On December 19, 2022, the Responsible Offshore Science Alliance (ROSA) Advisory Council met, convening 21 members and 6 alternates (a list of Council attendees can be found in Appendix A). Eighty-four interested others (including ROSA Research Advisors and Board of Directors), two facilitators and three ROSA staff attended the event.

At this meeting, researchers, state agencies, federal agencies, and ROSA shared updates on current research and projects. Meeting materials, including the agenda and presentations can be found on ROSA's website: [www.rosascience.org/our-work/advisory-council-priorities-and-meetings/](http://www.rosascience.org/our-work/advisory-council-priorities-and-meetings/).

**Welcome**

ROSA Executive Director Lyndie Hice-Dunton welcomed attendees and thanked them for participating. Facilitator Patrick Field (Consensus Building Institute) oriented participants to ground rules and the agenda. Attendees answered an introductory poll and shared their relation to ROSA, the industry they represent, and the region in which they primarily work.

**Researcher Updates**

**Responsible Offshore Development Alliance (RODA)** Fiona Hogan, RODA

Dr. Fiona Hogan, RODA Research Director, shared information about the Fisheries Knowledge Trust (FKT), a New York Energy Research and Development Authority (NYSERDA)-funded effort. FKT aims to connect fisheries scientists and managers with fishing industry data. Critical challenges include proprietary data, confidential and unstandardized data, and parties’ unwillingness to share data. FKT works via a process in which fishers share raw data, FKT cleans and standardizes the data, and approved analysts develop peer-reviewed products. Two pilot research questions were used to inform the FKT process. Both pulled data from government-run monitoring systems, which required a lot of cleaning and standardizing.

Lessons learned include that data standardization is a critical piece of the process, communication to the fishing industry about project status is critical, and communication improves participant buy-in. Next steps for FKT include looking for grant opportunities to fund additional research, and working on an upcoming project with the Maine Lobstermen’s Association and University of Maine.

**Discussion**
Below are verbal and written questions and comments that followed the presentation. Attendee questions are first order bullets, and answers are italicized below.

- Can others access the herring and clam fleet data from the pilot project?
  - *Pilot project products are contained in the final report on the NYSERDA website. Requests for data to conduct additional analysis have to go through the FKT governance structure to allow data owners to make data access decisions.*
- Which problems have arisen that are the hardest to solve?
  - *Communication and timeline management; accessing data from federal databases took longer than anticipated.*
- What is the timeline for the upcoming project with Maine Lobstermen’s Association?
  - *The project began this year and will end late 2023 or early 2024.*
- Is FKT pursuing any funding streams aside from grants? Developer funds may be more reliable.
  - *Grant funding is the most likely source for pilot projects but FKT intends to pursue other options as well.*

**Coonamessett Farm Foundation**

Dr. Liese Siemann, Senior Research Biologist, presented on a Department of Energy and Bureau of Ocean Energy Management (BOEM)-funded project to develop tools (e.g., modifying trawl for soft bottom, incorporating hydrophones into camera systems), and collaborate with commercial fishing enterprises. The project involves two parts: 1) developing a methodological framework for monitoring commercial fish and invertebrate species in wind farms, and 2) evaluating impacts of offshore wind on commercial fish and invertebrate species, and benthic habitats through optical surveys. The project involves surveys conducted before, during, and post construction with HabCam, video trawl, and stationary cameras to collect data including still and video imagery, sound levels, near-bottom salinity. Stakeholder engagement and publication development will be ongoing. Dr. Siemann shared the Kitware classification model, which identifies important commercial species and benthic habitats via automated detection.

**Discussion**

Below are verbal and written questions and comments that followed the presentation. Attendee questions are first order bullets, and answers are italicized below.

- Is survey data on sound levels intended to identify different species or compare sound levels before, during and after windfarm construction?
  - *The latter, i.e., compare sound levels, but fish noise could be analyzed time permitting.*
- Will the collected data be subject to sharing restrictions?
  - *No, because the project is not funded by developers. It will be publicly available on BOEM-sponsored platforms.*
- These surveys are more elaborate than traditional trawl surveys. Will you look at how they correlate with traditional ones?
  - *We intend to look at the correlation as it has not been analyzed in the literature. It will likely require more data than we can collect under this project to fully compare the two.*
- Have you done a power analysis, considering existing abundance, to know if you will collect enough data to compare species and habitat before and after construction?
  - *We will likely not do a power analysis because they are very difficult to conduct if you do not know what you will find.*
- Will this project take place in the South Fork Wind Farm?
  - *Yes.*
Do you anticipate coordinating monitoring with the proposed RODEO2 studies in the south fork of the Revolution Wind area?
- I am unfamiliar with those studies but will follow-up with BOEM.

Have you faced permitting challenges?
- It has been a slow process to obtain permits.
- Permitting challenges result from extra coordination with the protected resources group. Hopefully non-extractive techniques will allow for more streamlined monitoring.

Was dissolved oxygen on the list of parameters being measured?
- This is not currently included but could be measured via the HabCam.

Rutgers Cooperative Clam Research

Dr. Daphne Munroe, Rutgers University, and Mr. Tom Dameron, Surfside Seafood Products, LLC, presented on their New Jersey Department of Environmental Protection-funded work calibrating experiments for a novel clam survey dredge, and monitoring carbonate chemistry of surfclam habitat.

The three objectives of the dredge project were to 1) construct a scientific surfclam dredge designed and funded by the industry, 2) calibrate the dredge with federal survey stations via benthic grabs, oceanographic profiles and bottom water chemistry, and 3) gather ocean acidification data. The industry-designed dredge worked quite well with minimum cleaning required. The surfclam habitat study is happening at Ørsted's Ocean Wind 1 off New Jersey. It is a before-after control impact (BACI) design study using the industry-designed dredge to quantify dynamic abundance, distribution, and age of surfclams. The objective is to document the surfclam resource within the wind lease and evaluate changes after windfarm construction. Ørsted shared information about cables and stations to incorporate into the methodology.

Lessons learned regarding collaboration between industry and research include looking for alignment between researcher interests, developer interests, and federal and state grants. More information can be found at Rutgers Offshore Wind Living Resources Studies (ROWLRS) website: www.rowlrs.marine.rutgers.edu/.

Discussion

Below are verbal and written questions and comments that followed the presentation. Attendee questions are first order bullets, and answers are italicized below.

- How much mixing of surfclams and quahogs did you see in the calibration studies?
  - The New York Bight lease area had some mixing. For every 7-8 bushels of surfclams there were approximately 2-3 bushels of quahogs.

- What are your next steps for this research?
  - Additional calibrations, another year of pre-construction surveying at Ocean Wind 1, and developing maps with abundance and bottom temperature data. All Ocean Wind 1 data will be posted and available.
  - Hopefully additional developers with surfclam and/or quahogs in their lease area will collaborate on surveying efforts.

- Was dredge saturation [i.e., when a dredge gets filled up and can no longer sample] an issue?
  - We were concerned about it but most of our tows were clean. We re-towed in the few cases where there was saturation.

- Is grab sampling common for surfclam studies? What did you make of the newrecruit surfclams? Do you assume that there is a lot of recruitment if a certain level of abundance is found?
Grab sampling is not typically done for federal surveys but it is a consistent part of New Jersey state surveys. Looking at the New Jersey historic dataset, we see an association of small surfclam at stations relative to the number of adults. This is an evolving question; we are still processing data from some stations and we have a graduate student examining this further. Early results show that, as expected, there is a higher abundance of early recruits (ready for fishing in five to six years) than adults.

This is a great collaborative effort between researchers and industry.

State Agency Updates

Maine Department of Marine Resources
Dr. Casey Yanos, Lead Scientist for Offshore Wind and the Environment, shared information about Maine’s Climate Action Plan and Maine’s Offshore Wind Initiative. Maine’s climate action plan relies on offshore wind, and the Offshore Wind Initiative is focused on understanding offshore wind’s effects on the environment and fisheries. A critical recommendation from both the Environment and Wildlife Working Group, and Fisheries Working Group is to fill resource datagaps.

Dr. Yanos shared information on the Gulf of Maine floating offshore wind research array. The array will build understanding of floating wind technology and its effects on fishing and the environment. The array is located in Petterson Mud and will support ten to 12 turbines. Research will involve multiple survey types including a local historical knowledge and mapping survey. The Research Array is waiting further approvals from BOEM.

Discussion
No questions or comments were shared.

New Jersey Department of Environmental Protection
Dr. Colleen Brust, Research Scientist, shared information about New Jersey’s offshore wind goals and Research & Monitoring Initiative (RMI). New Jersey’s goal is to protect resources while offshore wind is being developed. The Governor increased the state’s target to 11 gigawatts by 2040, which has led the state to speed up its efforts.

The New Jersey RMI project is funded by the state’s second offshore wind solicitation, which required developers to contribute $10,000/1 megawatt of project capacity to the initiative. RMI established its research priorities through considerations such as stakeholder concerns, threatened, endangered, sensitive, or protected species, and fisheries with high social or economic value. Projects that look at these priority resources have been approved for funding but the money has yet to be distributed. RMI has faced challenges including stakeholder fatigue, research capacity, and data standardization. Next steps include improving the third party process review and moving beyond pre-construction.

Discussion
Below are verbal and written questions and comments that followed the presentation. Attendee questions are first order bullets, and answers are italicized below.

Are you coordinating with New York or Maryland to align your work? Normandeau Associates is creating a data visualization tool for other states into which your data could be incorporated. (Normandeau ReMote project url: https://remote.normandeau.com/remote_about.php).

Yes, we are working with other states and consultants and will look into that tool.
Are you actively looking for additional funding from developers or other entities?
  ○ The third solicitation has the same $10,000/1 megawatt requirement for developers.

What lessons did you learn during scoping and research procurement?
  ○ It was helpful to pitch our goals and research priorities to New Jersey state universities researchers to see about aligned interest to develop projects that match RMI goals.

Federal Agency Updates

**National Oceanic and Atmospheric Administration, Northeast Fisheries Science Center, Greater Atlantic Regional Fisheries Office (NOAA Fisheries)**

Mr. Doug Christel, Fisheries Policy Analyst, presented on the Greater Atlantic Regional Fisheries Office’s current initiatives. NOAA Fisheries published the final Survey Mitigation Strategy, and is now working to harmonize its and BOEM’s regional wind projects. NOAA Fisheries published wind socioeconomic impact logbook data for 2020 and 2021. Mr. Christel overviewed nine research publications expected in 2023. The protected species guidance on project-specific surveys is expected soon. NOAA Fisheries is undertaking an integrated ecosystem assessment, which is an adaptive management approach for decision-making. NOAA Fisheries has undertaken an initiative to develop ropeless lobster gear. Brian Galvez (brian.galvez@noaa.gov) is available to answer questions about this gear development. Lastly, NOAA Fisheries is updating fisheries surveys and monitoring plans.

Discussion

Below are verbal and written questions and comments that followed the presentation. Attendee questions are first order bullets, and answers are italicized below.

- In the first forthcoming paper [on comparing study fleet data to fishing footprint data] mentioned, does the study underestimate the number of boats but overestimate impact?
  - Given our analysis, the footprint overestimates the number of participants affected in an area but underestimates revenue impacts.

- Does the protected species guidance direct technology design in order to meet potential requirements?
  - The guidance pieces together applicable law relevant to each project. NOAA Fisheries offers to evaluate risk and recommend measures to reduce risk based on developer or ROSA plans.

- Has there been any increase in coordination among wind-related researchers?
  - The most coordination occurs through Passive Acoustic Monitoring for migratory species, where all studies use NEAMAP protocols. More alignment is needed in terms of trawl surveys using NEAMAP protocols and aligning objectives.
  - BOEM and NMFS are working to standardize project-level monitoring. Competitive landscapes for state procurements creates barriers to effective coordination.

- When is the Allen-Jacobsen et al., 2023 paper expected?
  - The Allen-Jacobson paper has been accepted and should be published by spring 2023.

Sea Grant

Ms. Jennifer McCann, Director of Extension Programs for Rhode Island Sea Grant and Sea Grant liaison for offshore wind, shared information on Sea Grant and the liaison role. Sea Grant is a university-based organization funded by National Oceanic and Atmospheric Administration for 50 years. They conduct research, outreach, education and workforce development. The offshore wind liaison brings research to
stakeholders so they can make informed decisions and access recent studies. Sea Grant helps stakeholders discuss difficult topics, and identify and implement innovative solutions. One example of a current project is their work with the Angler Association and Portsmouth to explain the science behind cable route development.

Sea Grant is hiring a social science postdoc to work on the integrated ecosystem assessment effort Mr.Christel described before. The job posting is available at: https://jobs.uri.edu/postings/10999.

Dr. Gayle Zydlewski, Director of Maine Sea Grant, shared the Northeast Sea Grant Consortium’s regional initiatives and ongoing projects. One regional initiative is the American lobster initiative. An example research project within this initiative is the testing of new ways to deploy gear. Another regional initiative is ocean renewable energies. An example research project within this initiative is on participatory approaches to ocean renewable energy siting. Sea Grant biennial research funding request for proposals are now open.

**Discussion**
Below are verbal and written questions and comments that followed the presentation. Attendee questions are first order bullets, and answers are italicized below.

- When will the projects have data ready to be shared?
  - Data will likely be available within the year.

**ROSA Updates**

ROSA Executive Director Lyndie Hice-Dunton shared updates on behalf of ROSA. The new ROSA website (https://www.rosascience.org/) is live. It hosts more comprehensive information, is more user friendly and includes the Fish FORWARD database described at the last ROSA Advisory Council meeting. ROSA is working to turn Fish FORWARD into a user-friendly web-based interface. Reach out to Mike Pol (mike@rosascience.org) if something is missing in the Fish FORWARD database.

Dr. Hice-Dunton shared upcoming regional items of interest:

- **NYSERDA Program Opportunity Notice 5226**: Environmental and Fisheries Research to Support Offshore Wind Development. $2.5 million is available to support environmental and fisheries research. Proposals are due March 13, 2023.
- **Special Initiative on Offshore Wind Fisheries Mitigation Project RFI**. Comments are due January 31, 2023.
- **New Jersey Board of Public Utilities Offshore Wind Solicitation #3**. Comments on draft solicitation guidance are due Dec 29, 2022.

Dr. Hice-Dunton shared information about relevant upcoming meetings:

- **NOAA Cooperative Research Summit**
  - January 31, 2023- Newport News, VA
  - February 15, 2023- Providence, RI
  - Abstracts due December 7, 2022
- **AFS Southern Division annual meeting**
  - February 2-5, 2023- Norfolk, VA
  - Session on “Offshore wind and fisheries: monitoring interactions and assessing impacts”
  - Abstracts due November 15, 2022
Facilitator Pat Field shared a ROSA staffing update: Dr. Hice-Dunton is leaving ROSA at the end of December. Mr. Field thanked her for her efforts leading the organization. Dr. Hice-Dunton shared that she will be joining the National Offshore Wind Research and Development Consortium as their Executive Director. ROSA is looking to hire an executive director quickly. Mr. Field encouraged participants to share the [job posting](#) and/or apply. He and ROSA staff will support the organization through the transition.

**Summary of Meeting Outcomes and Adjournment**

Facilitator Pat Field reviewed the key meeting outcome: researchers, state and federal agencies, and ROSA shared updates which were helpful to understand the breadth and depth of offshore wind research and initiatives.

The Advisory Council adjourned at 12 PM
# Appendix A | ROSA Council Member and Alternates Attendance

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Katie Almeida</td>
<td>The Town Dock</td>
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<tr>
<td>Chris Batsavage</td>
<td>NC Division of Marine Fisheries</td>
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<td>Bob Beal</td>
<td>Atlantic State Marine Fisheries Commission (ASMFC)</td>
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<td>Doug Christel</td>
<td>NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO)</td>
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<tr>
<td>Joseph Cimino</td>
<td>New Jersey Department of Environmental Protection</td>
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<td>Greg DeCelles</td>
<td>Ørsted</td>
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<tr>
<td>Michelle Duval</td>
<td>Mid-Atlantic Fishery Management Council (MAFMC)</td>
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<tr>
<td>Willy Goldsmith</td>
<td>American Saltwater Guides Association</td>
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<tr>
<td>Lane Johnston</td>
<td>Responsible Offshore Development Alliance (RODA)</td>
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<tr>
<td>Andy Lipski</td>
<td>NOAA Fisheries Northeast Fisheries Science Center (NEFSC)</td>
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<td>Julia Livermore</td>
<td>Rhode Island Department of Environmental Management</td>
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<td>EJ Marohn</td>
<td>Equinor</td>
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<tr>
<td>Fred Mattera</td>
<td>Commercial Fisheries Center of Rhode Island</td>
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<td>Joe Myers</td>
<td>Sea Watch International, Ltd</td>
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<td>Dick ogg</td>
<td>F/V Karen Jeanne</td>
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<td>Robert Ruhle</td>
<td>NEAMAP</td>
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<td>Daniel Salerno</td>
<td>NEFS 11</td>
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<td>Sarah Schumann</td>
<td>Commercial Fishing Deckhand &amp; Shining Sea Fisheries Consulting</td>
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<td>Joel Southall</td>
<td>Mayflower Wind Energy</td>
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<td>Mike Waine</td>
<td>American Sportfishing Association</td>
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<tr>
<td>Casey Yanos</td>
<td>Maine Department of Marine Resources</td>
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