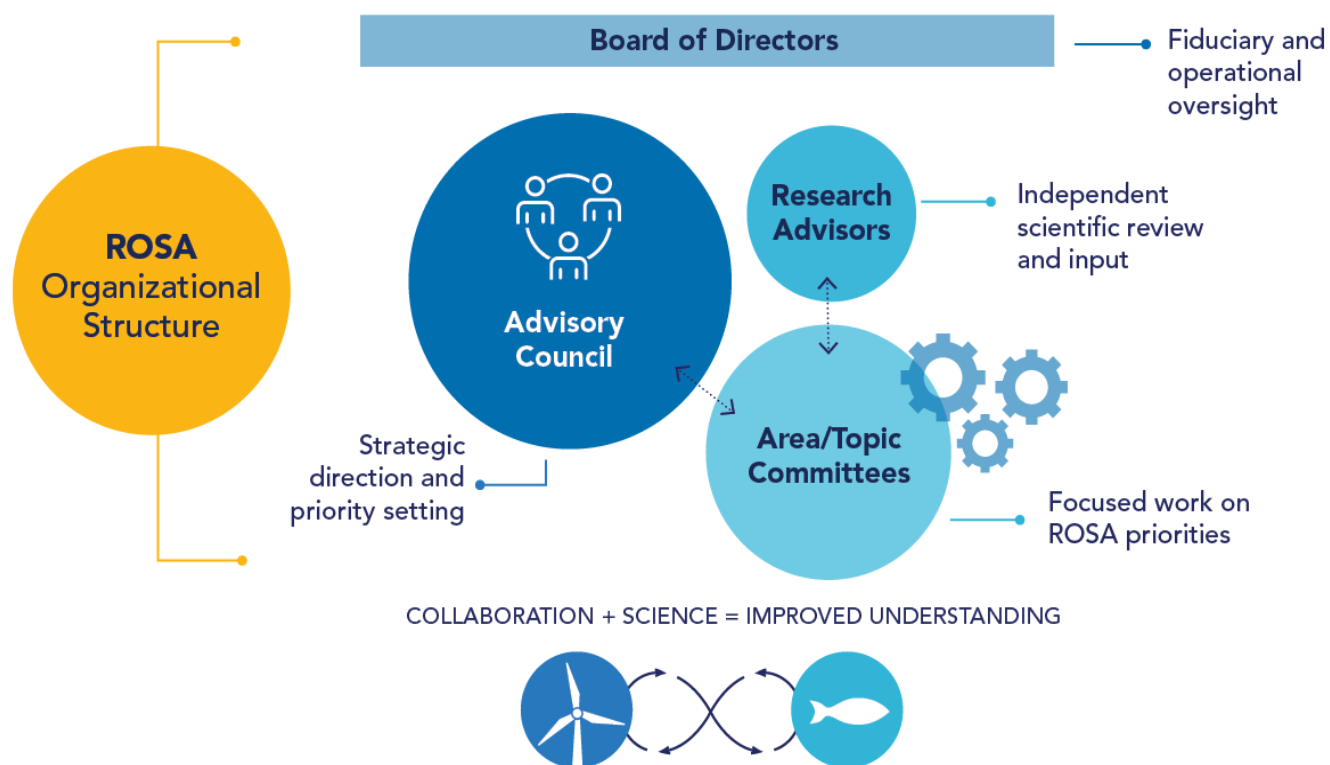


FIGURE 2. ROSA ORGANIZATIONAL STRUCTURE