ROSA Advisory Council Meeting

March 5, 2021

Agenda

9:30	Welcome
9:35	ROSA Updates
9:45	ROSA Role in Science Coordination & Tracking
10:05	Role of ROSA and Research Advisors
10:35	NMFS Survey Pre & Post Construction Alignment
10:55	BREAK
11:05	Improving Baseline Now
11:50	Science Updates from the Region
12:25	Next Steps
12:30	Adjourn

ROSA Updates

Research Director Search

- Announced search on January 26, 2021
- Preference given to applicants received by February 28
  - Still accepting applications- encourage any who are interested to apply
- Will be conducting interviews through March
- Hope to have the position filled by April/May
  - New staff will help expand organizational capacity

Update on ROSA Monitoring Guidance

- Builds upon existing **BOEM guidance** and **member expertise** to highlight **best practices** and elements that could help **improve future monitoring plan submissions**
- Monitoring plans will likely adapt over time
- Guidance should be considered a living document
- First step of many to improve our regional coordination for research and monitoring

Guidance Timeline

- **June 2020-** Working group began meeting
- **July through October 2020-** Working Group met regularly to draft guidelines
- **October 15, 2020-** Breakout group discussion to introduce guidance at Synthesis of the Science Workshop
- **October 29, 2020-** Draft released for public comment
- **December 1, 2020-** Comment period closed
- **December 2020 through January 2021-** Began addressing comments and reconvened working group
- **February 2021-** Working group finalized updated draft

Next Steps

- **Over 200** comments received from various agencies and groups
- Had follow up calls with **state and federal agencies** to ensure document **aligns with existing regulatory standards**
- Review of comments led to **reorganization of document** to create a more **comprehensive framework**
- **Updated guidance will be posted on ROSA website March 2021**
- **Living document** to be reviewed at least annually

- Contact working group co-chairs with questions
  - Lyndie Hice-Dunton, ROSA
  - Doug Christel, NOAA Fisheries Greater Atlantic Regional Fisheries Office

ROSA

ROSA DOE Concept Paper

- January 2021- DOE announced FOA "to support regionally focused, coordinated research efforts to increase understanding of the environmental impacts of offshore wind development as well as to advance and validate technical readiness of tools for monitoring and minimizing impacts." (DE-FOA-00002237)
- **3 Topic Areas**
  - Topic Area 1: Environmental Research, Validation of Tools and Methods, and Multi-Year Evaluation of Impacts of Offshore Wind Energy Development on Wildlife in U.S. Atlantic Waters (up to $7.5 million)
  - Topic Area 2: Environmental Research, Validation of Tools and Methods, and Multi-Year Evaluation of Impacts of Offshore Wind Energy Development on Ecology of Commercially Fished Species (up to $3.5 million)
  - Topic Area 3: Environmental Baseline Data Collection and Monitoring Tool Development and Validation for Evaluating Impacts of Offshore Wind Energy Development on Wildlife in U.S. Waters off of the West Coast (up to $2 million)

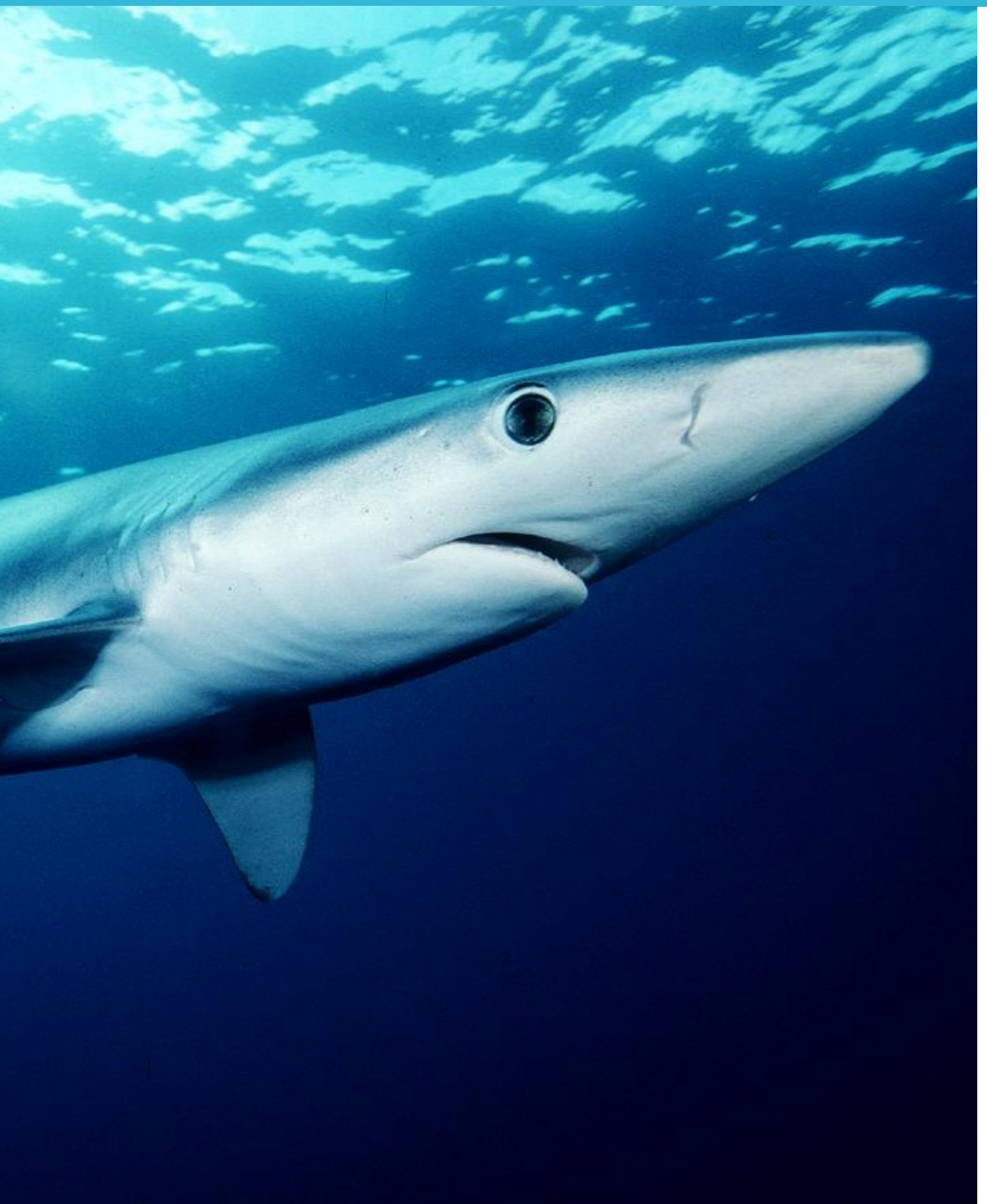
ROSA

ROSA DOE Concept Paper

- ROSA submitted a general concept paper for **Topic Area 2** with multisectoral project team. Details TBD in full proposal stage (pending approval).
  - Includes program management, subject matter, and industry experts
  - Addresses objectives and project team criteria as outlined in the FOA
  - Project will include cooperative research & work with fishermen
  - If awarded, project will work with the **ROSA Advisory Council** and **Research Advisors** to ensure project is addressing our regional goals
  - Up to **5 years** of funding- up to first 18 months of project is **planning phase**

**BOEM and NOAA/NMFS are federal partners in FOA and can not be involved in proposal discussions*

Regional Research Planning



- Need for overall strategic plan for the region which incorporates:
  - Integrated regional monitoring framework
  - Identification of research needs and data gaps
  - Strategies for cooperative research
  - Priority setting/decision matrix- acknowledging funding restrictions
  - Data management and sharing
  - Performance measures
- ROSA will be working to develop plan of approach

ROSA Role in Science Coordination and Tracking

Data Coordination and Sharing

- ROSA will be seeking a qualified contractor to conduct research and prepare a written report on coordination and data sharing for fisheries data, to support data accessibility and transparency requirement.
  - Follow on of discussions at the November 2020 Advisory Council meeting- will work with volunteers from Nov. meeting & others to scope report
  - Review of existing tools/structures and identification of gaps and needs
  - ROSA's objective is to be a trusted resource that enables scientific research, increases efficiency, deepens understanding and facilitates collaboration

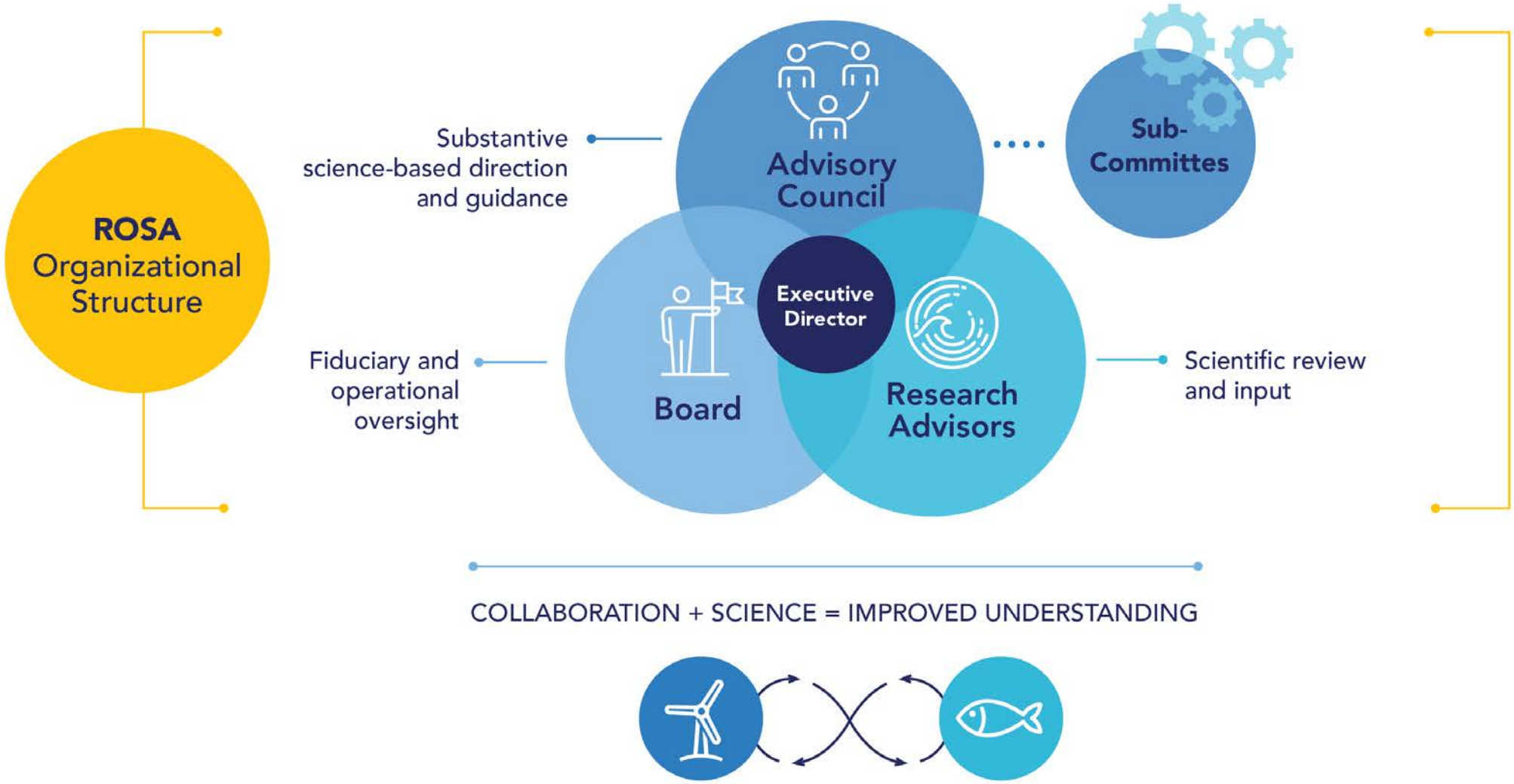
- The final report, with modifications as appropriate, would follow the general approach of the NYSERDA funded *Environmental Data Standardization and Sharing: Supporting Data Transparency Requirements for OSW Energy Projects Supplying Power to New York State*

Science Coordination & Tracking

- *Goal*: Understand level of effort for managing an on-going inventory of current, on-going fishery monitoring and research projects
- CBI intern conducted pilot scan in Dec. with one developer, academic, and state over 8 hours identifying 40 projects
- Sought to identify
  - What is the research topic, question and or hypothesis?
  - What are the target species, organisms, or habitat?
  - What methods are being used?
  - Who are the Principal Investigators?
  - What is the timeline for the research?
  - Who are the project sponsors?
  - Where will research data and findings be housed?
  - Source
- Next Step: Work with RODA Research Director to frame out and refine approach in preparation for ROSA Research Director to undertake once in place
- Information will ultimately be included in the ROSA website- format TBD

Role of ROSA and Research Advisors

ROSA Organizational Structure



ROSA Governance & Roles

	Board of Directors	Advisory Council	Advisory Council Executive Committee	Research Advisors	Committees Established by the Advisory Council
Members	• Offshore wind developers • Fishing industry representatives	• Offshore wind developers • Fishing industry representatives • Federal and state agencies • Fisheries Councils and Commission	Members of the Advisory Council, representing: • Offshore wind developers • Fishing industry representatives • Federal and state agencies • Fisheries Councils and Commission	• Membership open to any sector if criteria is met	Could be members of: • Advisory Council • Research Advisors • Board of Directors • Others outside of ROSA governance with the appropriate expertise
Roles & Responsibilities	• Fiduciary, operational, and policy oversight • Follows formal board procedures (motions, votes, etc.)	• Organization guidance, including determining short- and long-term research goals	• Help address issues, problems or conflicts that arise in Advisory Council meetings • Ensure the smooth functioning of the Advisory Council	• Provide independent scientific and technical input • Contribute to development and advancement of scientific integrity of ROSA activities	• Conduct core, detailed work • May be issue- or area-specific • Chair(s) determined by Advisory Council
Examples	• Reviewing and approving ROSA's operating budget • Audit oversight	• Determining regional research needs • Reviewing ROSA protocols, procedures, & documents	• Plan Advisory Council agendas, meetings, and work • Report on the views of others from their sector on the Advisory Council	• Help develop protocols and tools • Develop/review RFPs • Provide peer review	• New England/Mid-Atlantic committees • Monitoring Plan Guidance
Meeting frequency	• Monthly to quarterly	• At least 2x per year	• At least 2x per year, in advance of Advisory Council meetings	• As needed	• Varies based on committee goals and timeline
Decision-making	• Consensus, with majority vote if absolutely needed	• Consensus and broad acceptance or support	• Consensus and broad acceptance or support	• Advisory only	• Makes recommendations or advice to Council by consensus. Including any differences remaining

ROSA Research Advisors' Role

- Provides **independent scientific input** and **review**
- Help identify **detailed scientific needs** based on Advisory Council direction and committee work
- Contribute to the development of effective and **consistent research and monitoring protocols, standards,** and **tools**
- Review and assist with developing **Requests for Proposals (RFPs)**
- Provide independent **peer review** as needed
- Serve as **subject matter experts** to contact as needed for scientific input
- Contribute to development and advancement of **scientific integrity** of ROSA activities

Discussion

- How best to use our governance structure, our new Research Advisors, and/or monitoring guidance to learn, adapt, and improve individual monitoring and research efforts as they move forward?

- How do we “issue spot” science or technical problems from our Council members and organizations and bring them forward to ROSA to address?

NMFS Survey Pre and Post Construction Alignment

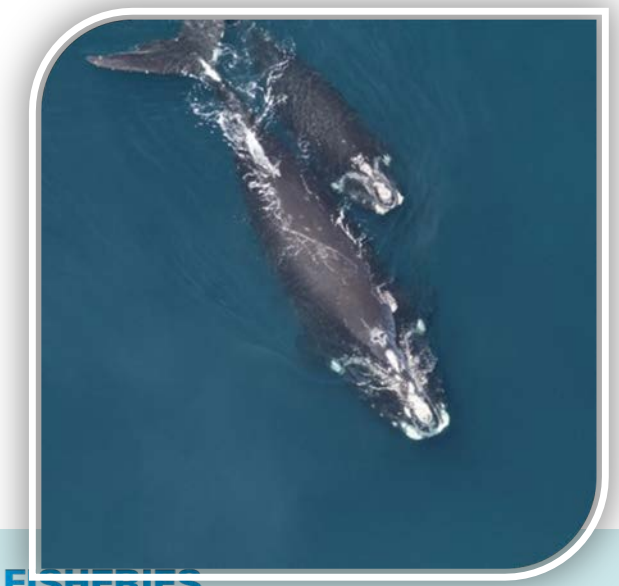
NMFS Survey Mitigation Updates

Andy Lipsky, NOAA Northeast Fisheries Science Center
Phil Politis, NOAA Northeast Fisheries Science Center
Anna Mercer, NOAA Northeast Fisheries Science Center

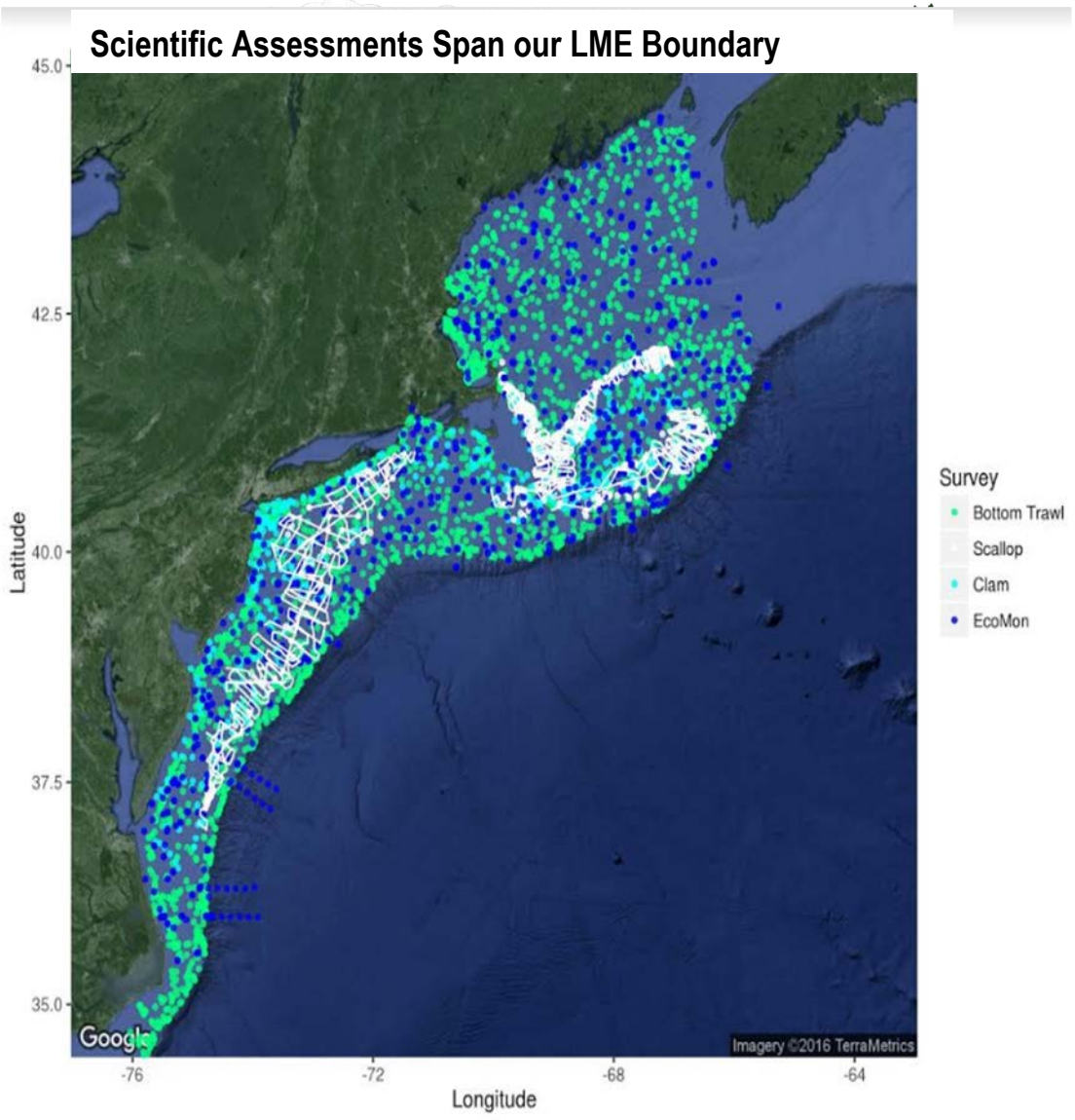
NOAA FISHERIES

Northeast Fisheries Science Center
NMFS Office of Policy

Presentation to the ROSA Council Meeting
March 5, 2021



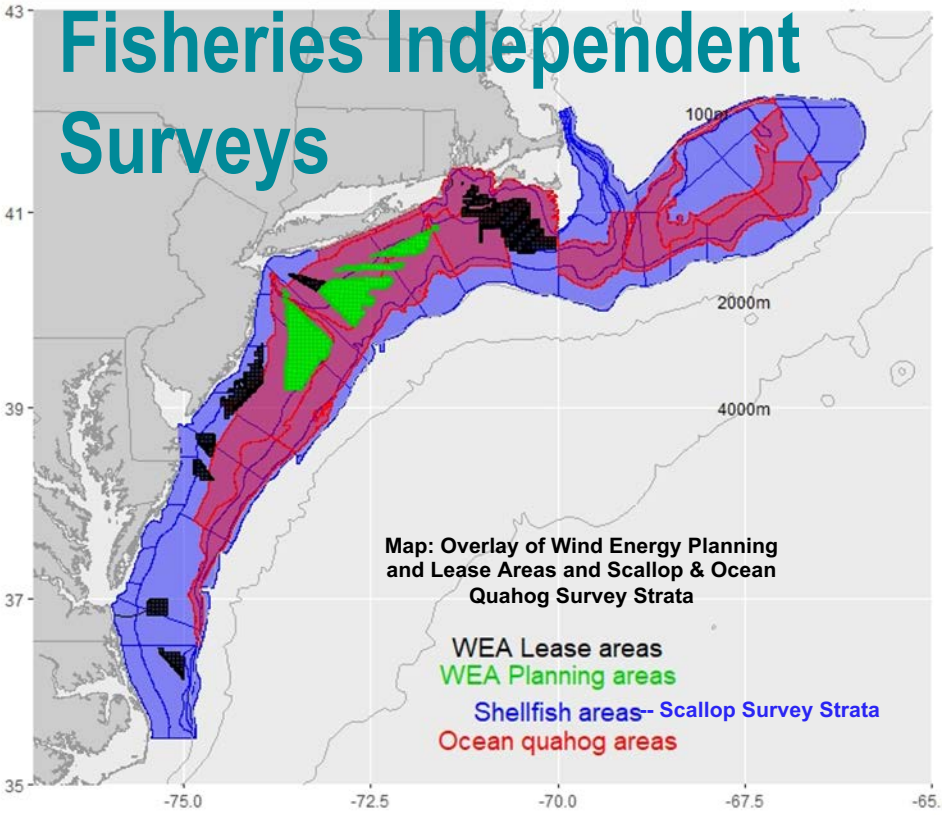
NMFS Surveys Implemented Across NE Large Marine Ecosystem



How Wind Energy Impacts Scientific Survey Assumptions:

1. Vessel/aircraft operations and access to areas for sampling under status quo vessel/gear: **No**
2. Continuity of historical stratified random statistical design: **No**
3. Habitat Change & Assumptions on Species distribution, abundance, and vital rates within and outside wind energy areas: **No**

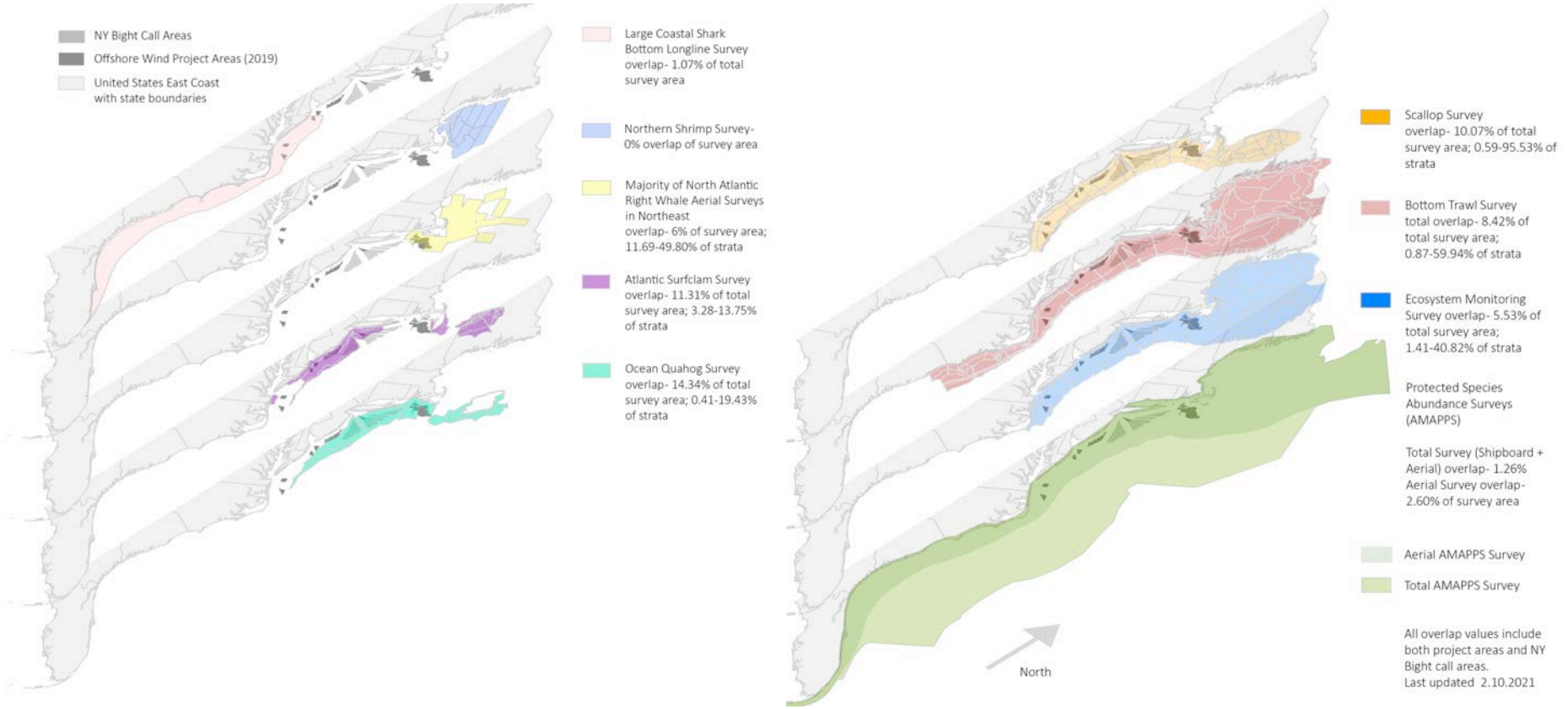
Offshore Wind & Fisheries Independent Surveys



394 Years of Total Survey Effort Support $27B in commercial and $6.5B recreational fisheries annual economic output (NMFS,2018)

Survey	Year Started	Survey Design	Major Applications
Autumn Bottom Trawl Survey	1963	Random Stratified Design - North Carolina to Nova Scotia (bottom trawl)	abundance; length, age, sex, weight, diet, maturity samples, distribution, EcoMon
Spring Bottom Trawl Survey	1968	Random Stratified Design - North Carolina to Nova Scotia (bottom trawl)	abundance; length, age, sex, weight, diet, maturity samples, distribution, components of Ecosystem Monitoring survey
Scallop Survey	1979	Random Stratified Design (dredge); line transect (HabCam)	biomass, abundance, distribution, size and sex of sea scallops and other benthic fauna
Atlantic Surfclam and Ocean Quahog Surveys	1980	Random Stratified Design (hydraulic dredge)	biomass, abundance, distribution, size and sex of Atlantic surfclam and ocean quahog
Northern Shrimp Survey	1983	Random Stratified Design (commercial shrimp trawl)	biomass, abundance, length
Gulf of Maine Cooperative Bottom Longline Survey	2014	Randomly Stratified Design (bottom longline)	abundance, biomass, length, age, sex, weight, maturity samples, distribution, habitat data
Ecosystem Monitoring Survey	1977	Random Stratified Design (linked to Trawl Survey Design); fixed stations embedded in design (plankton and oceanographic sampling)	Phyto/nkton, zooplankton, ichthyoplankton, carbonate chemistry, nutrients, marine mammals, sea birds
North Atlantic Right Whale Aerial Surveys	1998	Aerial line transects	Right Whale population estimates; dynamic area management
Marine mammal and sea turtle ship-based and aerial surveys	1991	Line transects for ship and aerial surveys. biological and physical oceanography sampling	Abundance and spatial distribution of marine mammals, sea turtles, and sea birds
Large Coastal Shark Bottom Long-line Survey	1986	Fixed station design in US continental shelf waters from Fl to DE with stations ~ 30 nm apart	Abund., distribution, migrations (tagging), and bio-sampling for assessment, EFH designations, and life history studies
Coop. Atlantic States Shark Pupping and Nursery Longline/Gillnet Survey	1998	Random stratified and fixed station (longline and gillnet) surveys in estuarine and nearshore waters from Florida to Delaware	Abundance, distribution, migrations (tagging), and bio-sampling for assessment, EFH, and life history studies

NMFS-Core Surveys in Southern New England & Mid-Atlantic



Does not include Gulf of Maine Cooperative Bottom Long-line Survey Line Survey, Apex Predators Inshore COASTSPAN Survey

Implications of NOAA Fisheries Survey Disruptions

American Public
- Adverse impacts on fishermen and fishing communities and American public who consume seafood and expect recovery and conservation of endangered species and marine mammals

Commercial/Recreational Fishermen & Fishing Communities
- Increase uncertainty in estimates of abundance—through application of the precautionary approach—impacting setting of quotas,
- Increase in more precautionary protected species management measures

Protected Species
- Greater uncertainty in protected species assessments/recovery programs

Non-fishing Sectors-Shipping & Energy
- Uncertainty in protected species information and stock assessments

Federal Agencies
- Harm caused by the need to include more precautionary mitigation measures, e.g., Incidental Take Statements (ITA) through ESA Biological Opinions and MMPA ITAs

Climate Science
- Disruptions of 40+ year time series decreases ability to understand and mitigate the effects of climate change, impacting American Public

Implementing a Federal Survey Mitigation Program- Included in BOEM's South Fork Draft EIS

1. **Evaluate survey designs**: Evaluate and quantify effects and impacts of proposed project-related wind development activities on scientific survey operations and on provision of scientific advice to management.
2. **Identify and develop new survey approaches**: Evaluate or develop appropriate statistical designs, sampling protocols, and methods, while determining if scientific data quality standards for the provision of management advice are maintained.
3. **Calibrate new survey approaches**: Design and carry out necessary calibrations and required monitoring standardization to ensure continuity, interoperability, precision, and accuracy of data collections.
4. **Develop interim provisional survey indices:** Develop interim indices from existing data sets to partially bridge the gap in data quality and availability between pre-construction, and operational periods while new approaches are being identified, tested or calibrated.
5. **Wind energy monitoring to fill regional scientific survey data needs**: Apply new statistical designs and carryout sampling methods to effectively mitigate survey impacts due to offshore wind activities from operations for the 30 year operational life-span of project developments.
6. **Develop and communicate new regional data systems:** New data collections will require new data collection, analysis, management, dissemination and reporting systems. Changes to surveys and new approaches will require substantial collaboration with fishery management, fishing industry, scientific institutions and other partners.

Current Status of Project Level Efforts

- NEFSC is in the initial **planning phases**

- Inter-agency agreement with BOEM
  - Develop a strategy to mitigate wind energy areas impact on NEFSC Multispecies Bottom Trawl Survey
  - Soliciting contractor & Cooperative Institute for North Atlantic Region support
  - Planning for 2 stakeholder workshops in 2021 to develop modeling framework to evaluate survey impacts and alternative methods through simulation
- Investigating options for supplemental bottom trawl survey efforts on smaller vessels capable of operating inside wind energy areas
- Scallop Survey Strategy

Bottom Trawl Survey Adaptation Strategy

- Determine effects of WEA's on survey data, stock assessments and management measures.
  - Evaluate range of impacts (eg. Eliminate all observations from WEAs and recalculate abundance indices)
  - Must look at over 40 assessed stocks for bottom trawl survey
- Identify potential combination(s) of sampling methodologies and statistical designs for inside WEAs
  - Results should be able to be incorporated with historical and existing sampling for continuity of time-series
- Observing System Simulation Experiments (OSSE) or other modeling approach
  - Stakeholder workshops in 2021

Bottom Trawl Survey Adaptation Planning-Workshop 1

- Proposed for July 2021
- Identify impacts of offshore wind energy development on fisheries
  - Impacts on ecosystems data
  - Impacts on stock assessment and management advice
  - Linkages and questions that need to be addressed
- Define the objectives and questions that OSSE needs to answer
- Define the outcomes needed
- Identify candidate model approaches

Bottom Trawl Survey Adaptation Planning Workshop 2

- Proposed for November 2021
- Design analytic and empirical framework
  - Parameters, assumptions, scenarios, requirements
- Develop goals and specifications for analytic and empirical work
  - Build on questions and recommended approach from Workshop 1
- Develop cohesive and clear plan to build a simulation to evaluate alternatives and proposed approaches

Other NMFS Fisheries Survey Adaptation Efforts

Limited by lack of permanent dedicated resources and staff to address this issue

- New England Fisheries Management Council Scallop Survey WG/Strategy (https://www.nefmc.org/committees/scallop-survey-working-group)
  - Facilitate collaboration around integrated approaches to scallop surveys that support stock assessments and management;
  - Make recommendations about specific issues stemming from the Council's Research Set-Aside (RSA) Program Review (2019), the Scallop Survey Peer Review (2015), and the 2018 research track assessment (SARC 65); and
  - Address the disruption that offshore wind development will have on scallop surveys and monitoring operations.

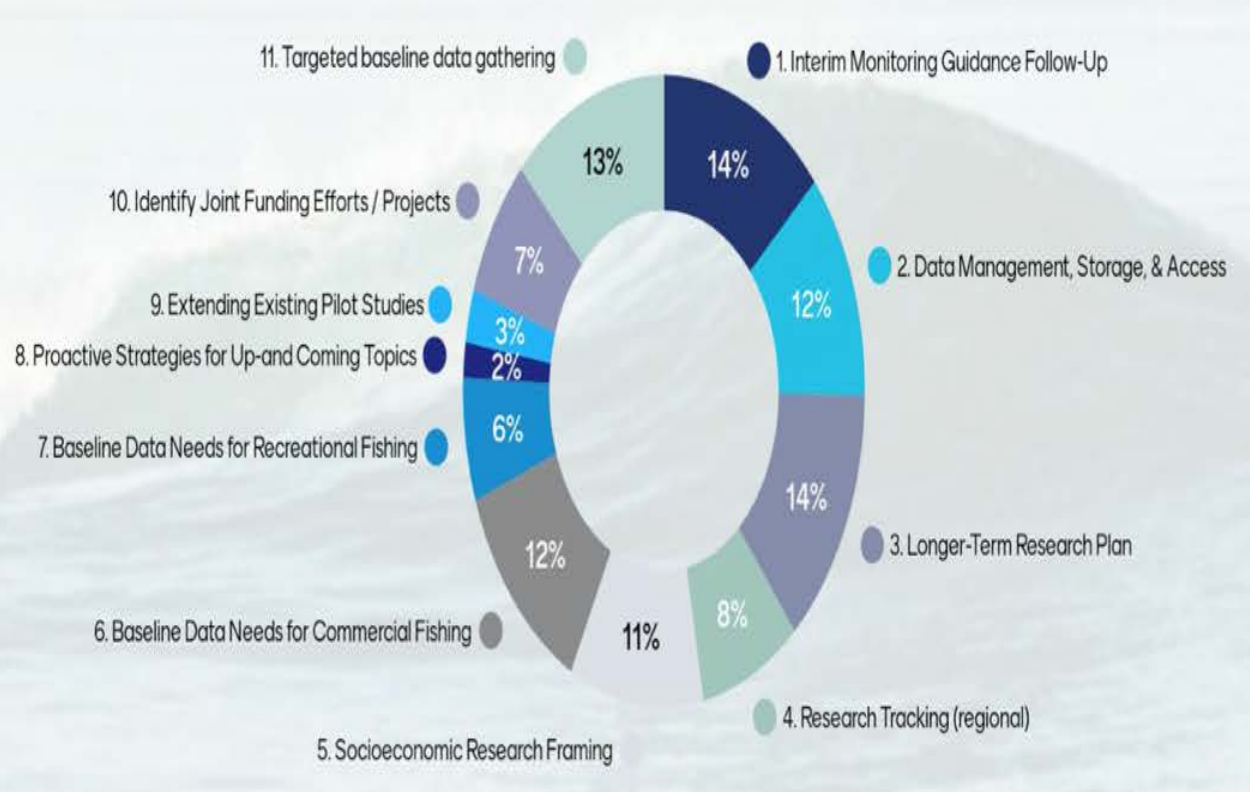
- NEFSC Cooperative Research Program and Atlantic States Fisheries Management Commission effort to support scoping and research activities to contribute to NMFS process to adapt regional fisheries surveys to wind development, e.g., development of industry-based surveys

Questions

BREAK

Improving Baseline Data Now

Priorities from November meeting: BASELINE!



Choices (in descending order)	Votes
Interim Monitoring Guidance Follow-Up	15
Longer-Term Research Plan	15
Targeted baseline data gathering	**14**
Data Management, Storage, & Access	13
Baseline Data Needs for Commercial Fishing	**13**
Socioeconomic Research Framing	12
Research Tracking (regional)	9
Identify Joint Funding Efforts / Projects	8
Baseline Data Needs for Recreational Fishing	**7**
Extending Existing Pilot Studies	3
Proactive Strategies for Up-and Coming Topics	2

Partners in Science Workshop:

Objective: To Identify Specific Ecological Metrics & Sampling Strategies for Baseline Monitoring to Inform Offshore Wind Development

January 28, 2021

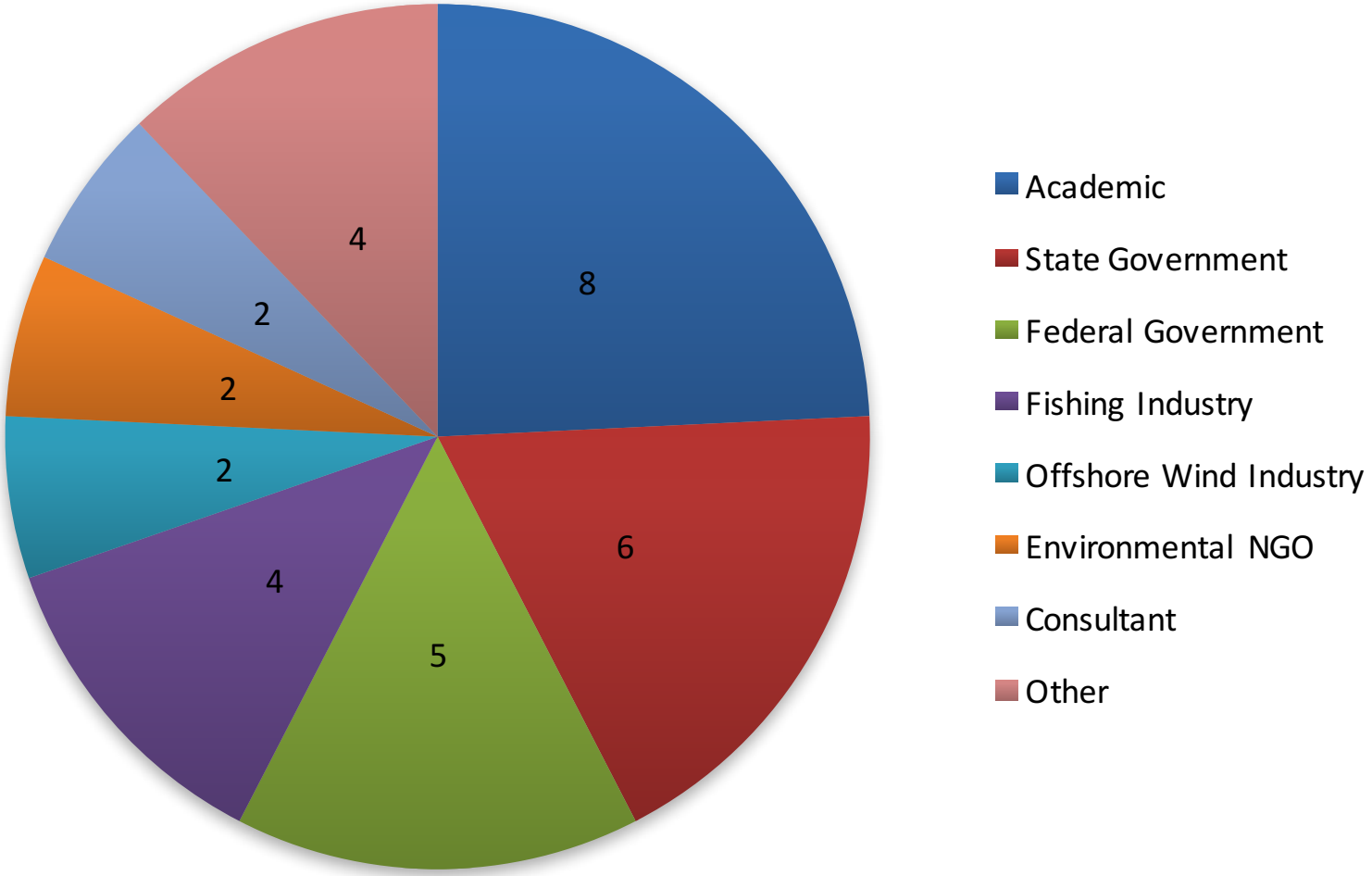
Very Preliminary Summary

Workshop Approach

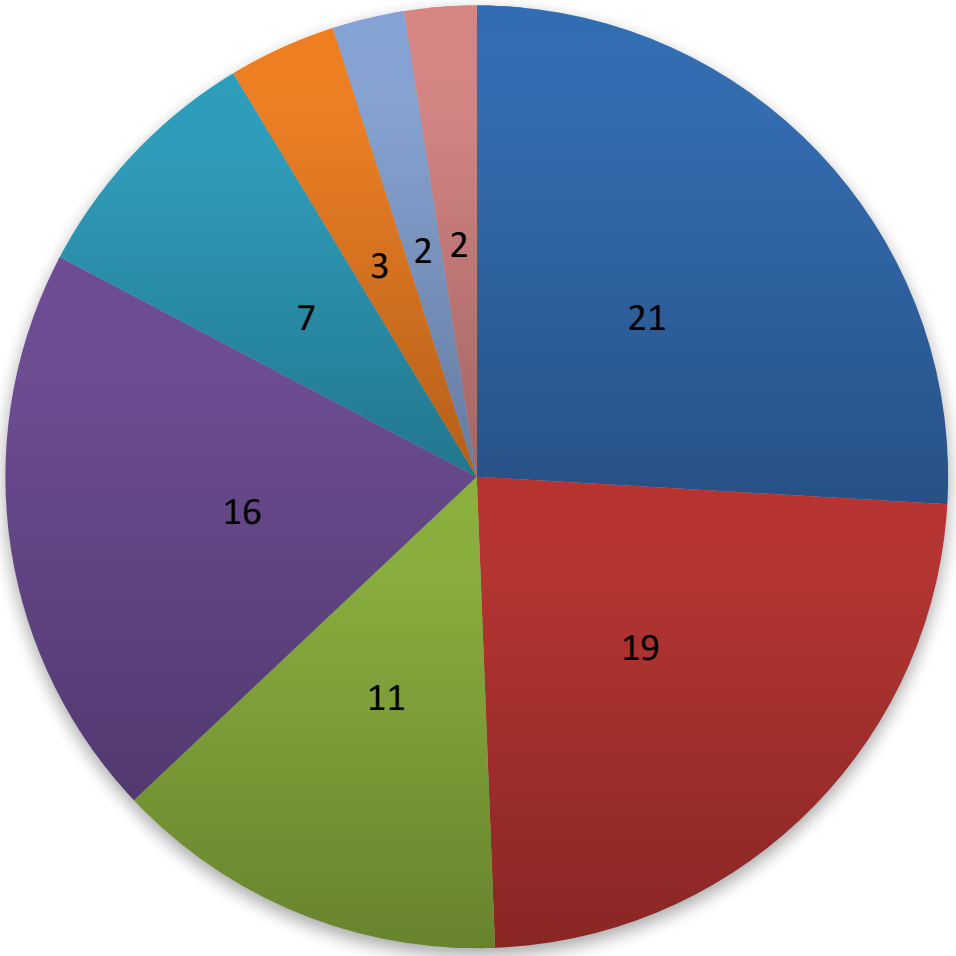
- Pre Survey of the registrants (33 respondents)
- Coordinating with ongoing efforts
  - Literature Reviews
  - State of the Science
  - Synthesis of the Science
  - ROSA guidance document
- Global Café (81 participants)
  - Opportunity for all participants to build off initial survey results to iterate a more complete guidance of baseline and monitoring specifics
  - 2 Cohorts, each organized into 3 groups of roughly 15 people
    - Physical/Chemical
    - **Fisheries**
    - Non-fisheries biota

Community Representation

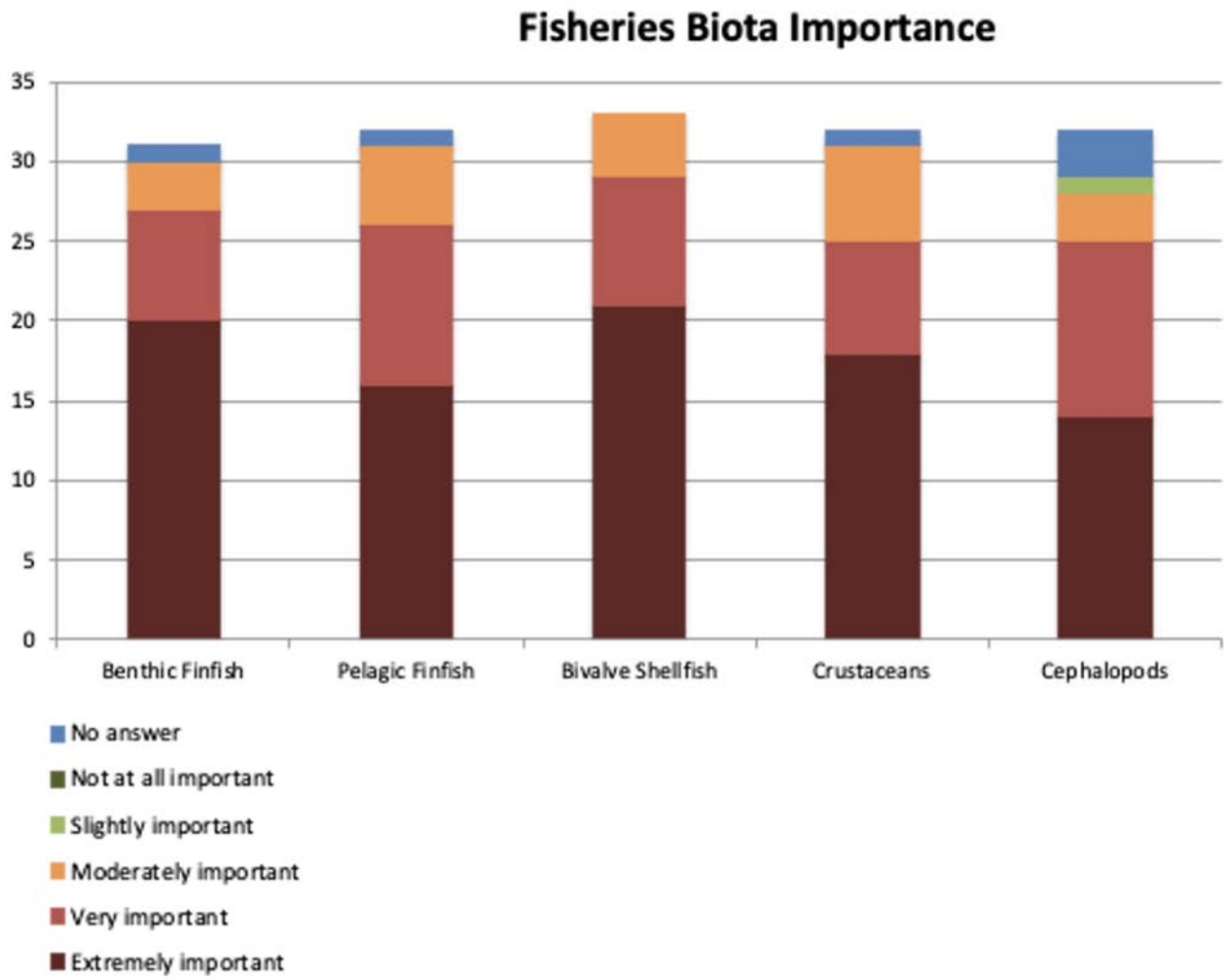
Survey Respondents (33)



Worskhop Attendees (81)

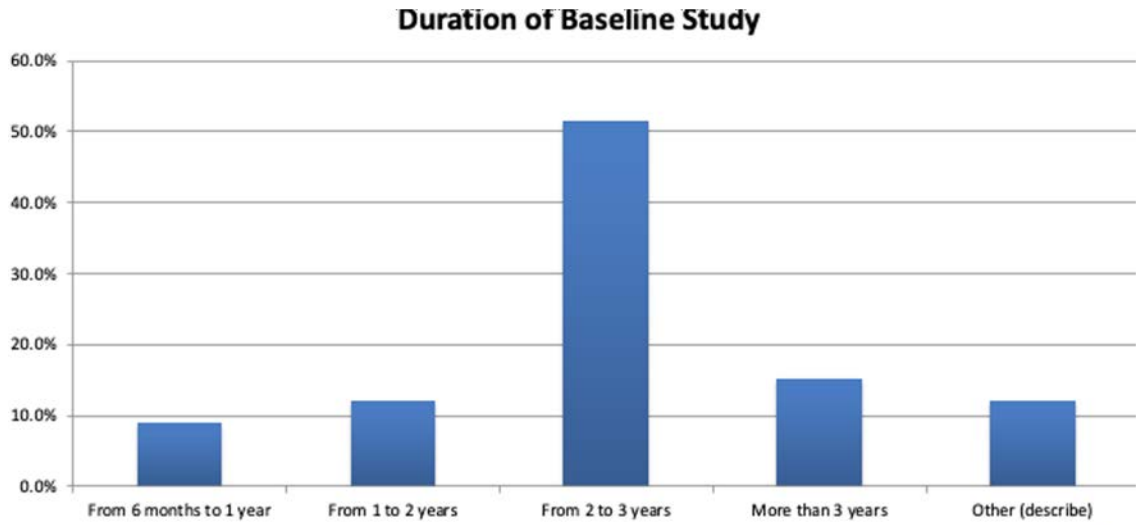


What to measure (Fisheries):



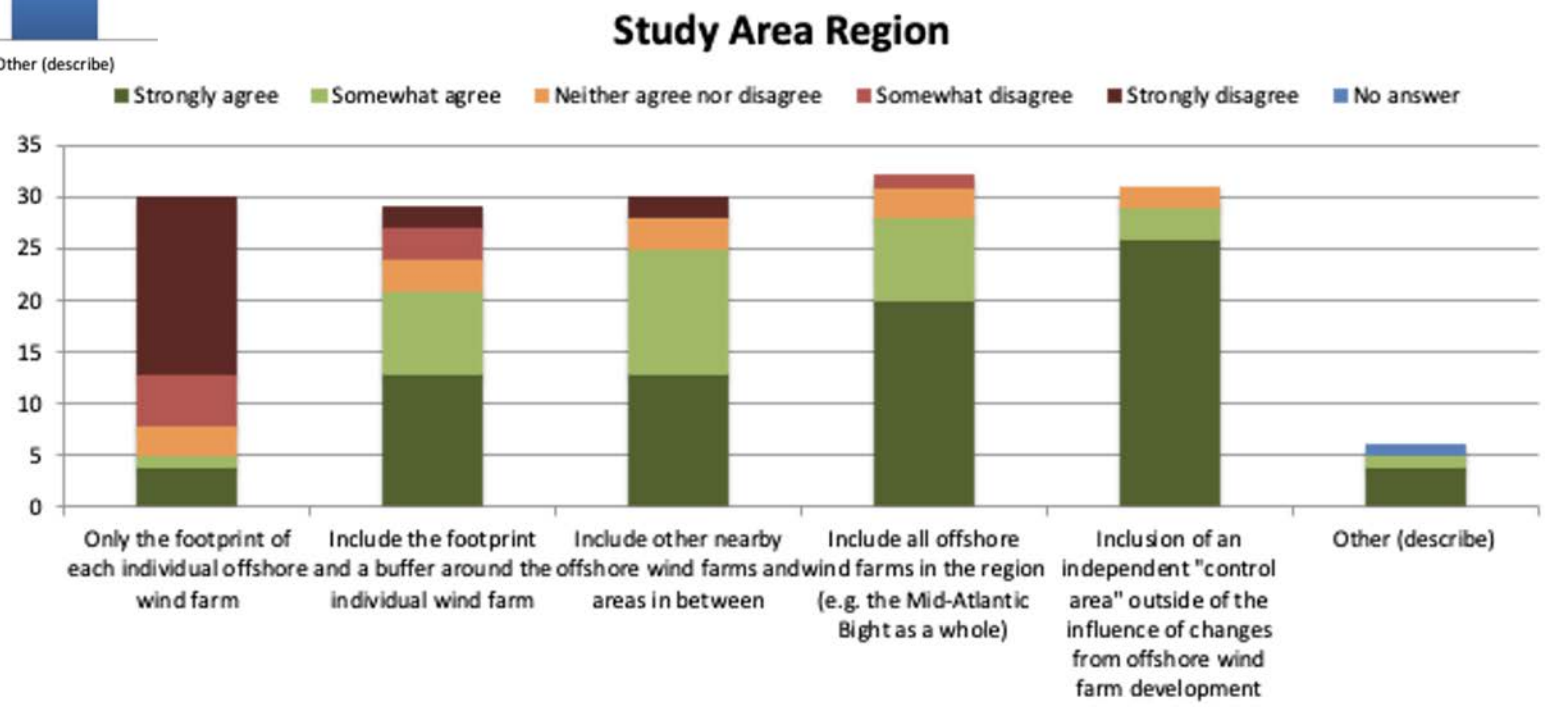
- All species and habitats are important, but we will need to prioritize!
  - Species vulnerability/sensitivity matrix could help to prioritize
- Utilize existing info when possible while working to address data gaps using existing or new sampling methods
  - Each location will have different needs and issues
- The "who" will also be important for regionally-coordinated cooperative fisheries research involving industry
- Observations will have to be considered within the context of coast- and stock-wide population and ecosystem dynamics.

Where and when to measure

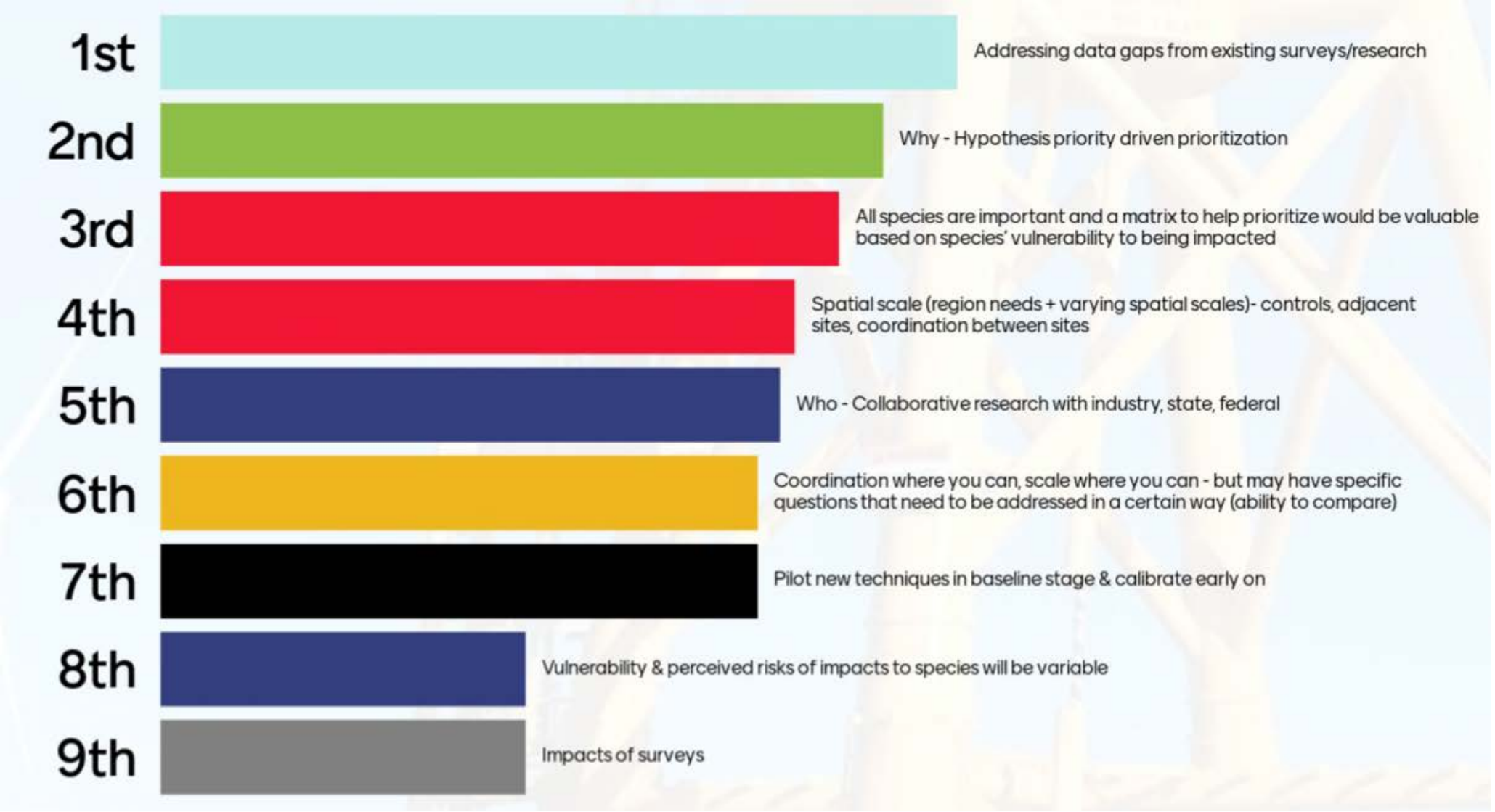


Clear majority indicated that baseline monitoring should begin 2-3 years prior to construction and continue in some manner through the life of the wind facilities

Clear majority indicated that monitoring should be coordinated regionally



Summary and Overview of Key Points - Fisheries Breakouts



Summary

- It is important to coordinate wherever possible to keep things consistent between different studies/surveys.

- We need to design, test, and calibrate new study methods before construction.
  - Ocean Observing Technology (HF Radar, gliders, fixed stations)
  - Optics and Acoustics (passive and active)
  - eDNA, marine mammal and fish tags
  - High-def photography, lidar, aerial surveys
  - Trawls and Traps

- Need to design new sampling techniques in a way that they can be incorporated into long-term existing data streams.

- **Coordinate, collaborate, communicate!**

ROSA Baseline Potential Approaches

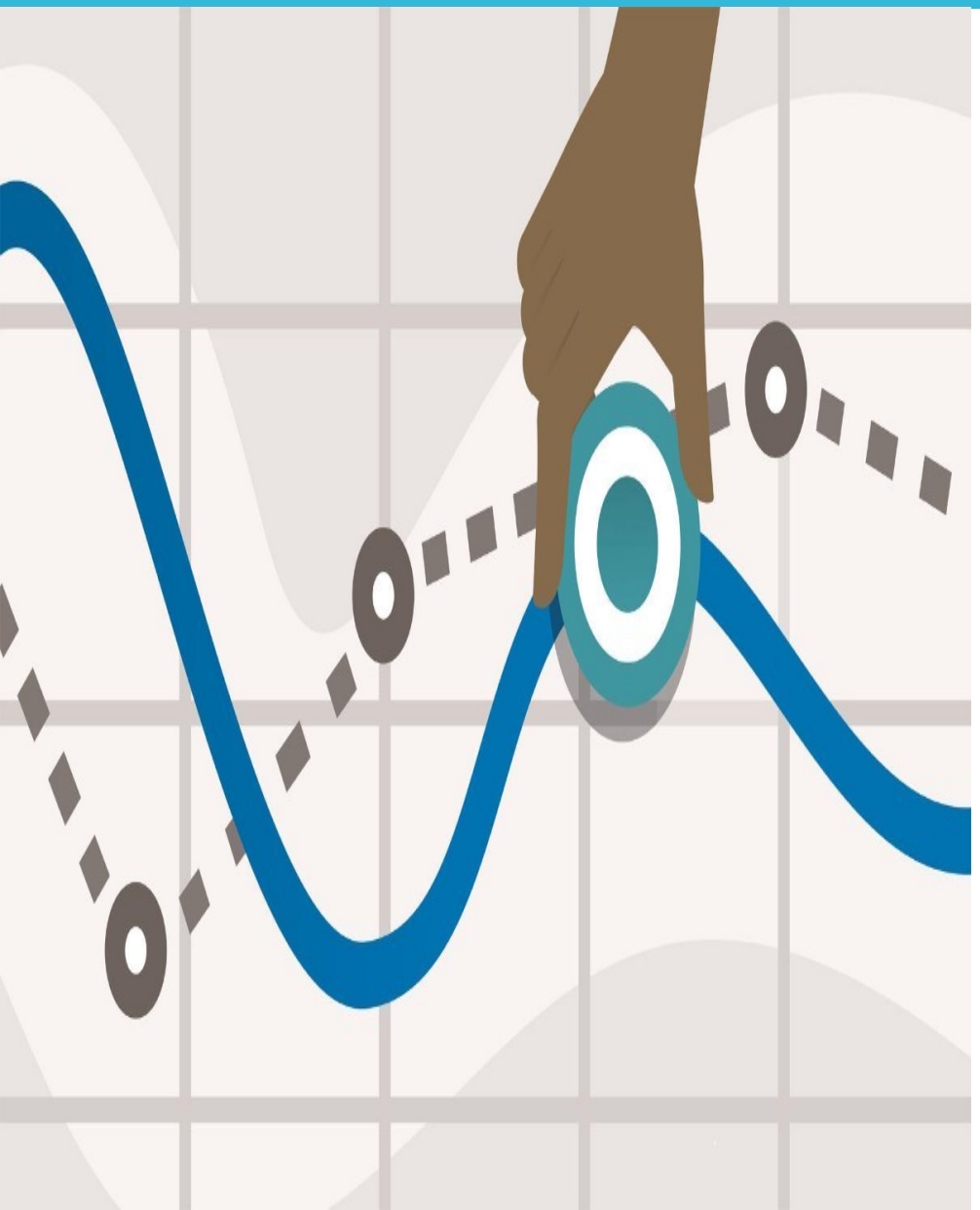
CRITERIA

- Practical and tractable
- Achievable within 2 to 3 years
- Implementable ASAP- within the next several months
- Useful to inform future efforts

OPTIONS

- ***RODEO project*:** What data did it gather (what, how, where, duration)? What are we learning and how can that inform future thinking about baseline data gathering? Can or should this framework be adopted for larger project or subregions like the SNEWEA or NY Bight areas?
- ***SNEWEA*:** ROSA confidentially assemble existing monitoring data cross all five leases, report summary statistics, and make anonymized data available to researchers for specific research questions or hypothesis through RFP or other process
- ***Other:*** Strategies to address study design or control site issues?
- ***What, specifically, can we pilot NOW while we work on a comprehensive regional plan?***

Baseline Breakout Questions



- What might you learn from these ideas or approaches?
- What other ideas do you have for addressing the baseline interest in an actionable, near term, and practical way?
- Other thoughts or considerations?

Breakout Groups

- 20 minutes
- Breakouts mixed among: 1) Council members and Research Advisors: 2) Council Alternates and ROSA Board of Directors members
- General attendees stay in Plenary/main Zoom room for same conversation
- Report back 1 to 2 top ideas
- ROSA will synthesize detailed notes and prepare survey for prioritization and interest just after meeting

Science Updates from the Region

Fisheries Science Updates

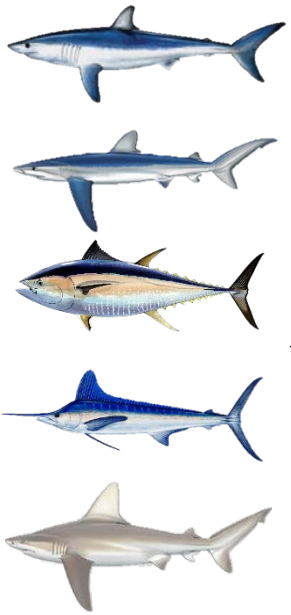
- International Council for Exploration of the Sea (ICES)- Work Group for Offshore Wind Development and Fisheries (WGOWDF)
  - **General Work Group Update-** Andy Lipsky, NOAA Fisheries NEFSC- ICES WGOWDF Co-Chair
  - **Workshop on the Socio-Economic Implications of Offshore Wind on Fishing Communities (WKSEIOWFC)-** Annie Hawkins, RODA- Workshop Co-Chair
- MA/RI Research Projects- Kathryn Ford, MA DMF

Highly Migratory Species (HMS) Telemetry Monitoring

Anderson Cabot Center for Ocean Life
at the New England Aquarium

INSPIRE ENVIRONMENTAL

X 25 (2020)
X 47 (2021)



X 29 (2020)

X 81 (2021)

MATOS

Supporter	PI
MassCEC	INSPIRE ENVIRONMENTAL; Anderson Cabot Center for Ocean Life at the New England Aquarium
BOEM	SMAST; Commonwealth of Massachusetts Division of Marine Fisheries
Ørsted	Anderson Cabot Center for Ocean Life at the New England Aquarium; INSPIRE ENVIRONMENTAL
Equinor	Anderson Cabot Center for Ocean Life at the New England Aquarium
Mayflower	Anderson Cabot Center for Ocean Life at the New England Aquarium

Note: Map depicts a potential receiver configuration in Equinor and Mayflower leases. Final locations are TBD

ROSA Advisory Council: NYSERDA Research Updates

NEW YORK STATE OF OPPORTUNITY. | NYSERDA

March 5, 2021

Updates on NYSERDA-Led Research

5 Contracted Studies

- Wildlife Distribution Modeling in the New York Bight; Ecology and Environment
- Multi-Scale Relationships Between Marine Predators and Forage Fish; Biodiversity Research Institute
- Development of Monitoring Protocols for Nanotag Studies at Offshore Wind Farms; US Fish and Wildlife Service
- Strategies and Tools to Address Commercial Fishing Access in Offshore Wind Farms; National Renewable Energy Laboratory (NREL)
- Creation of a Fishermen's Data Trust for effective inclusion of fishermen's knowledge in OSW decision making; Responsible Offshore Development Alliance (RODA)

2020 State of the Science on Offshore Wind and Wildlife: Cumulative Impacts

> Purpose: understand and avoid cumulative impacts to wildlife from offshore wind development

> 2021: Seven working groups developing a research agenda of key studies that could be conducted in the next 3-5 years to improve our understanding of cumulative biological impacts as the offshore wind industry develops in the eastern United States

2020 State of the Science Workshop

Efforts continue…

- Taxon-specific work groups are meeting throughout early 2021 to develop a list of research priorities for the next 3-5 years to improve our understanding of cumulative impacts
- Groups: Marine mammals, sea turtles, birds, bats, fishes and mobile

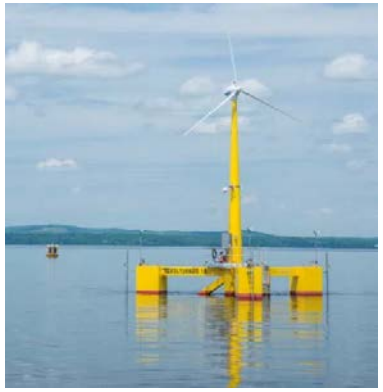
  invertebrates, benthos, and environmental change
- Culmination webinar in May 2021 to report back on efforts and synthesize across groups
- Final workshop proceedings released in summer 2021

Questions?

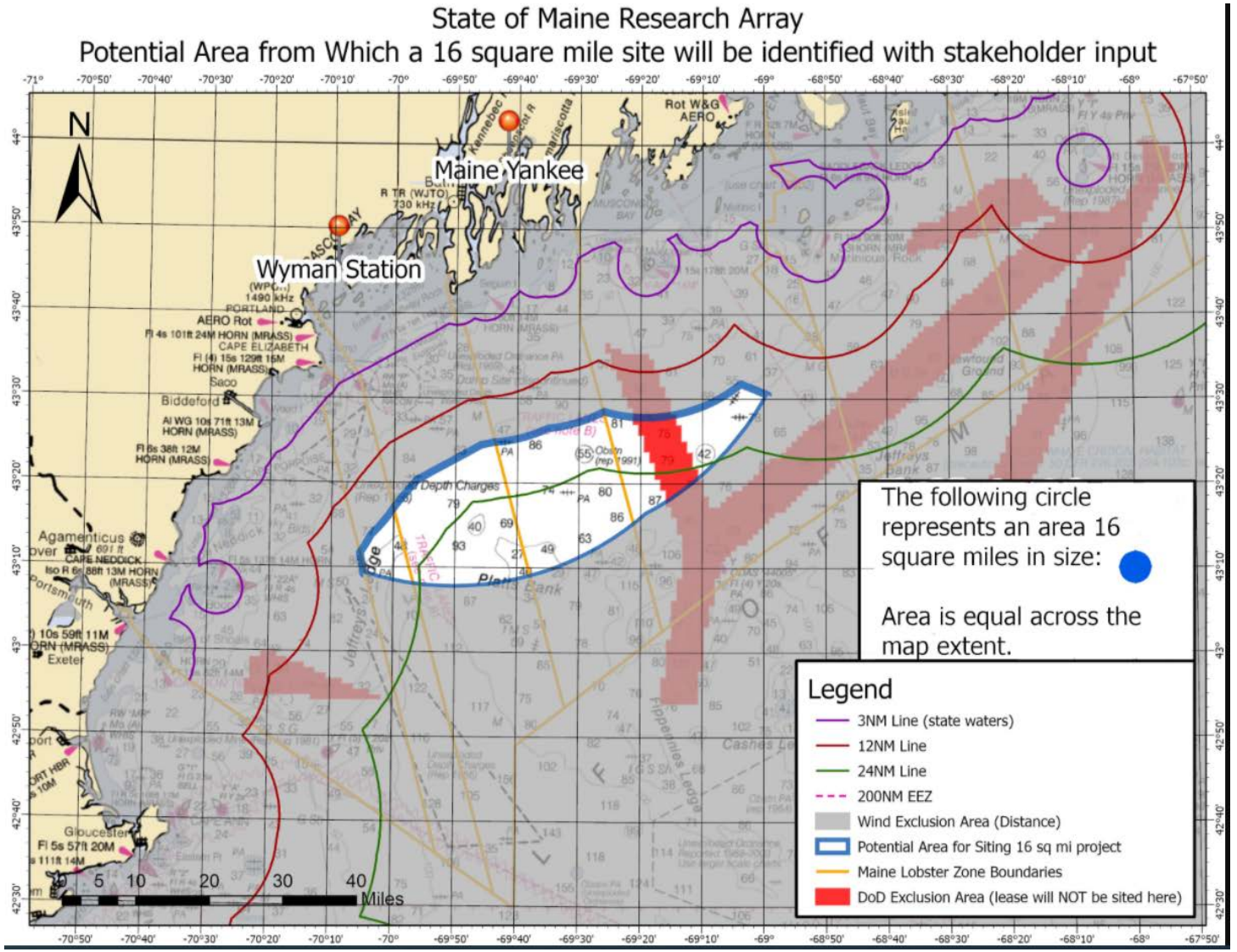
NEW YORK STATE OF OPPORTUNITY. | NYSERDA

Maine Offshore Wind Projects

2013	2023	2025+	TBD*
1/8 Scale Pilot Project - 1 turbine (Castine – UMaine, Cianbro, MMA)	10 MW Demonstration Project - 1 turbine (Monhegan – NEAV LLC, UMaine)	Research Array - 12 turbines or less (State, UMaine, NEAV LLC)	Commercial Development - BOEM Leasing and Permitting



Research Array General Area of Interest



Research Approach

- Research is the key driver for the array.
- Research objectives will inform:
  - Siting process and decision
  - Project design, layout and operations

Overall research process:

- Key themes in initial application
- Further develop research approach through roadmap effort
- Stand up formal consortium, with diverse interests at the table
- Seek broad funding opportunities
- Open source data

Research Approach

- Environment and ecological interactions
- Interactions with fishing activity
- Navigation
- Technology research and demonstration, including mooring systems
- Workforce education and training
- Others?

Research Array Process Elements

State of Knowledge Workshop	• Setting stage • Building common information
Webinars	• Build understanding across sectors
Work Sessions	• Detailed dialogue on data, siting, and research approach
Dockside and Informal	• Direct engagement with fishermen • Direct engagement with interested others
Joint workshops	• Coordinating and refining advice from wildlife, fisheries and other

Fisheries and Offshore Wind Interactions: Synthesis of the Science

- Project leads: NOAA Fisheries, BOEM, and RODA
- Goals
  - Describe the current state of science, existing research and monitoring programs, data gaps
  - Solicit input into priority research questions
  - Advance ROSA's regional science efforts
- Two integrated components
  - Workshop (held in October 2020) – over 550 participants
  - Report – expected to be completed in June 2021
- For more information - https://rodafisheries.org/portfolio/synthesis-of-the-science/

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Fisheries and Offshore Wind Interactions: Synthesis of the Science

- Ecosystem Effects
  - Benthic habitat modification
  - Physical habitat modification
  - Oceanographic processes
  - Ecosystem synthesis
- Fisheries Socio-Economics
  - Fishing operation effects
  - Economic impacts
  - Socio-cultural effects to fishing and coastal communities
  - Cumulative impacts/Resilience & adaptive capacity
- Fisheries Management & Data Collection
  - Fishery dependent data collections
  - Fishery independent data collections
  - Impacts on management
- Methods & Approaches
  - Cumulative impacts
  - Integrated ecosystem assessment
  - Innovative monitoring approaches & technologies
- Regional Science Planning

NOAA 50 YEARS

NOAA FISHERIES

RODA

BOEM
Bureau of Ocean Energy Management

Summary & Next Steps

- **Near term goals:**
  - Hire Research Director & expand organizational capacity
  - Monitoring guidance- make available on ROSA website
  - Data coordination- with support from contractor (TBD)
  - Expand ongoing research inventory & post to ROSA website
  - Develop strategic approach for regional plan
  - Baseline data needs- survey to Advisory Council & Research Advisors in next 1-2 weeks

- **6 month check in**
  - First Advisory Council meeting was in September 2020; feedback on:

    -Communications

    -Overall role of ROSA

    -Meeting frequency

    -Meeting content and outcomes