



ROSA
Responsible Offshore
Science Alliance

ROSA Advisory Council

June 18, 2026



Zoom Poll - Who is in the room?

Agenda

- 1:00pm** **Welcome, Introductions, Agenda Review**
- 1:10pm** **ROSA Updates**
- 1:25pm** **Partner Updates - Boulder Relocation**
- 1:45pm** **Research Highlights**
- 2:25pm** **Fishing Industry Insights (FINsights)**
- 2:55pm** **Action Items, Next Steps, and Other Business**
- 3:00pm** **Adjourn**

A large, powerful ocean wave is captured in the middle of a break, with white foam spraying upwards. The water is a deep, dark blue. The sky is a pale, clear blue. A semi-transparent teal banner covers the bottom third of the image, featuring the text 'ROSA Updates' in white, bold, sans-serif font.

ROSA Updates

2026 Members & Supporters



Maryland
Energy
Administration



**New Jersey Offshore Wind
Research & Monitoring Initiative**



MASS CLEAN ENERGY CENTER 



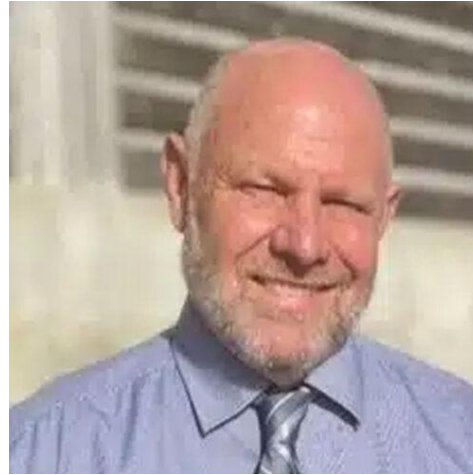
**MAINE DEPARTMENT OF
Energy Resources**



Welcome New Board Members



Audrey Bard,
Strategic
Environmental Lead,
Equinor Wind US



Eric Reid, Fisheries
Consultant



Nora DeDontney,
Senior Director of
Development,
Vineyard Offshore

2026 Summer intern: Deepthi Kavitha



- Master of Science in Computer & Information Science, University of Massachusetts Dartmouth (Faye Lab)
- Strong background in data analysis, visualization, & science communication
- Supporting new visualizations & tools for FishFORWRD and the Gaps Analysis



FishFORWRD Update

Tricia Perez



ROSA
Responsible Offshore
Science Alliance

FishFORWRD
Fish and Fisheries OffshoRe Wind
Research Database

OBJECTIVE

Increase awareness of ongoing and completed offshore wind fisheries research and monitoring

Avoid duplication of efforts

Create a common understanding of progress made and research needs remaining

LAST UPDATE:

May 2026

COMPONENTS

Research Projects

- Projects funded by federal agencies, state agencies, non-profits, etc.
- Individual Surveys of Offshore Wind Project-Level Fisheries & Benthic Monitoring Plans

Research Needs

- Individual Research Needs compiled from 17 research prioritization documents

Research Gaps Analysis

- 70 Summarized Research Needs structuring the offshore wind fisheries science space
- Assessment of coverage and gaps across all 70 Summarized Research Needs

RESEARCH CATEGORIES



Habitat Fragmentation/Modification



Socioeconomic & Sociocultural Impacts



Cumulative Impacts & Fisheries Mgmt



Sound/Vibration Impacts



Species Distribution/Composition



EMF



Fishing Access



Fisheries Engagement & Capacity Building



Survey Adaptation

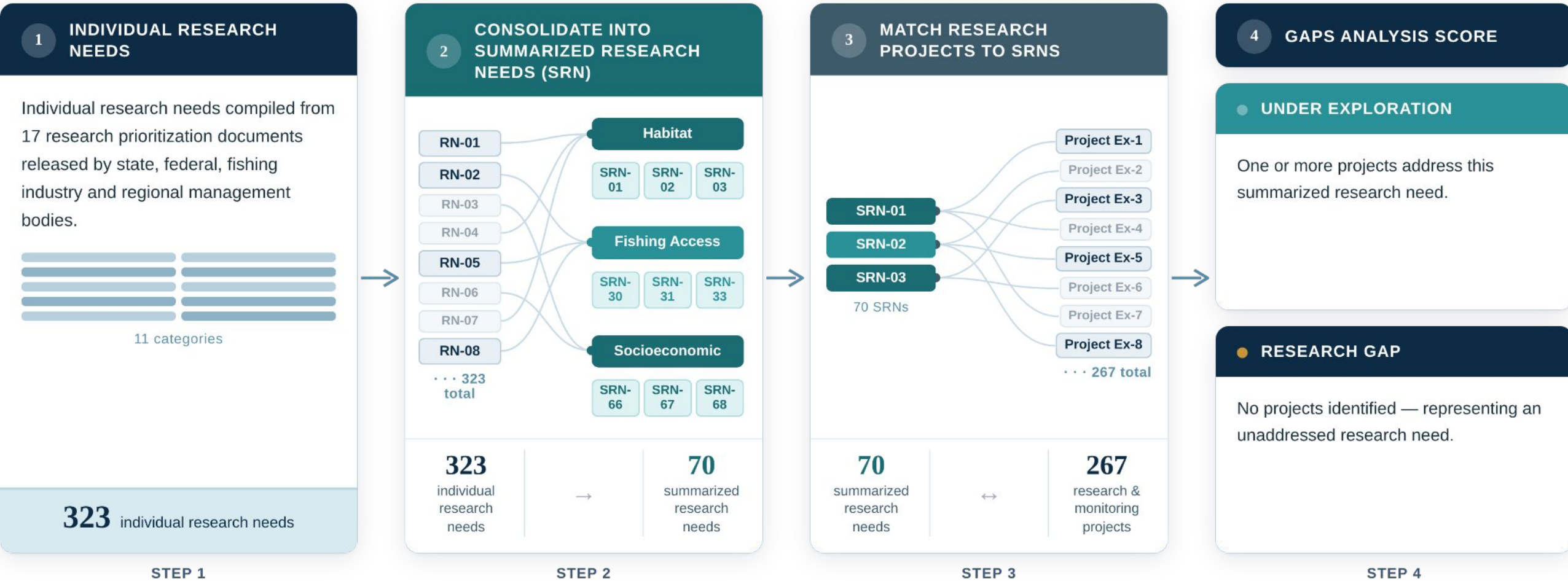


Data Management



Regional Resource Monitoring

Research Gaps Analysis Process



FishFORWRD v2.2.1 – May 2026

36 Additional Projects

- ROSA Regional Research & Monitoring Program
- Massachusetts Fisheries Innovation Fund
- NOAA RSA
- New Jersey RMI
- Roger Williams University School of Law
- and more!

see executive summary on our website for full update

31 Research Needs Addressed

Regional Monitoring

- SRN-10: Design and Evaluate Strategies for Regional Scale Monitoring

Habitat Fragmentation/Modification

- SRN-28: Effect of Artificial Substrate on Benthic and Epibenthic Community

Fishing Access

- SRN-51: Gear Modification, Fisheries Enhancement, and Other Fisheries Development to Allow Co-Use
- SRN-52: Fishing Interaction with Cable Protection Measures

Socioeconomic/Sociocultural Impacts

- SRN-55: Secondary and Tertiary Effects to Supply Chains and Supporting Businesses

And more!

ICYMI

**FISH AND FISHERIES
OFFSHORE WIND
RESEARCH GAPS
ANALYSIS**

U.S. ATLANTIC COAST

FINAL REPORT

MARCH 2026

ROSA
Responsible Offshore
Science Alliance

Final Report Available Now

Webinar Recording Available Now

rosascience.org/resources/fishforwrd





Data Governance Update

Mike Pol

Data Governance Update

- Fishing Gear Data Working Group - May 14th
 - Announced OBIS as recommended repository
 - Structure with Darwin Core
 - Challenging to adjust to
 - Working to make resources available
 - FI encouragement to open data
- Image Data Working Group - June 5th
 - Roundtable of image data governance activity
 - Possible repositories to investigate
 - Storage is still an issue - size and cost
 - Variety of annotation tools
 - Forever storage
- Data Guidance Governance document in final stages
 - Includes Fishing Gear recommendations
- Data Governance page update also coming soon
- Cumulative Impact Assessment
 - Hope to begin work soon

Data Management & Sharing Plan (DMSP) Template

TEMPLATE HIGHLIGHTS

- Roles & responsibilities around data
- Research Inputs (third party data)
- All data, metadata, and data products to be produced/created
 - Data standards used
 - Data licenses and access restrictions
 - Timeline and plan for sharing the data
 - Plans for stewardship & preservation

Atlantic Offshore Research (RWSC & ROSA)

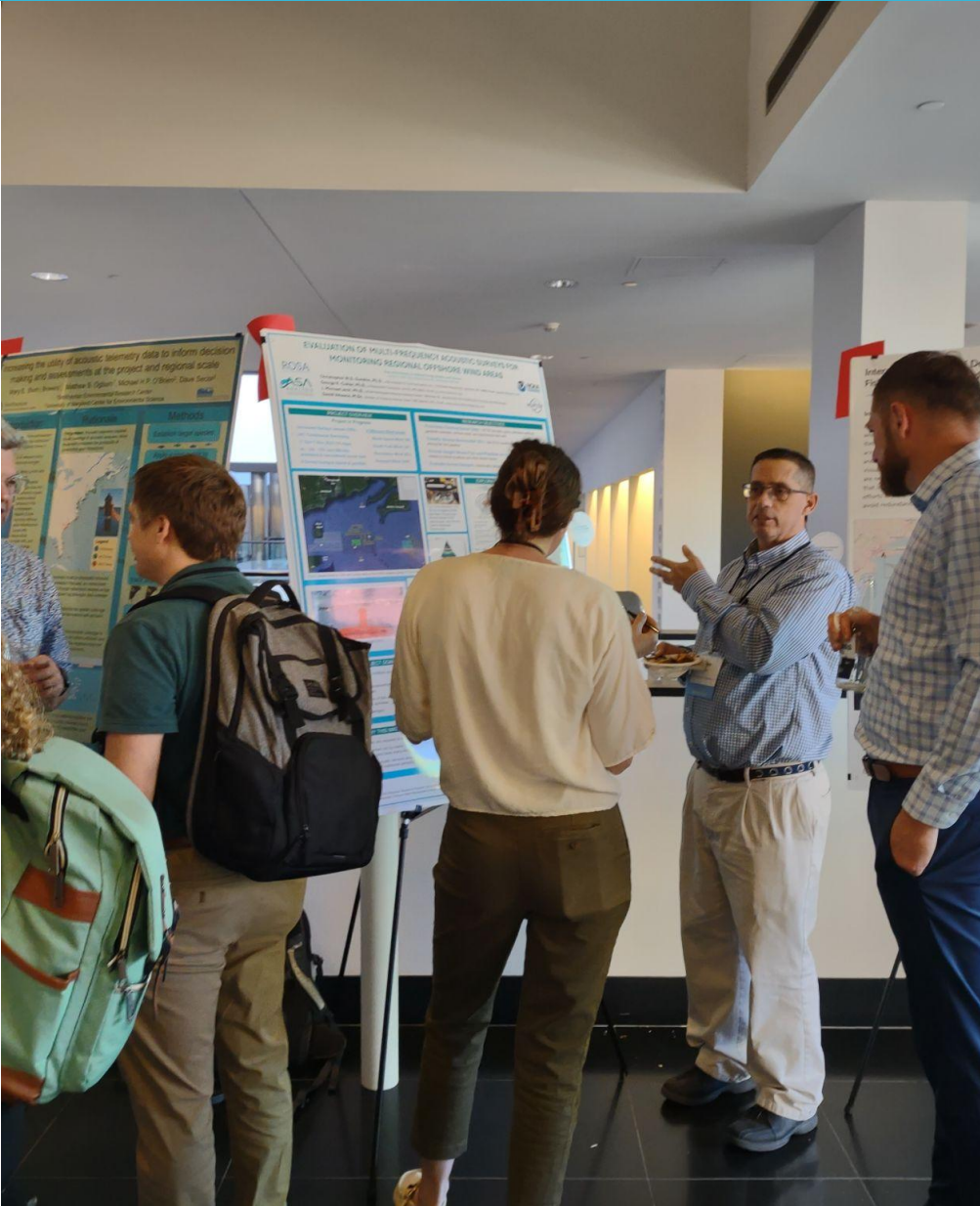
available at dmptool.org

16 Types of Research Outputs

Most Relevant to Fisheries Research

- Fishing Gear & Biological Sampling Data
- Fisheries Socioeconomic & Human Dimensions Data
- eDNA
- Acoustic Telemetry
- Biological Oceanography
- Data Products

ROSA NYSERDA State of the Science



- Strong focus on results that coming in
- Big presence for ROSA and many mentions by participants
- Co-hosted a poster session featuring the 10+2 new projects funded by Empire Wind through NYSERDA
- Tabled at MTS Mini TechSurge
- Tricia presented on Gaps Analysis
- Mike convened a session on regional monitoring with Reneé as keynote with Emily Shumchenia of RWSC



Partner Updates Boulder Relocation

The background of the slide is a dark, teal-colored image showing an underwater scene. In the center, a large, dark, conical object, likely a boulder, is being lifted by a crane or hoist system. The structure is made of metal and has a cage-like appearance. The water is dark and slightly hazy, with some light reflecting off the surfaces of the equipment.

Boulder Relocation & Offshore Wind Development

Protecting Fisheries Through Collaboration, Research & Engagement

Partner Organizations:

CFRF | CFCRI | RICRMC | RIDEM | MADMF | NYSERDA | RISG

The Issue: Boulder Relocation & Fisheries

What is boulder relocation?

During offshore wind cable installation, boulders on the seabed are relocated to allow cable laying — changing the underwater landscape.

Why it matters to fishermen

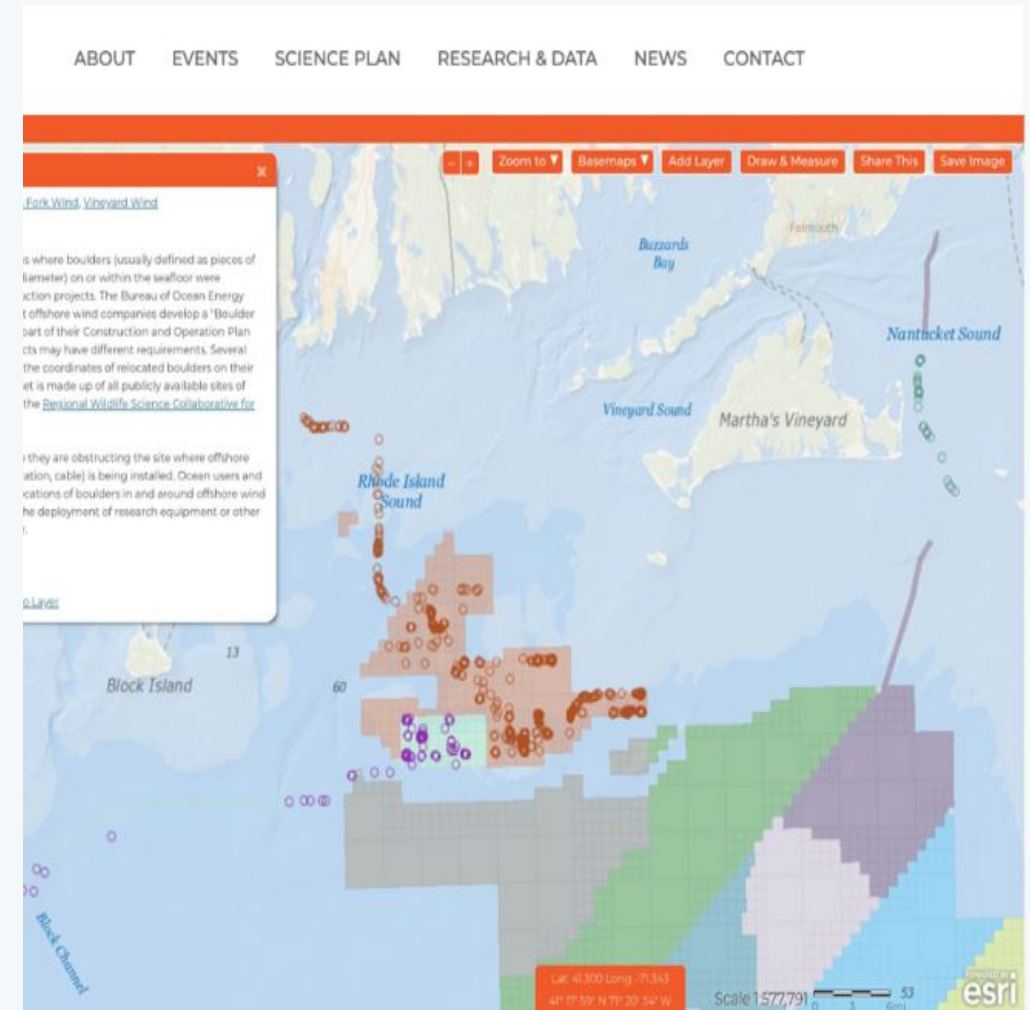
Relocated boulders could obstruct historically towable areas, creating gear snag risks, safety hazards, and loss of fishing access.

South Fork & Revolution Wind

Experience from these projects revealed gaps in fisherman engagement, siting decisions, and post-relocation monitoring.

The need to act

Partners committed to learning, research, and developing strategies that center commercial fishermen's knowledge and priorities.



Source: Regional Wildlife Science Collaborative (RWSC)

Our Approach

A three-part commitment to fishermen-centered solutions

With leadership from CFRF, CFCRI, RIDEM, RICRMC, MADMF, NOAA's Northeast Fisheries Science Center, and RI Sea Grant, partners committed to three goals:

1

Learn from Other Regions

Jun 7 2024 international event with U.S. & European regulators, researchers, and fishermen. UK fishermen face similar challenges — key lessons: global coordination, sustained engagement, shared priority research questions.

Mass develops Guidance and Policy

2

Understand the Issue & Its Impacts

Apr 28 2025 full-day hybrid event. Fishermen proposed engagement ideas; BOEM communicated NOI checklist requirements and mitigation recommendations.

3

Integrate Fishermen into Planning

Ensure knowledge, experience, and priorities of commercial fishermen are fully embedded in planning and execution — from pre-development through post-construction monitoring.



Priorities & Plan of Work

COMPLETE

Understanding Current Impacts of Relocated Boulders

Led by CFRF with CFCRI & Ørsted. Only 5 of 2,700+ relocated boulders (0.18%) posed potential hazards in towable areas. Risks are limited and manageable.

ONGOING

Evaluating Trawling Over Cable Protection Mattresses

Led by CFRF with MA Fisheries Innovation Fund. Partners with commercial fishermen & net-makers to develop and test trawl gear configurations near offshore wind cable infrastructure.

COMPLETE

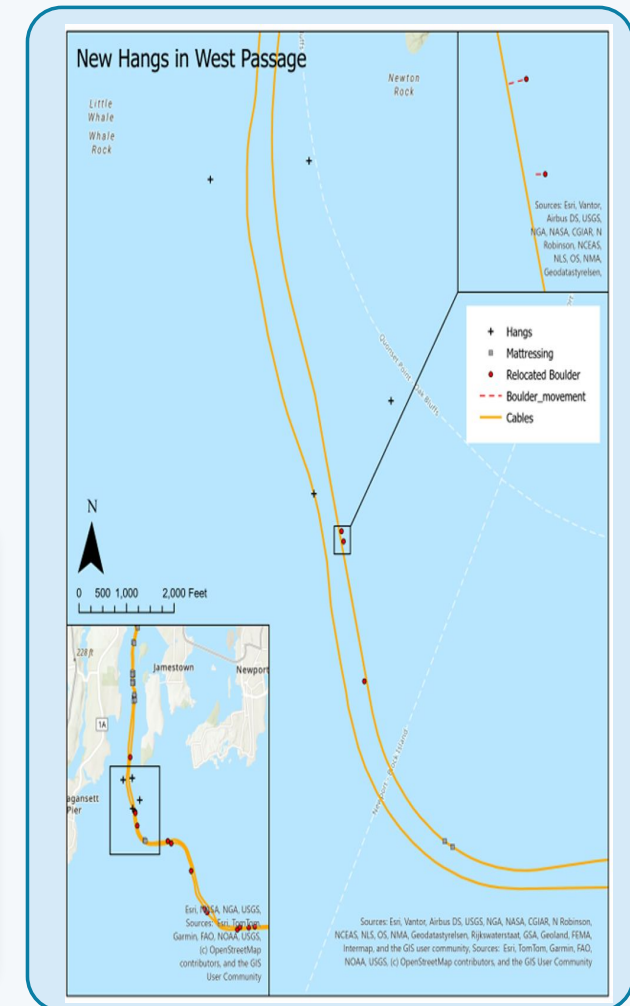
Artificial Reefs & Cross-Industry Collaboration (RI)

With RICRMC, Marine Affairs Institute & RI Sea Grant Legal. Analyzed federal/state laws governing boulder relocation and fishermen engagement mechanisms.

ONGOING

Monitoring Changes Along Subsea Cable Routes

Enhanced fisheries monitoring to assess baseline conditions along cable routes. Builds on Ocean SAMP & RIDEM efforts. Partnerships ensure relevance to fishing community.



Source: RIDEM

Key Strategies & Next Steps

1

Integrate Fishermen Early & Continuously

Next Steps:

- Establish regional Fishermen Working Groups
- Engage during leasing and COP development
- Protect tow areas and evaluate reef opportunities
- Pair fishermen's experience with data

2

Expand Cooperative Research

Next Steps:

- Support mattress cable research
- Engage with RIDEM cable monitoring
- Address habitat, displacement, and socioeconomic data gaps
- Evaluate artificial reef potential of relocated boulders

3

Apply the Model to Other Energy Issues

Next Steps:

- Advance EMF research
- Incorporate fishermen's knowledge into planning
- Develop risk-reduction and opportunity strategies

Thank You!

Fisheries and Energy Partnership

Ensure fishermen's knowledge and priorities guide ocean energy development to minimize impacts and advance industry opportunities

Read our story: https://docs.google.com/document/d/1xLiKsmSj3-hVAfexBjP9r1_V2H8rVxqV/edit

Images:

[1] Image — Boulder Relocation Operations: UTROV, Inc.
utrov.com/operation/boulder-relocation)

[2] Relocated Boulders Map: Regional Wildlife Science Collaborative for Offshore Wind (RWSC) — Revolution Wind, South Fork Wind, Vineyard Wind datasets.

[10] GIS Map — New Hangs in West Passage: Rhode Island Department of Environmental Management (RIDEM). Sources: Esri, USGS, NOAA, OpenStreetMap contributors.

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Research Highlights

Connectivity, Movement and Distribution of Fishes in Offshore Wind Farm Areas

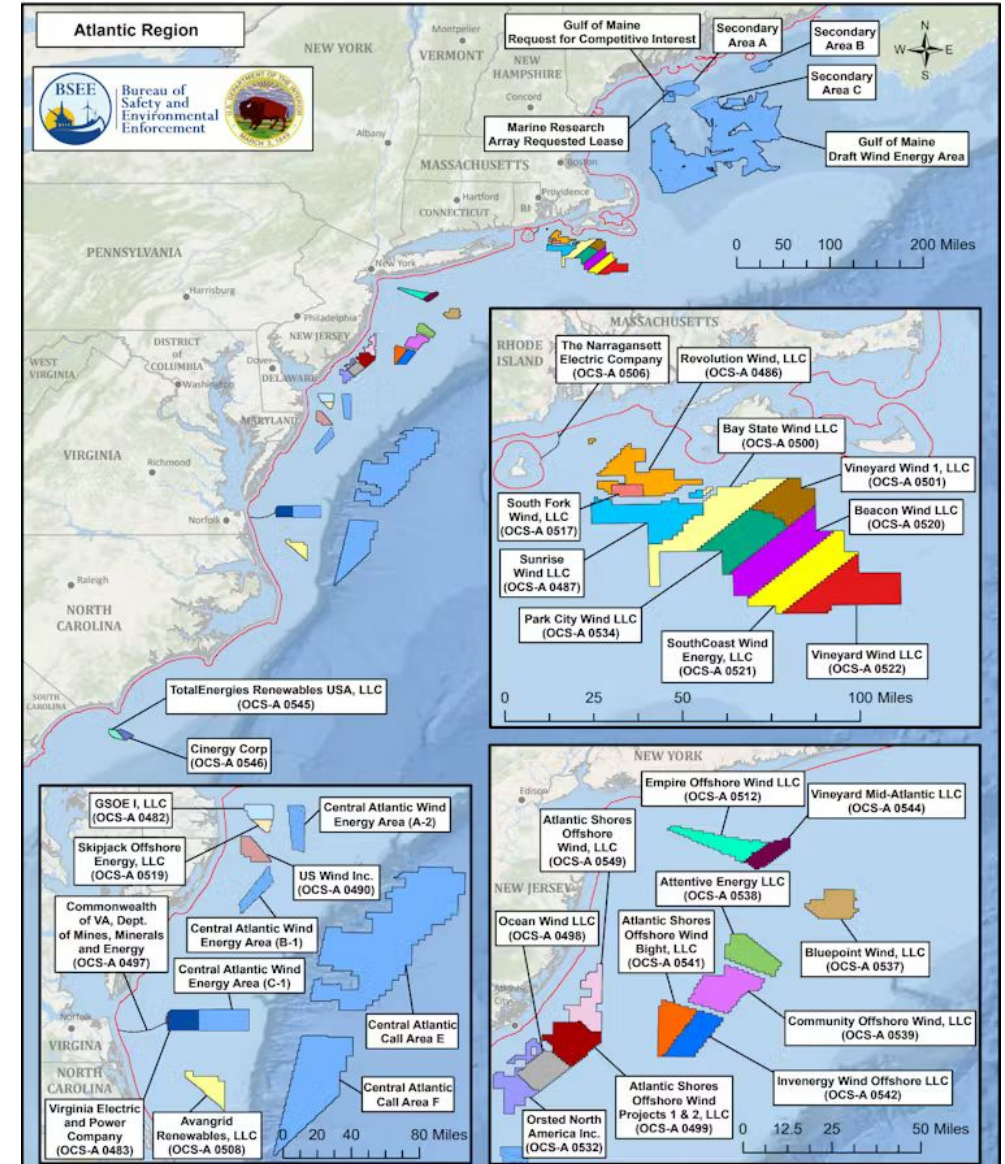
Lauran Brewster, Alison Frey, Steve Cadrin, Chris Rillahan, Keith Hankowsky,
Pingguo He

University of Massachusetts Dartmouth
School for Marine Science and Technology (SMAST)



Background: Atlantic Offshore Wind Development

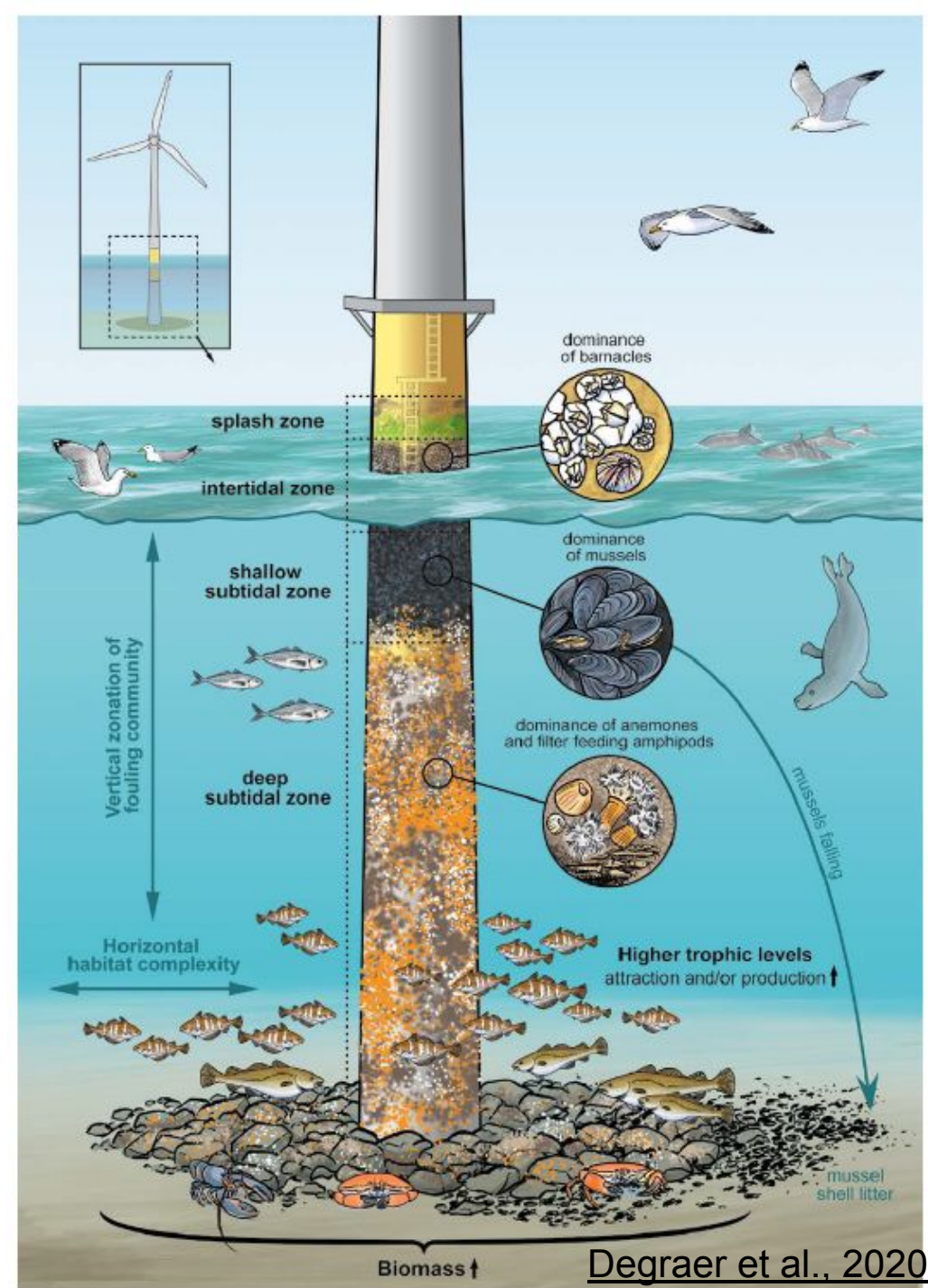
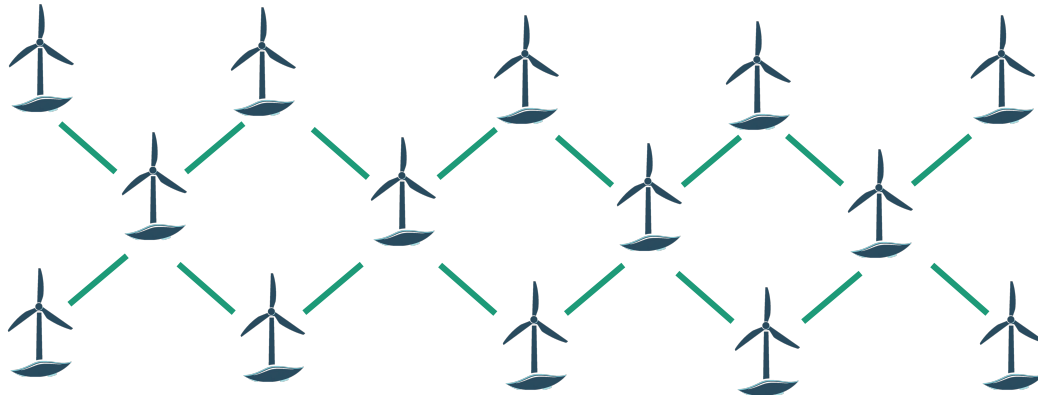
- Southern New England Lease Area:
 - 800 turbines
 - 1,418 sq. miles
 - For perspective: the entire land area of RI is 1,034 sq. miles
- Mid-Atlantic Lease Areas:
 - ~1,100 turbines
 - 2,062 sq. miles
 - For perspective: the entire land area of DE is 1,982 sq. miles



Project Objectives

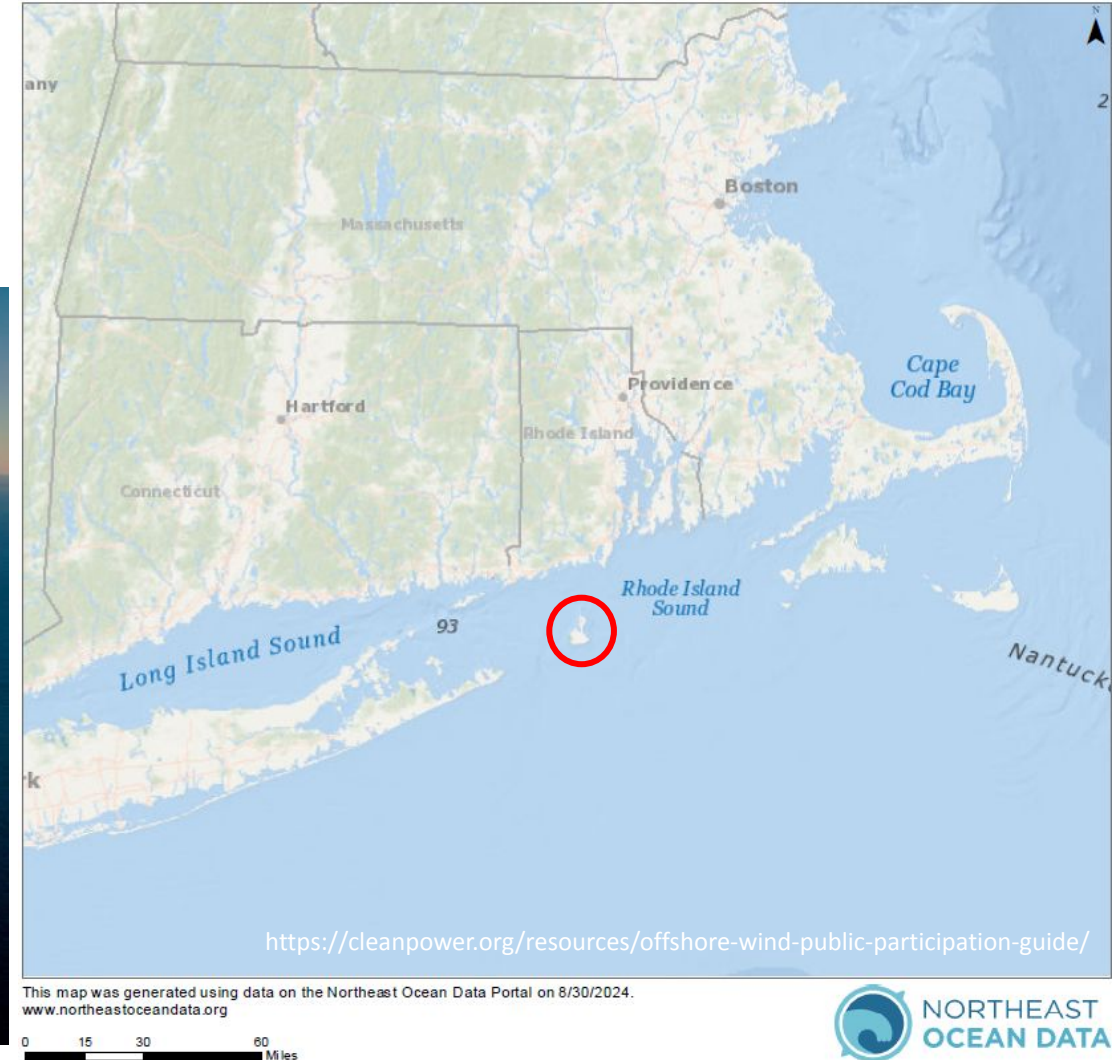
Determine **individual** and **additive** impacts of multiple wind turbine structures by evaluating:

1. Do fish move among turbines?
2. Do turbines act as isolated reefs or connected networks?
3. Does space use differ vertically and seasonally?



Study site: Block Island Wind Farm

- Constructed 2016
- Five 6-MW turbines
- ~0.5 nm apart
- Jacket piling foundations



Methods

Two complementary methods were used to link population-level habitat use with individual-level movement and connectivity

1. **Optical imaging:** baited remote underwater video systems (BRUVS)
2. **Acoustic telemetry:** tagging and tracking of three commercially and recreationally important species



Black Sea Bass
(*Centropristis striata*)



Summer Flounder
(*Paralichthys dentatus*)

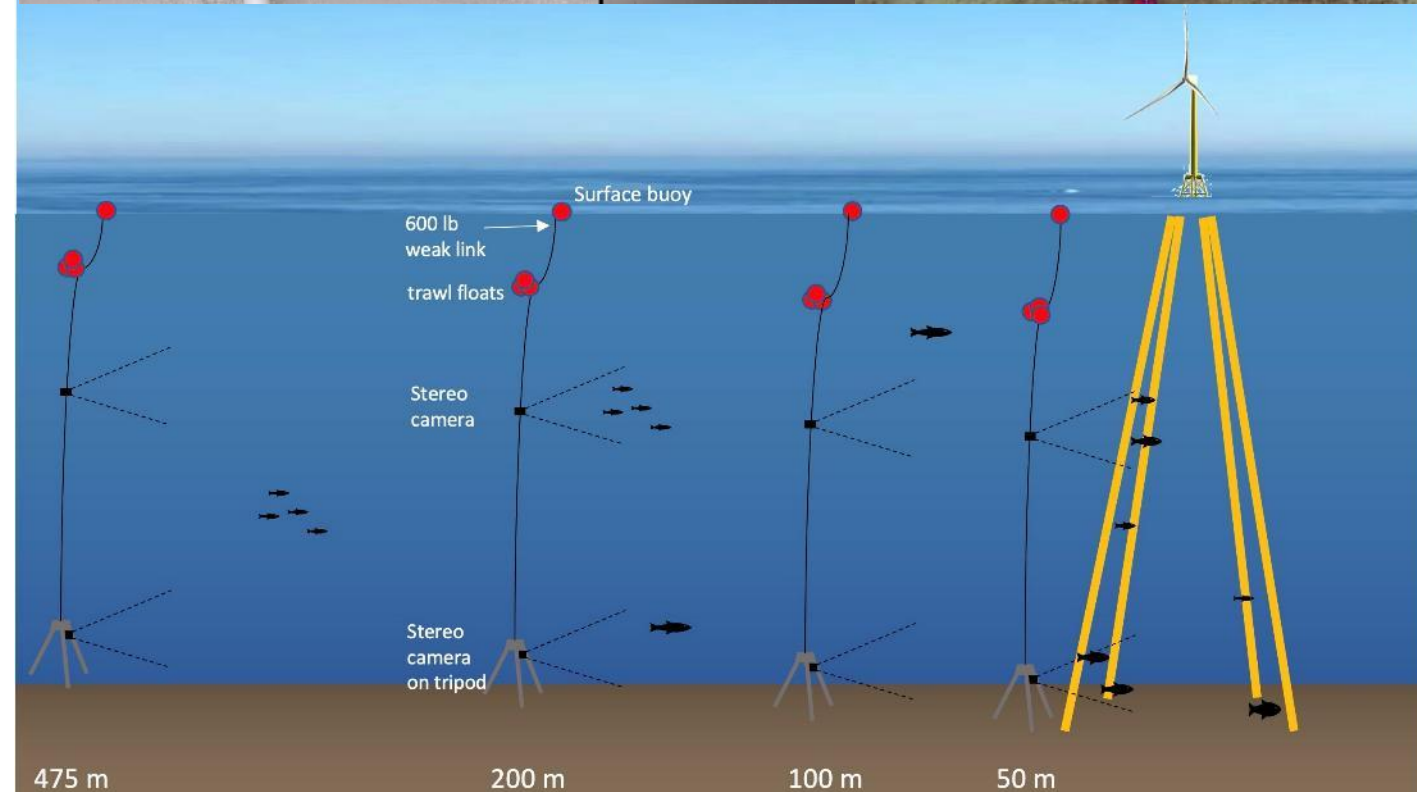
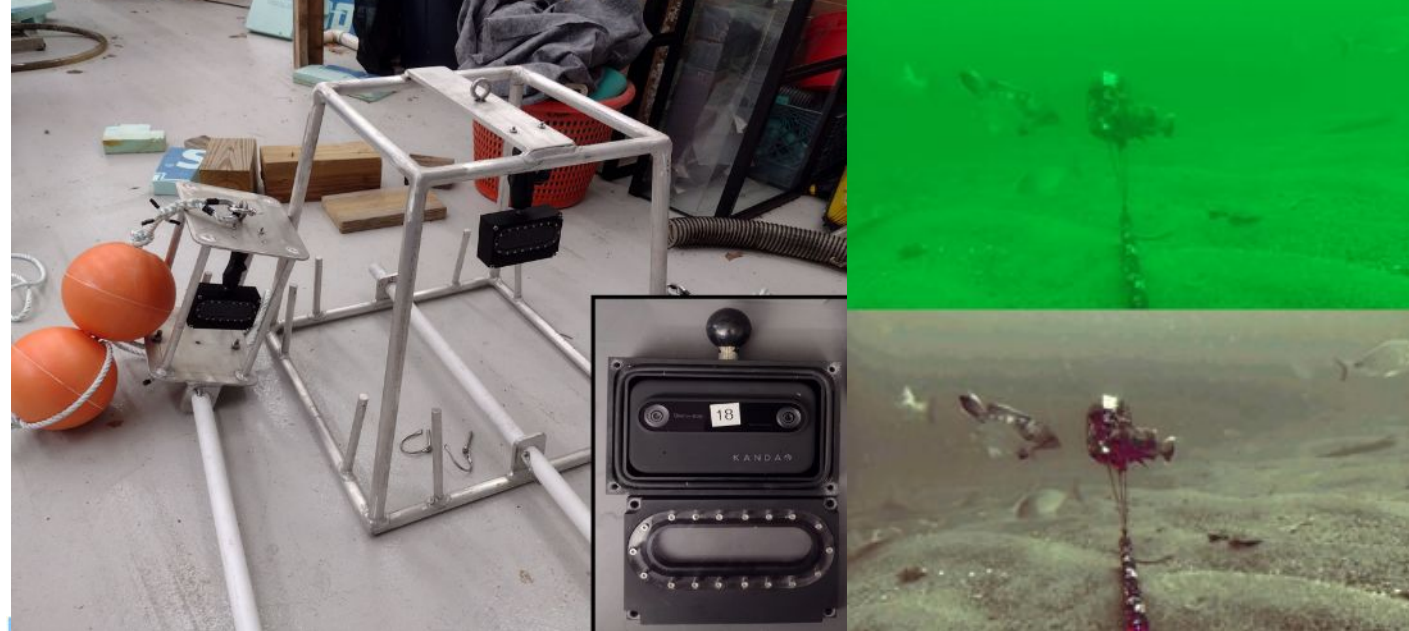


Striped Bass
(*Morone saxatilis*)

Methods: BRUVS

BRUVS were used to assess seasonal patterns in species presence and relative abundance around turbines

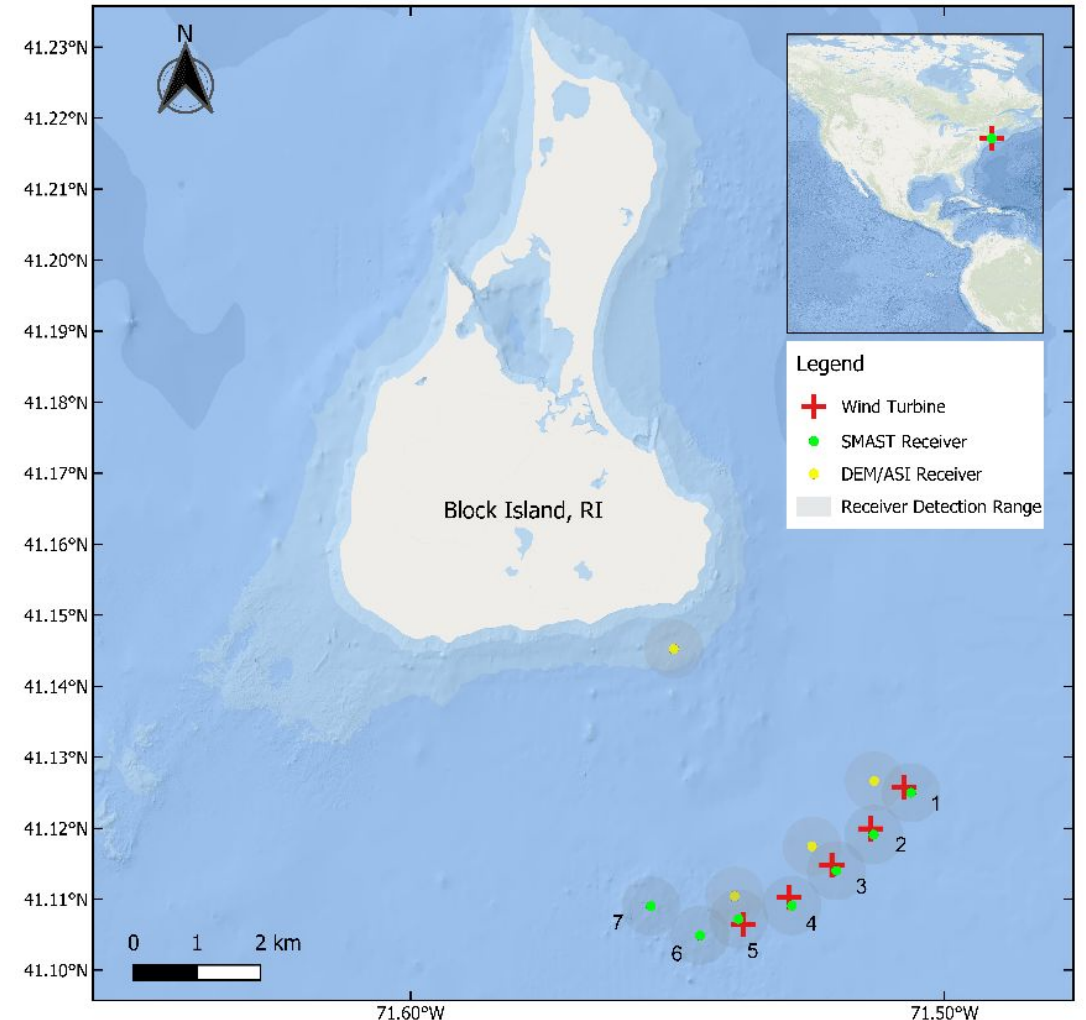
- Gradient sampling design
- Stereoscopic camera systems
- Benthic and pelagic
- 70 min deployments
- 12 transects per period
- Four periods:
 - Apr–May (spring)
 - Jun–Jul (summer)
 - Aug–Sept (fall)
 - Oct–Nov (late fall)
- Convolutions Neural Networks to enhance imagery



Methods: Acoustic Telemetry

- Goal □ 150 Tags; ~50/spp.
 - V13P □ Black Sea Bass (internal), Summer Flounder (external)
 - V16P □ Striped Bass (internal)
- Seven VR2Tx receivers
- Cooperative work RI fishermen
- Data sharing via ACT-MATOS network

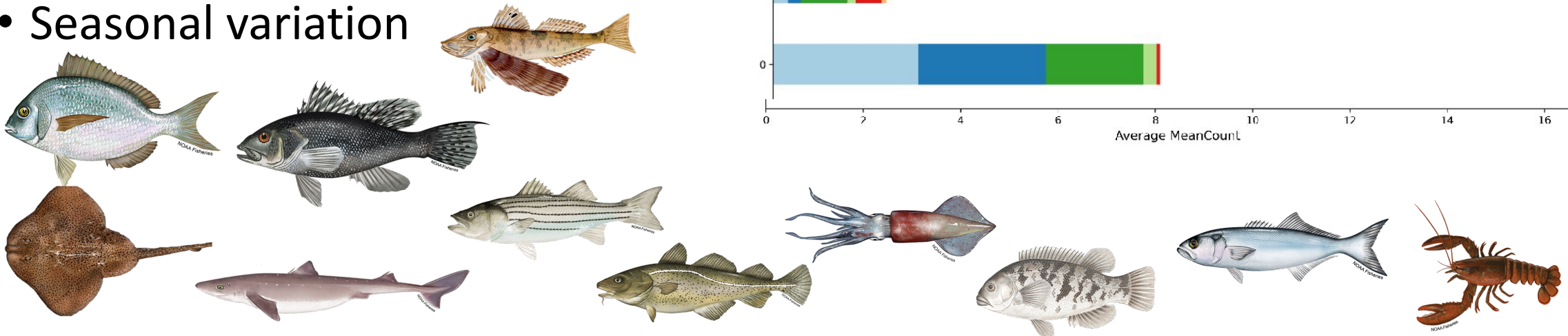
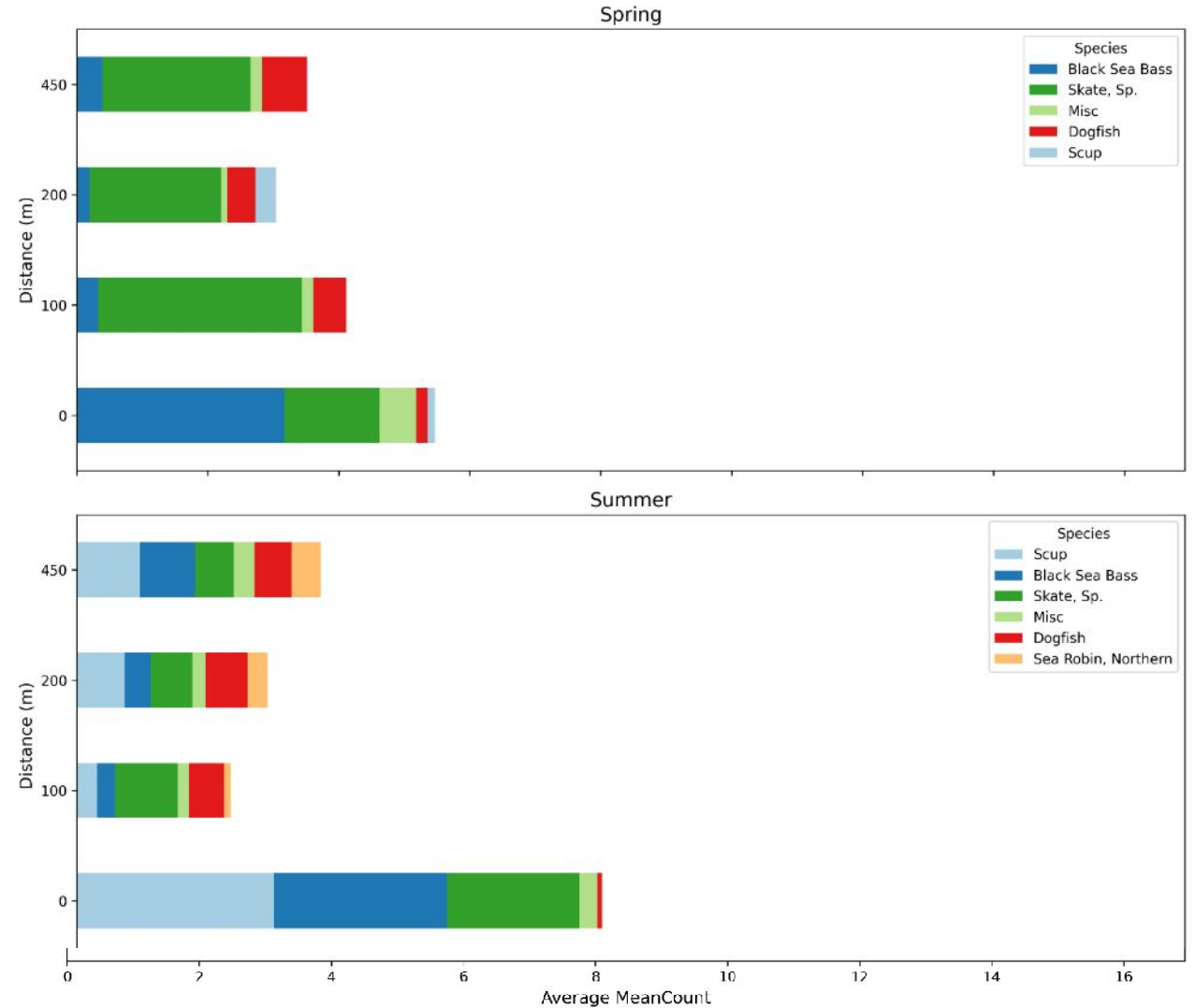
Receiver detections allow us to quantify residency, movement, and turbine-to-turbine connectivity



Results: BRUVS

BRUVS show species-specific associations with turbine habitat

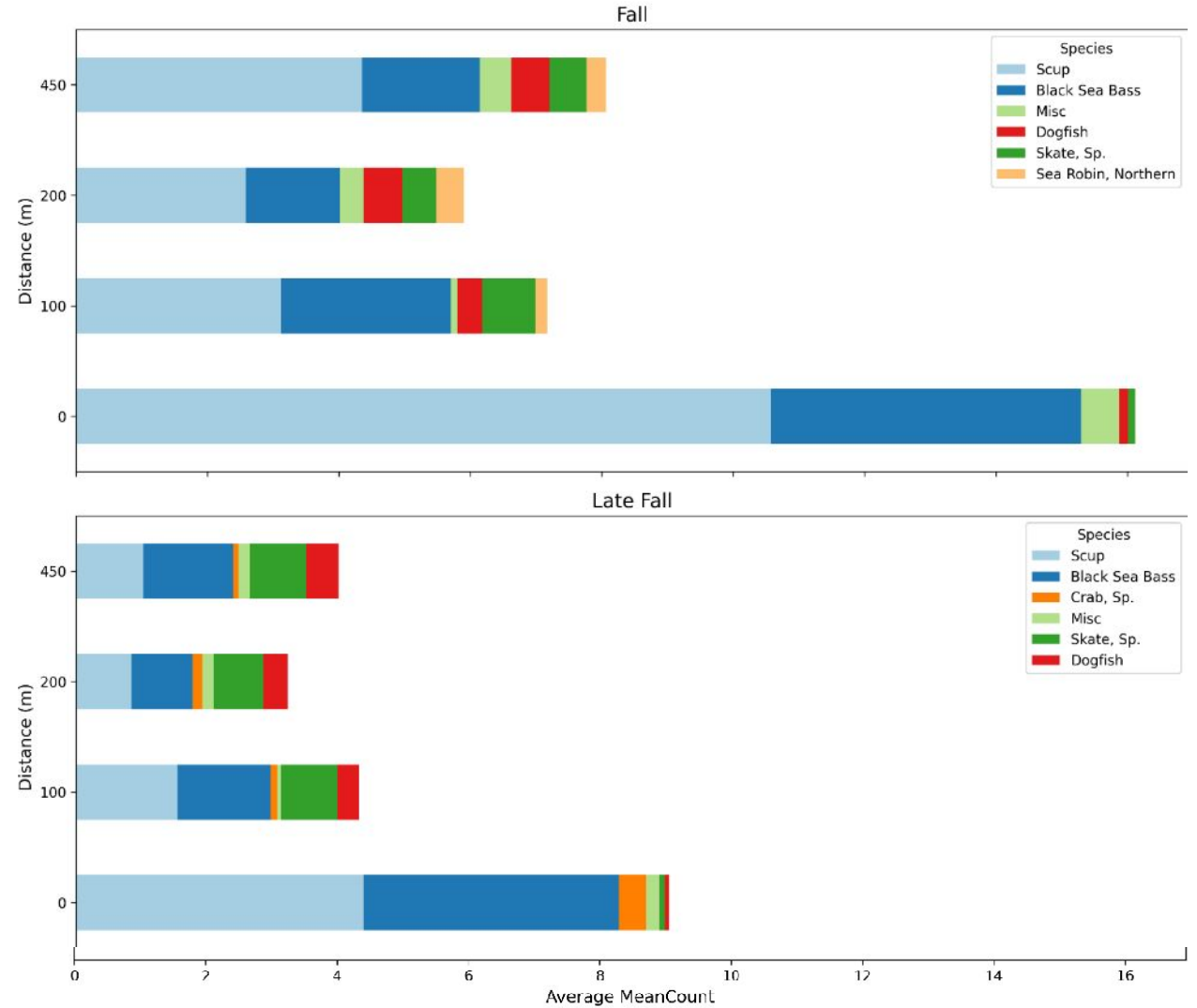
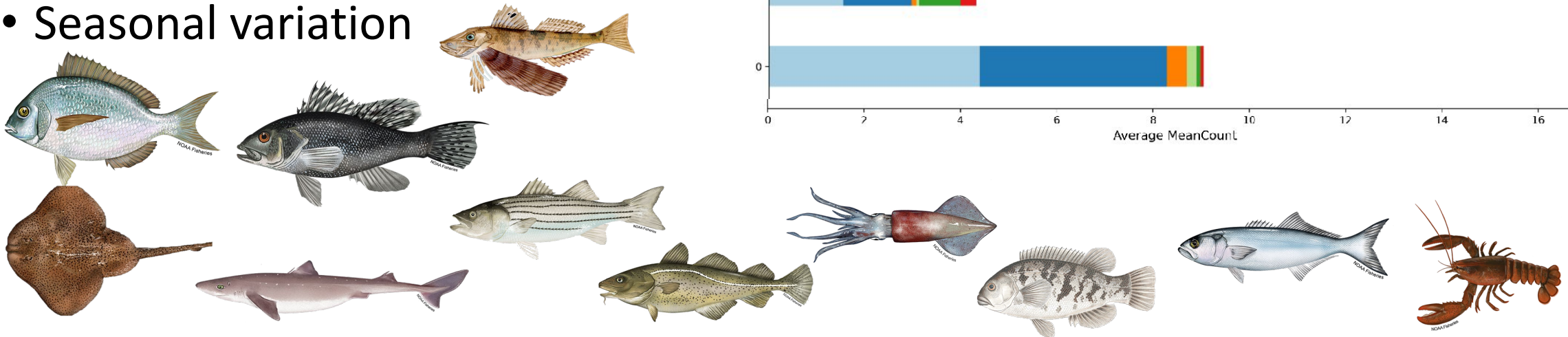
- 84 transects (~720 h)
- 31 Species
- Turbines dominated by black sea bass and scup
- Skates ubiquitous
- Mobile spp. off turbines
- Seasonal variation



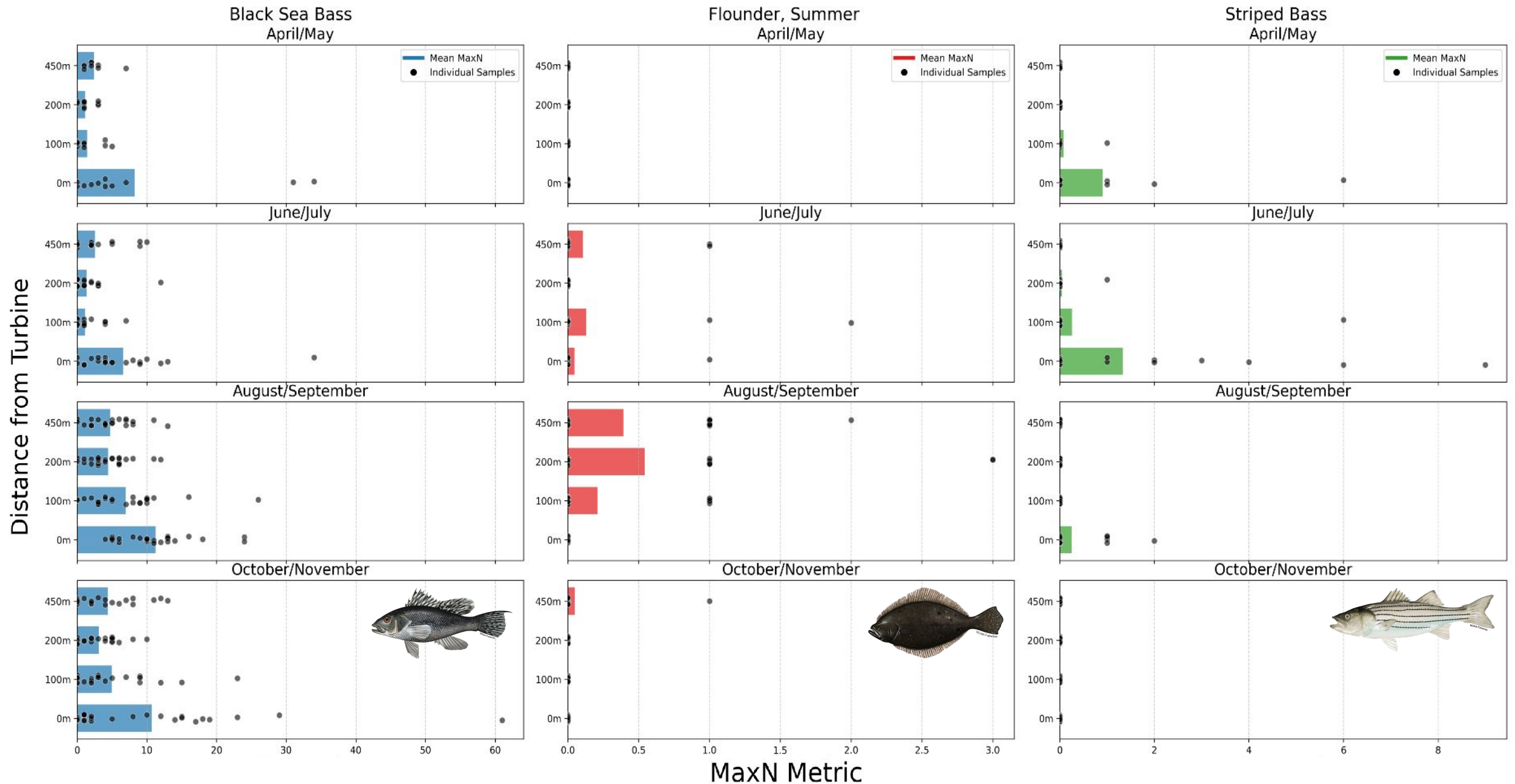
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 - 31 Species
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- 
- A detailed illustration of a scup fish, shown in profile facing left. It has a brownish-gold body with darker vertical stripes, a prominent dorsal fin, and a large eye.



Results: BRUVS

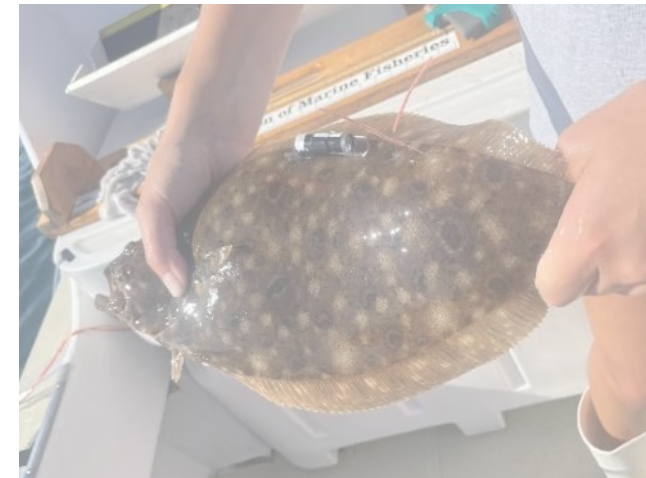


Results: Acoustic Telemetry

Species	Total Tagged	Total Detected	Total Length (Mean, $\pm$ SD)	Days at liberty (Median, IQR)
Black Sea Bass	63	59	41 $\pm$ 4 cm	57 (106)
Summer Flounder	35	33	45 $\pm$ 5 cm	30 (54)
Striped Bass	50	33	77 $\pm$ 12 cm	1 (25)

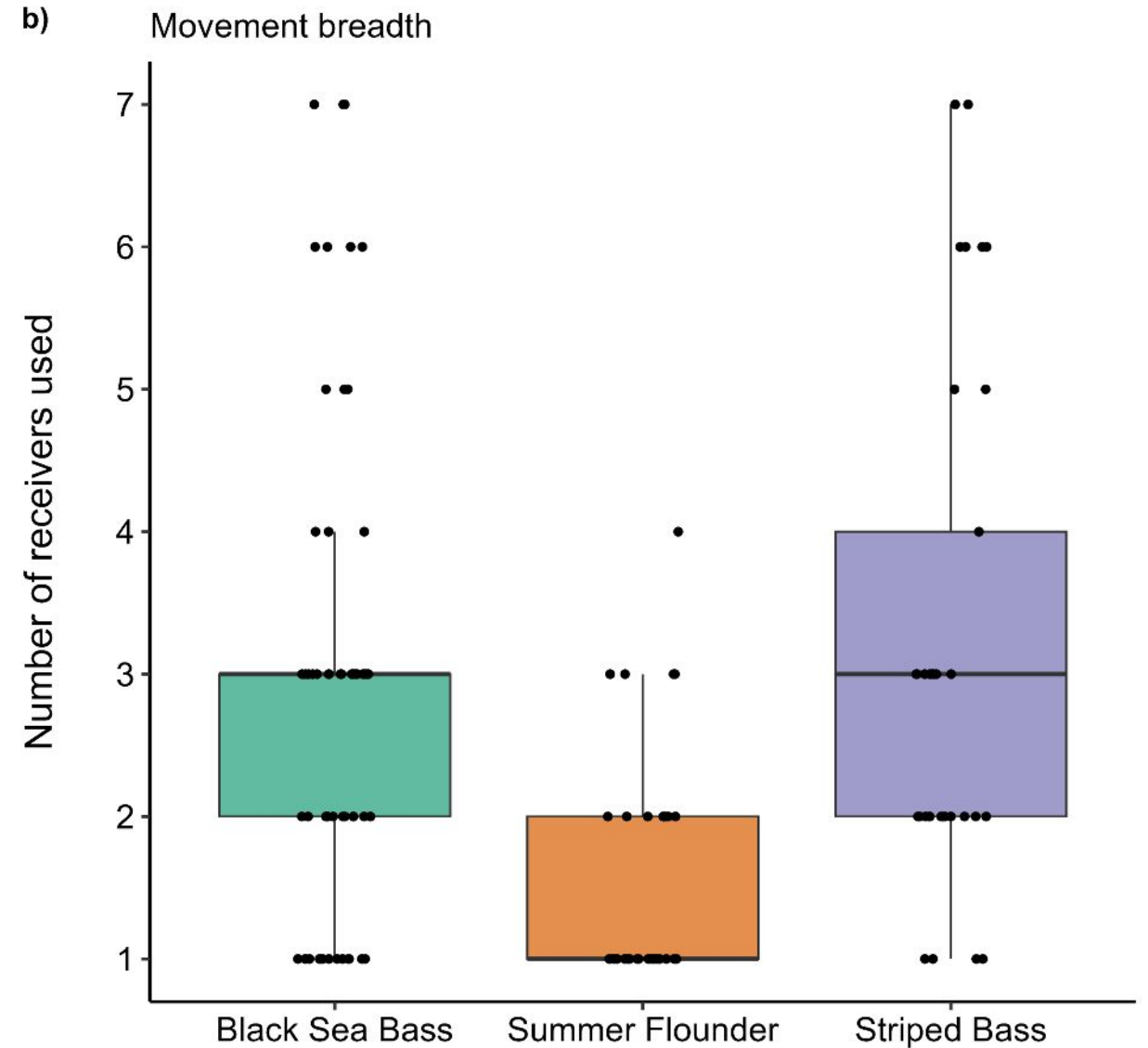
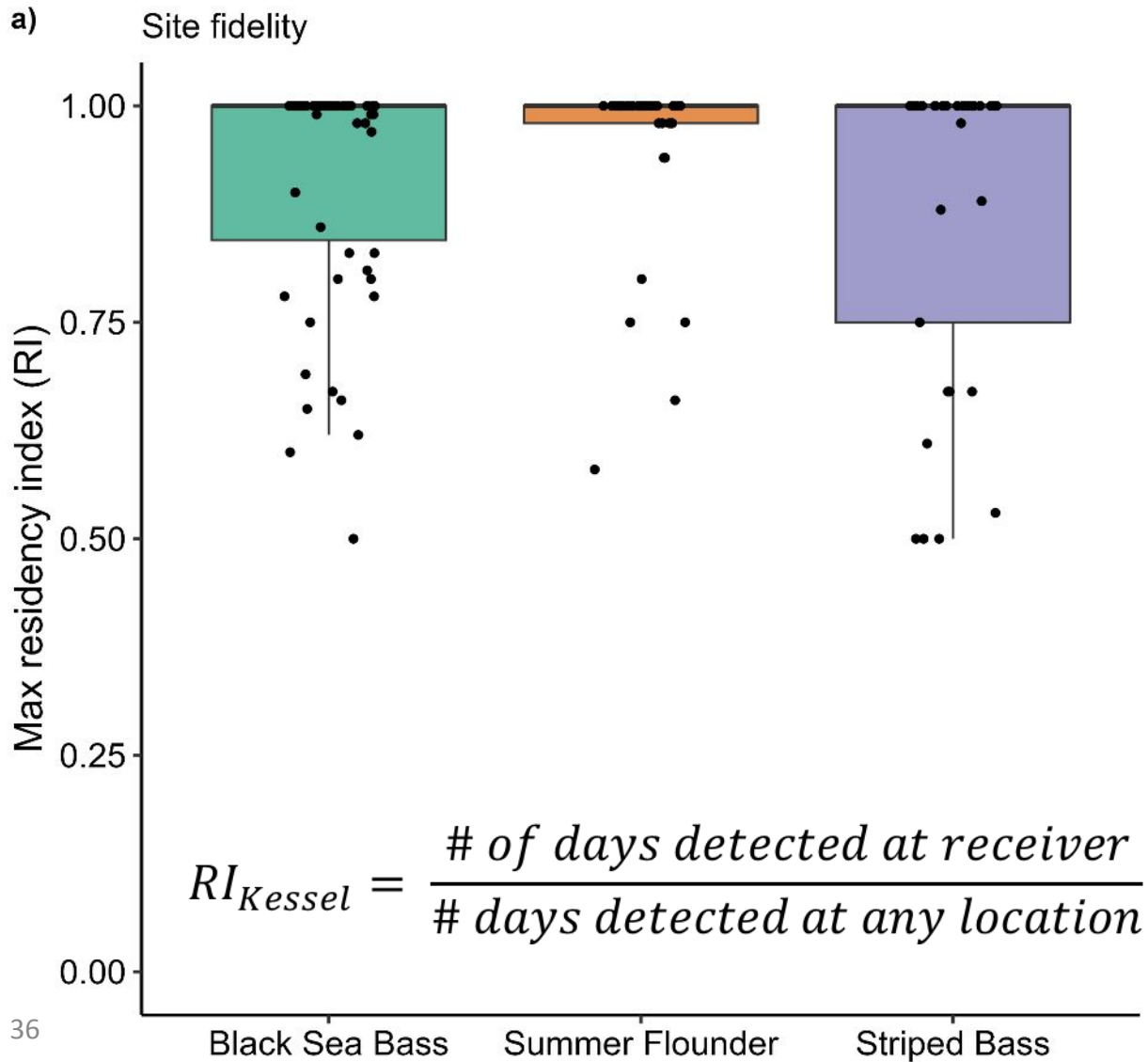
- 5 tags returned (1 redeployed)
- 1 lost receiver (adjacent rocky habitat; Sept 2023)

Sufficient detections across all species to evaluate movement and connectivity



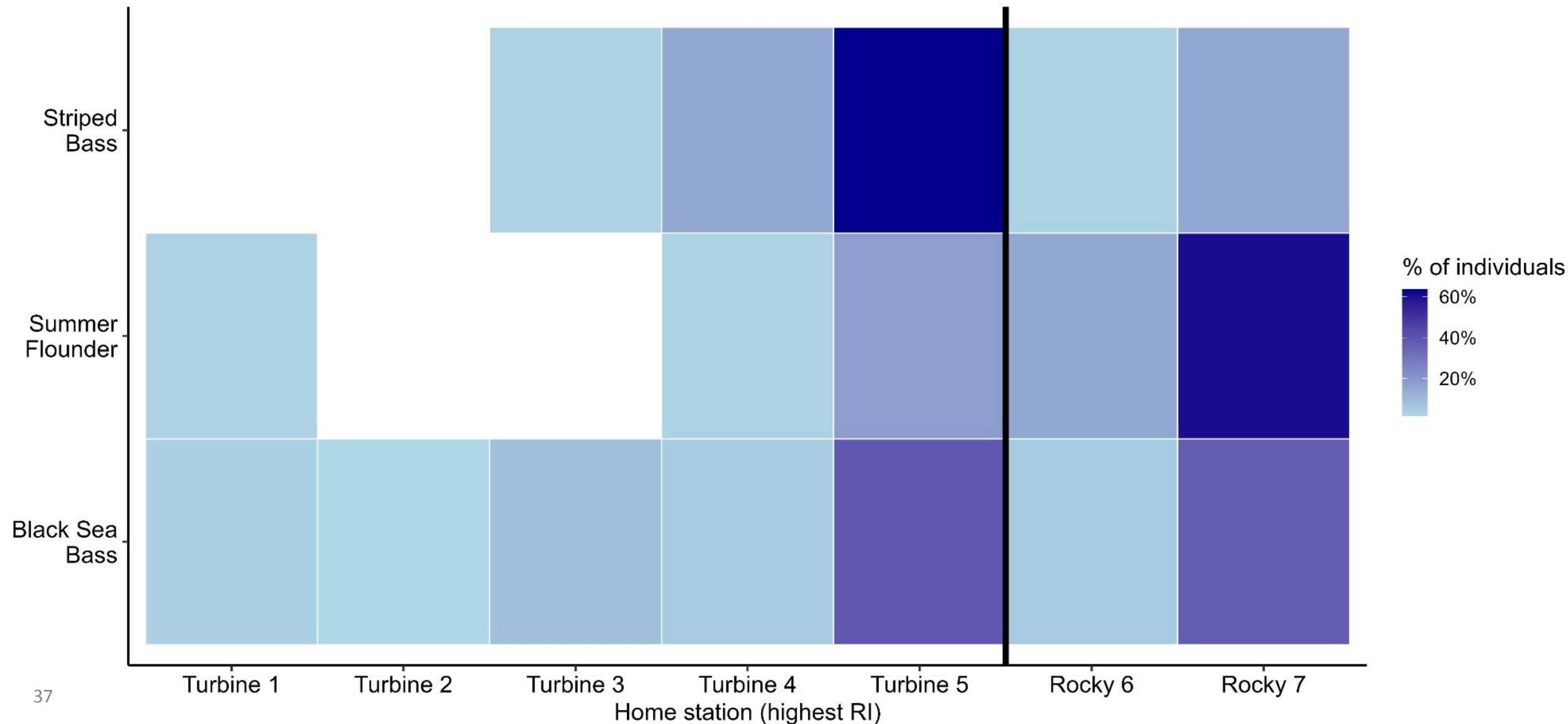
Results: Acoustic Telemetry

1) *Do fish move? Residency index*



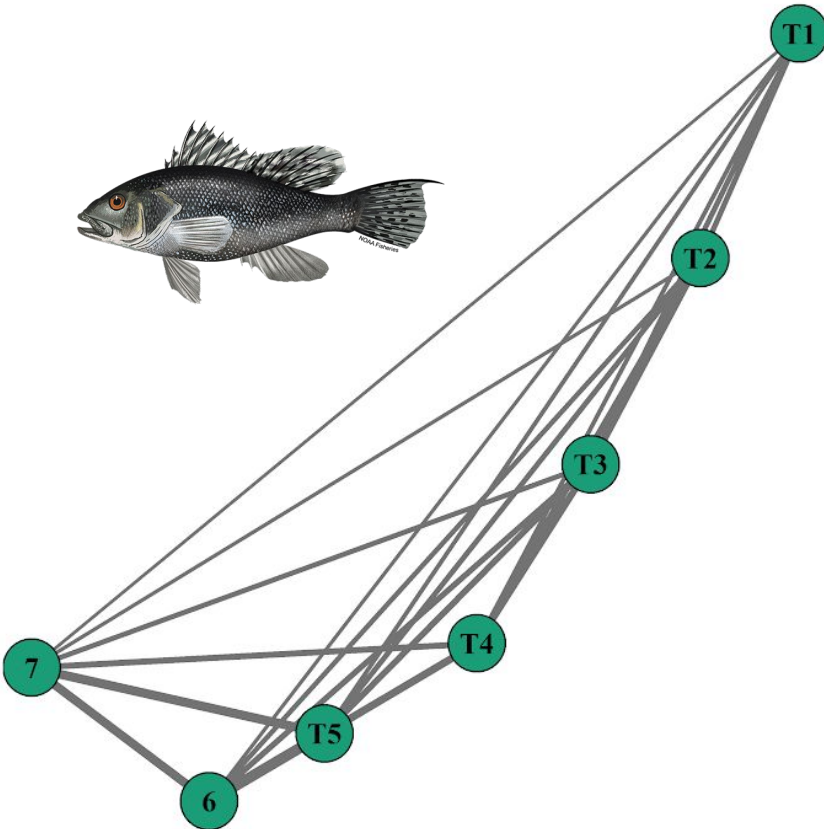
Results: Acoustic Telemetry

□ 2) *Where do fish “anchor” when site-faithful? Residency heatmap*

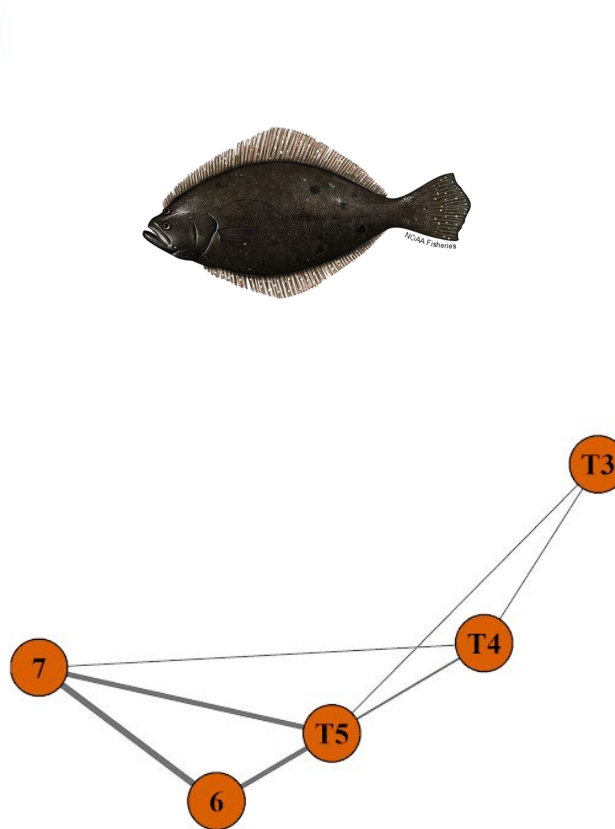


Preliminary Results: Acoustic Telemetry

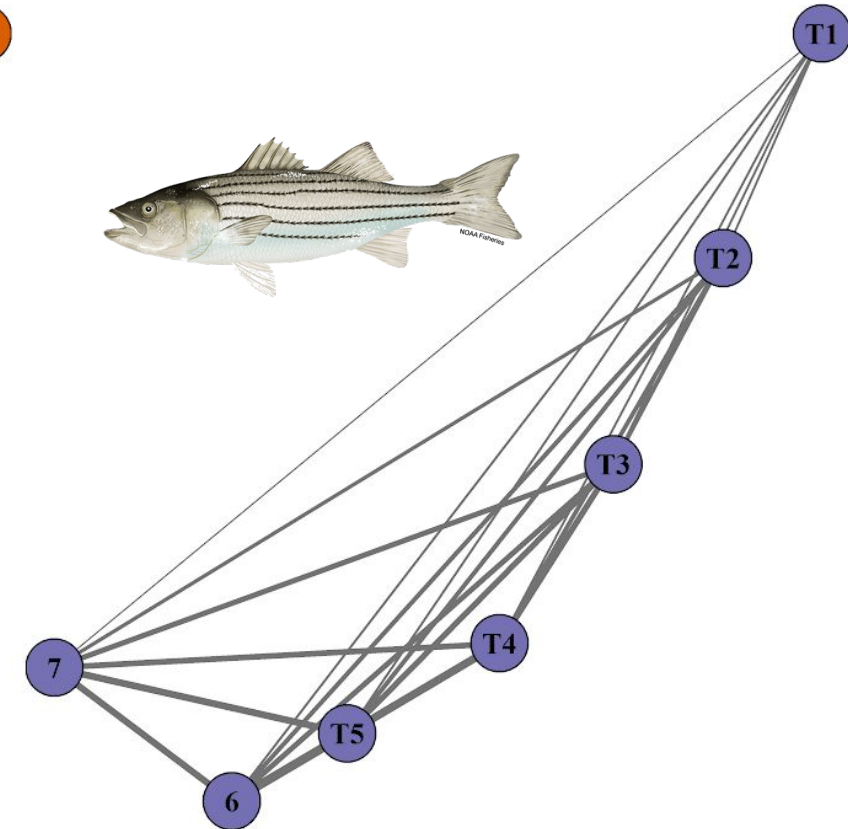
□ 3) *How are locations connected? Network analysis*



Black Sea Bass
median = 3 stations
range 1–7
 $n = 59$



Summer Flounder
median = 1 station
range 1–4
 $n = 33$

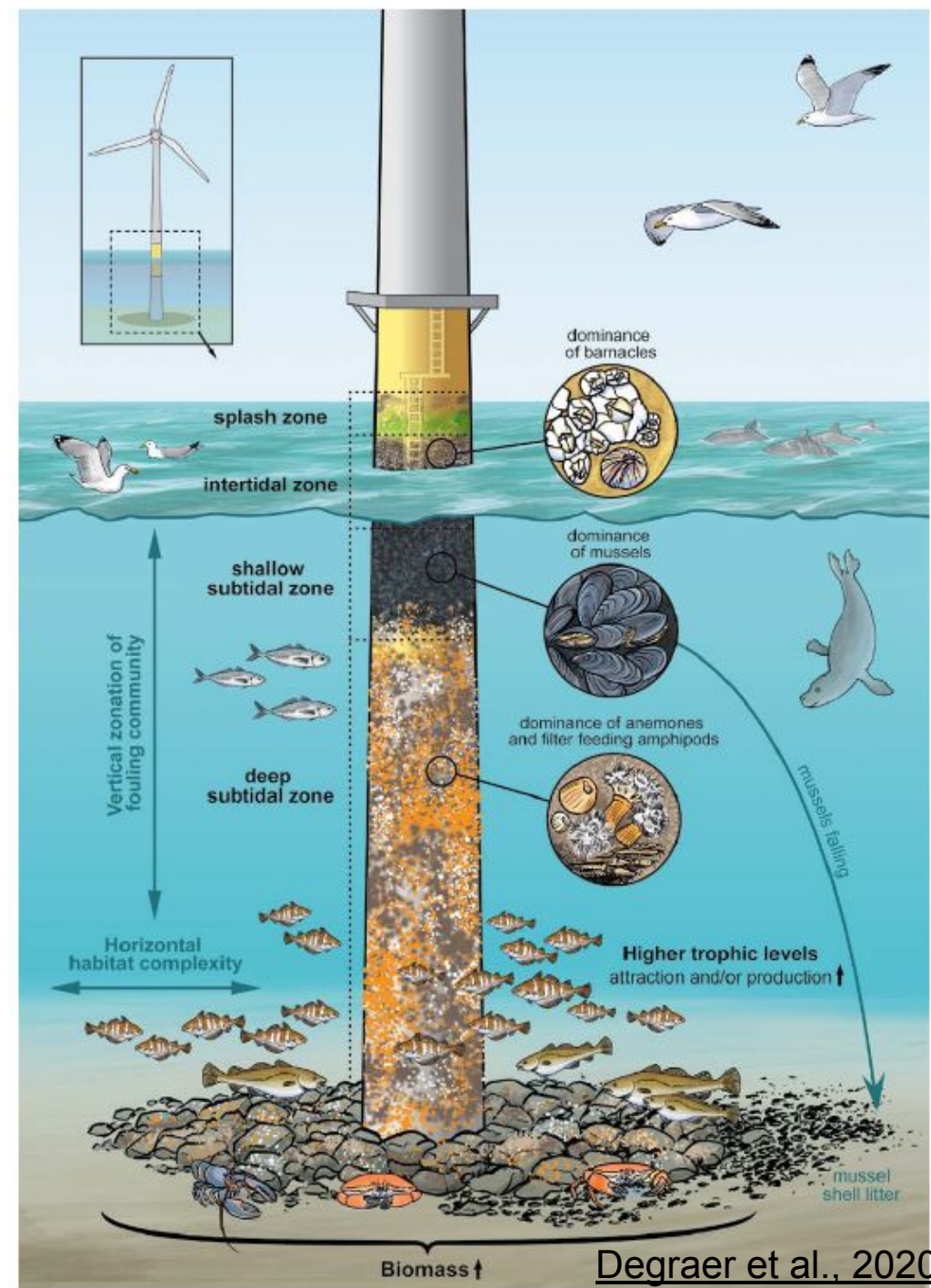


Striped Bass
median = 3 stations
range 1–7
 $n = 33$

Preliminary Conclusions

- Appearance of strong reef effect, particularly for black sea bass & scup
- Connectivity between turbines is species dependent
- Evidence of seasonal movement (BRUVS) and residency (telemetry)

Turbine spacing and foundation type may differentially benefit reef-associated species



Next steps

BRUVS

- Standardize counts to account for visibility
- Model species richness and abundance as a function of distance from turbine
- Evaluate vertical space use



Acoustic Telemetry

- More robust protocol for tag loss and mortalities
- Explore regional connectivity
- Seasonality

Acknowledgements

- BOEM
- Capt. Rick Bellavance
 - Priority Too Charters
- Capt. Greg Mataronas
 - F/V Cailyn & Maren
- Rhode Island Division of Marine Fisheries and Atlantic Shark Institute
- Rhode Island Coastal Resources Management Council
- ACT MATOS
- SMAST Staff and grad students
- SMAST/New Bedford High School internship program





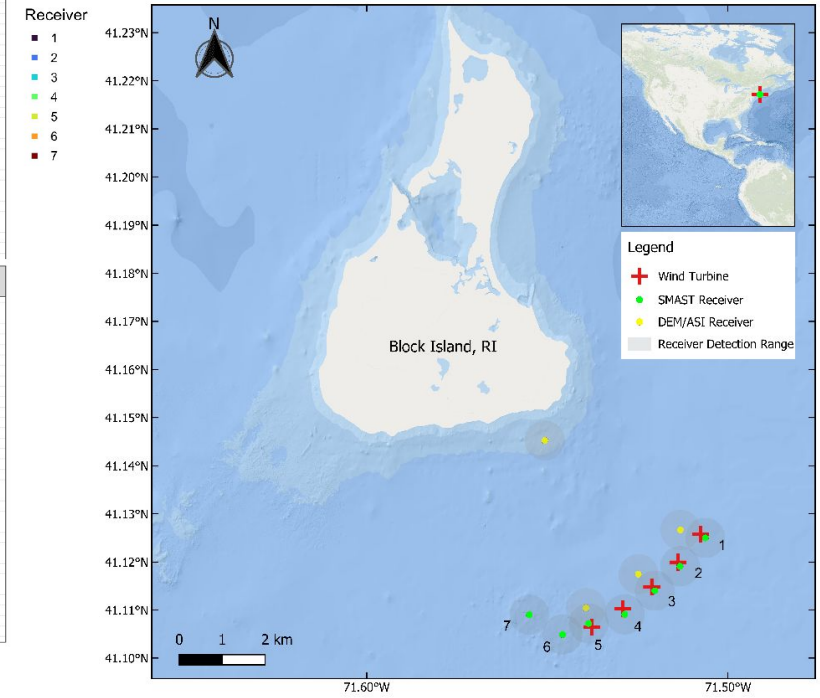
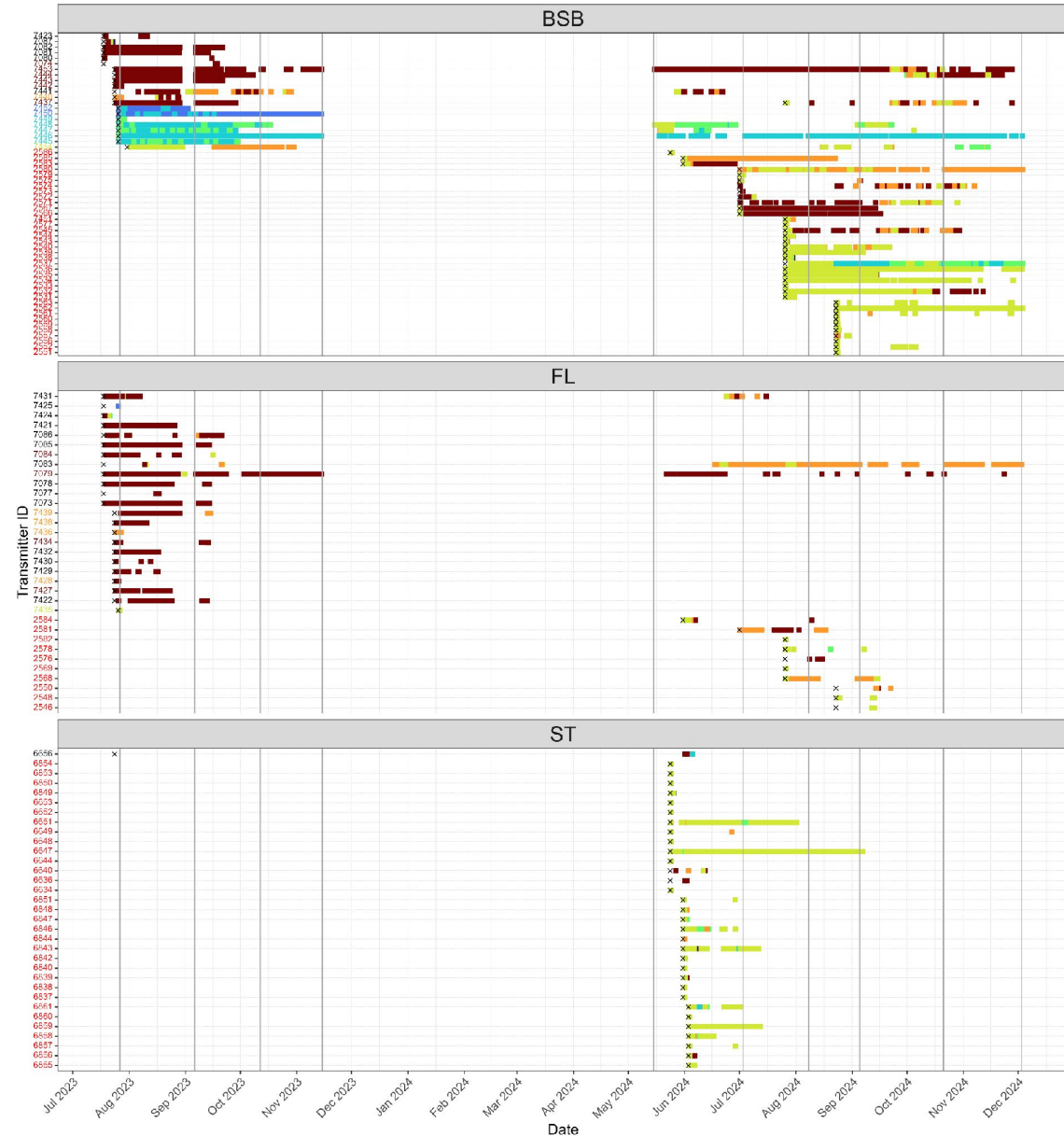
Connectivity, Movement and Distribution of Fishes in
Offshore Wind Farm Areas

Questions?

crillahan@umassd.edu



Telemetry results (preliminary)





Fishing Industry Insights (FINsights)

Why FINsights exists



- **Gaps Analysis confirmed:** fisheries engagement & local ecological knowledge (LEK) are among the least-explored research areas.
- **FINsights is a direct response to that gap.**
- Fishing industry sees things most researchers don't:
 - Changes in fish behavior
 - New interactions with infrastructure
 - Emerging gear conflicts
- FINsights creates a systematic mechanism to capture that knowledge.

The Objective is Connection



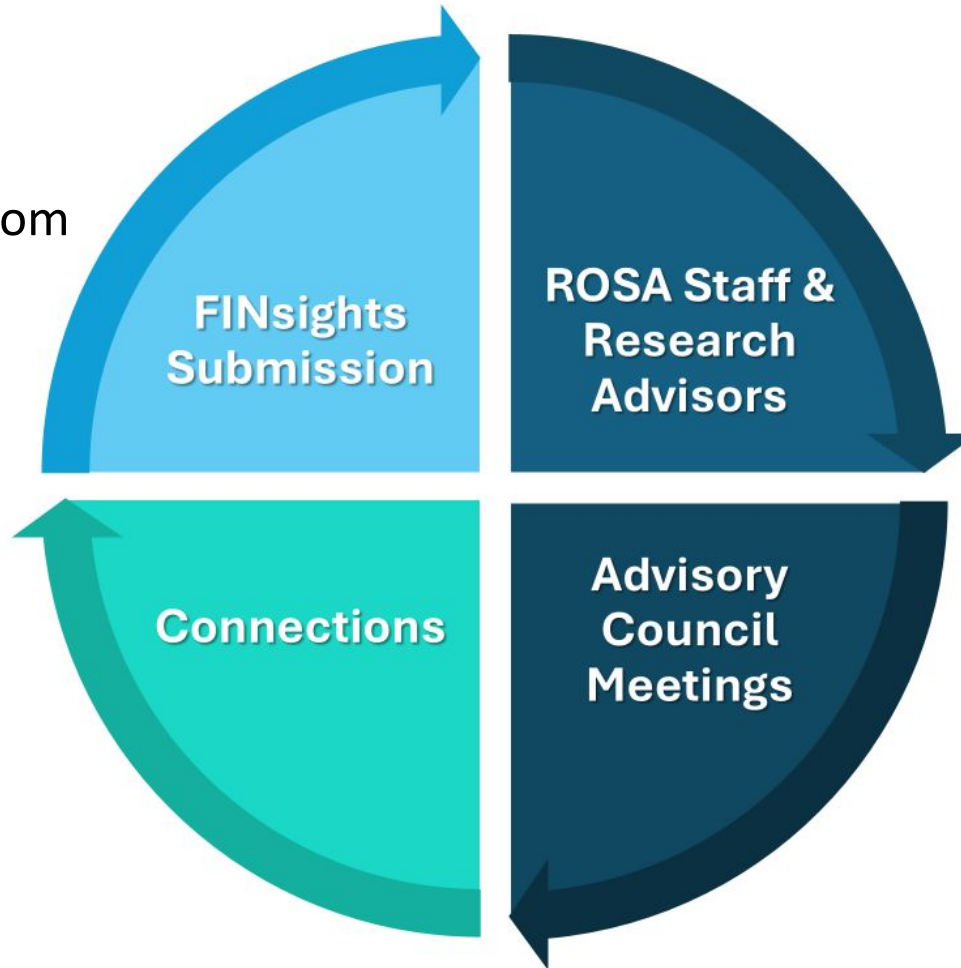
1. FINsights Submission

Invite observations, questions, & insights from those on the water

4. Make Connections

Match interested fishing industry members with resources:

- Scientists
- Funding Opportunities
- Published research
- Tools



2. ROSA Staff & Research Advisors

- Frame testable research questions around the observation or insight
- Collate state of knowledge on topics

3. Advisory Council Meetings

- Provide space for oral submissions
- Read out themes from submissions: "What FINsights is hearing"
- Present latest observations & resources

Launch in March & April



**You're on the water.
You see things researchers don't.**

ROSA's FINsights is an open channel for fishing industry members to share observations, concerns, and knowledge about offshore development and its interactions with fisheries.

Whether you've **noticed changes in where** you're catching specific species, **encountered new behavior** near infrastructure, or **have ideas** about what research questions most need answering, we want to hear from you.

**Submit anytime.
Your contact
information will
only be used to
follow up if
you'd like us to.**

What happens with your input:

- ✓ Summarized for industry readouts.
- ✓ Identifies topics for research projects.
- ✓ Ensures your expertise is part of the conversation.

Share your
insights here



NEFSC Cooperative Research Summit

Reminder: what it is & what it isn't

IS

- Rolling submission channel
- **NEW** platform, infrastructure is still maturing

IS NOT

- One-time survey/data collection effort
- Established mechanism for formal comments

Submissions can include observations, concerns, research questions related to offshore development that the industry thinks are underprioritized, supporting documents, and/or photos.

Submission Form

Share your insights here.

renee@rosascience.org [Switch account](#)



Not shared

* Indicates required question

What are you experiencing or what insight do you want to share? (e.g., a certain species is showing up in a new area)

Your answer

When are you seeing it?

☐ Seasonally (e.g., in fall or spring)

☐ While actively fishing

☐ While en route to fishing grounds

☐ Other: _____

Where are you seeing it?

☐ Open water

☐ Near offshore turbine foundations

☐ Along cable routes

☐ Other: _____

What question(s) do you have about what you're seeing? (e.g., is there published research about the potential causes for what I am seeing? Is anyone currently studying this phenomenon? Is this pattern happening across the region or is this an isolated observation?)

Your answer

Name *

Your answer

Email address (your email will be used only to contact you to learn more or to provide answers. We will not share your email with anyone beyond ROSA without your permission.) *

Your answer

I would like to schedule a follow-up meeting with ROSA staff regarding this insight/observation.

☐ Yes

☐ No

Submit

[Clear form](#)

Preliminary Feedback on Submission Format

- **Add metadata to the submission form**
 - Observation type
 - Date/time
 - Broad location
 - Fishery/gear context
 - Development phase
 - Confidence level
- **Build in layers of permission**
 - ROSA-only/anonymized internal synthesis
 - Named researcher sharing
 - Anonymized public use
- **Two-layer submission model**
 - Plain-language intake for contributors
 - Back-end normalization for researchers
- **Use FishFORWRD's 11 research categories & 70 SRNs**
 - Connect FINsights & FishFORWRD
- **Make "research idea/question" an explicit submission type**
 - Not just observations & concerns

Preliminary Feedback on Submission Format

- **Feedback loop**

- Quarterly "What FINsights is hearing" summary back to industry

- **Explicitly connect FINsights outputs to FishFORWRD**

- *FINsights* generates upstream signals *FishFORWRD* remains the structured downstream layer
- Define how and when that handoff happens.

Adopt a phased launch approach

Phase 1: intake & internal triage (!)

Phase 2: formal roll-out/promotion beyond ROSA AC

Engage the Data Governance Program

Formally define:

- submission permissions
- attribution rules
- anonymization
- retention
- QA/QC

The Objective is Connection



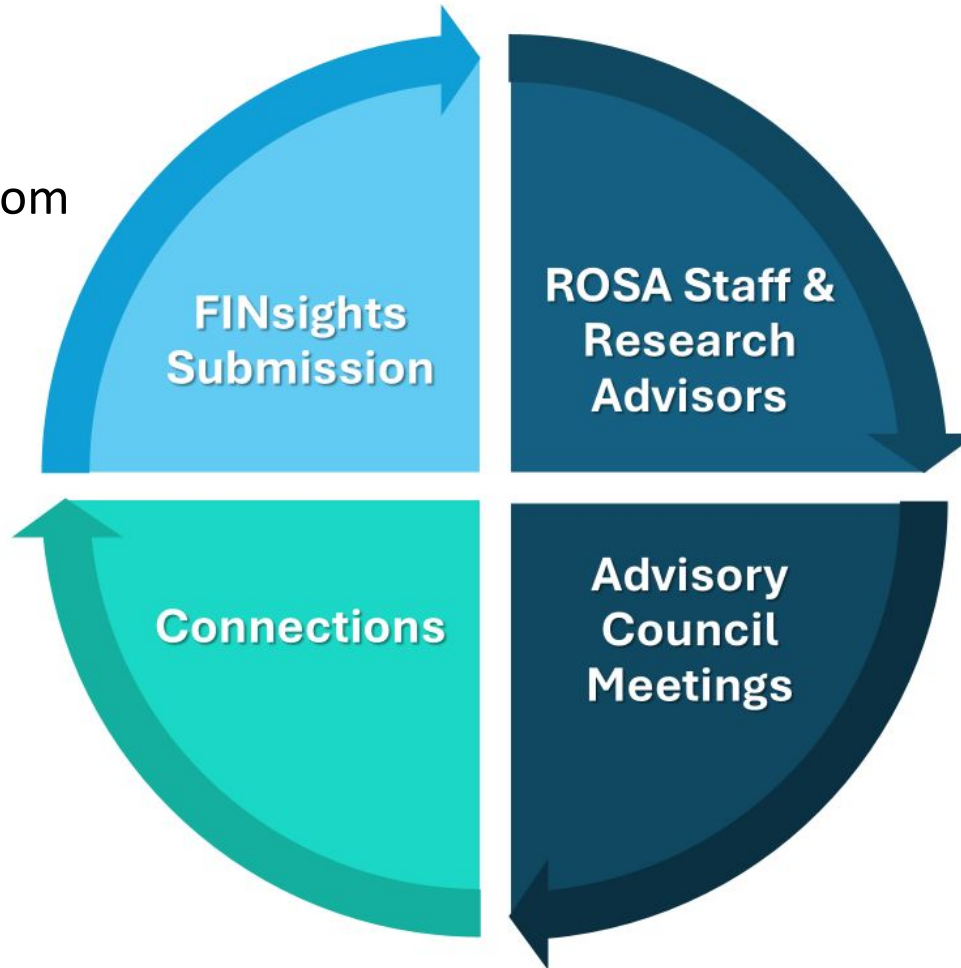
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A large, powerful ocean wave is captured in mid-break, with a massive plume of white water spraying upwards from the crest. The water is a deep, vibrant blue-green color. The background shows the vast expanse of the ocean under a pale, overcast sky. A semi-transparent teal banner is positioned across the lower third of the image, featuring the text 'Q1 Submissions' in a bold, white, sans-serif font.

Q1 Submissions

Four themes received in Q1



Construction-phase
catch impacts

Scallop recruitment
& survival

Aquaculture co-use
& fleet adaptation

Pre-construction
baseline gaps

Construction-phase catch impacts



Reported declines in catch rates. Questions around attribution to pile driving, cable laying, dredging, and electromagnetic disturbance in Rhode Island State Waters.

Key Question:

Is published research documenting catch disruption during OSW construction available?

Scallop Recruitment & Survival



Two consecutive year-classes observed with apparent low recruitment or elevated mortality in areas near turbine foundations and cable routes.

Key Question:

Did turbine installation affect juvenile scallop survival? Is anyone actively studying this?

Aquaculture Co-use & Fleet Adaptation



Asks about integrating kelp, bivalve, and finfish cultivation into active lease areas, citing European precedents. Raised fleet retooling & funding questions.

Key Question:

What's being done to enable aquaculture co-use at U.S. turbine sites?
What funding exists?

Pre-construction Baseline Gaps



A recurring thread across submissions: insufficient ecological and fisheries baselines were collected before construction began, making attribution of observed changes difficult.

Key Question:

What baselines exist, and can observed changes be attributed with available data?



Discussion - Responses & Resources



Action Items, Next Steps, and Other Business

American Fisheries Society Annual Meeting



Session Title: The Blue Economy, Fish, and Fisheries – Emerging Knowledge, Technology Advancement, and Applications

Session Day and Time: Thursday, September 03, 2026 from 1:30 PM - 5:00 PM

Early bird registration ends on Wednesday, June 24th



ROSA
Responsible Offshore
Science Alliance

Thank you!

Next ROSA Advisory Council Meeting
September 24, 2026 - 1pm ET

Soliciting feedback

The Objective is Connection



1. FINsights Submission

Invite observations,
questions, & insights
from those on the
water

3. Advisory Council Meetings

- Provide space for oral submissions
- Test if others are seeing similar things
- Read out themes from submissions
- Present latest observations & resources

4. Make Connections

Match interested fishing industry members with resources:

- Scientists
- Funding Opportunities
- Published research
- Tools

2. ROSA Staff & Research Advisors

- Frame testable research questions around the observation or insight
- Collate state of knowledge on topics

Reminder: what will ROSA do with the information?

- Collect ongoing submissions
- A month before the AC, email Research Advisors asking if they:
 - Want to be connected?
 - Have resources?
- Present latest observations & resources each quarter
- ROSA website updates after each AC meeting
- [add ci]