

Northeast Ocean Plan Stakeholder Forum May 2, 2017



MEETING OBJECTIVES



Provide updates and discuss progress implementing the Northeast Ocean Plan, with a focus on initiatives to:

- Use, maintain and update the Northeast Ocean Data Portal
- Advance aspects of plan performance monitoring and evaluation

Obtain feedback on progress to date and potential next steps to inform decisions at the Northeast Regional Planning Body Meeting on May 24

NORTHEAST REGIONAL PLANNING BODY



Six New England states

Six federally-recognized tribes

Nine federal agencies

New England Fishery
Management Council

Two ex-officio members, NY
and Canada



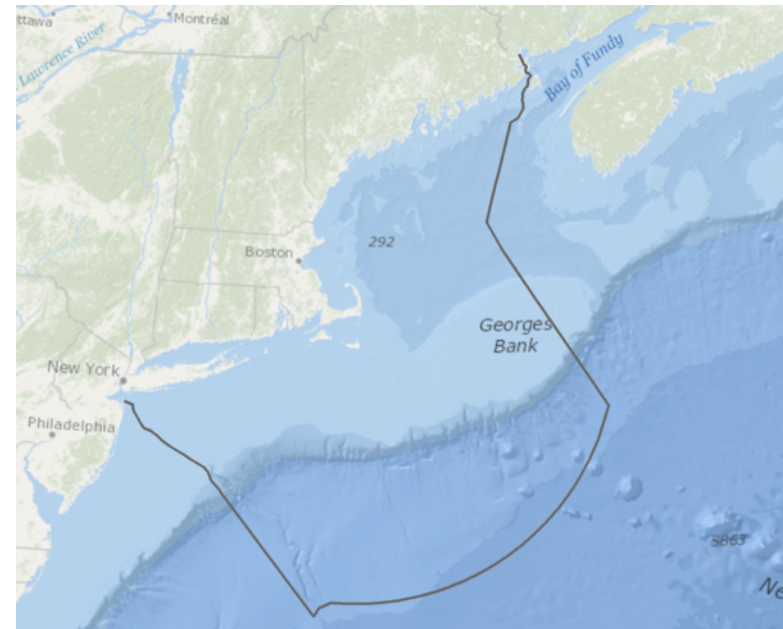
NORTHEAST OCEAN PLAN: GOALS



Healthy ocean and coastal ecosystems

Effective decision-making

Compatibility among past, current and future ocean uses



TIMELINE



October – December

- Northeast Ocean Plan finalized and certified by the National Ocean Council
- RPB begins to organize itself for implementation

January – March

- Plan is adopted and signed by RPB leadership
- RPB begins implementing the actions in the Plan and developing associated materials for upcoming public conversations

April - May

- April 13 public webinar to provide an overview of implementation activities in preparation for May public meetings
- May 2 Stakeholder Forum in Portsmouth, NH
- May 24 RPB Meeting in Gloucester, MA

IMPLEMENTATION WORK PLAN OVERVIEW

NORTHEAST OCEAN DATA PORTAL

- Communicating the use and role of the Portal
 - Portal use and case studies
 - Relationship of the Portal to the Plan and other data and information systems
- Updating ocean activity data
 - RPB actions to update data
 - Outreach to relevant stakeholders
- Updating marine life, habitat, and important ecological areas (IEA) data products
 - RPB actions to update marine life and habitat data
 - Advance IEA framework by developing draft data products for each component of ecological importance
 - Input on draft methods and products

Ocean Resources & Activities



IMPLEMENTATION WORK PLAN OVERVIEW

MONITORING AND EVALUATION



What is **Monitoring & Evaluation?**



Plan Performance Monitoring

Measure progress toward implementing the Plan's actions and achieving the Plan's goals and objectives



- Conditions before Plan
- Track implementation
- Obtain public input

Ecosystem Health Monitoring & Evaluation

Measure changes in the ecosystem, including human activities, to identify issues that may require management attention



- Baseline
- Indicators
- Obtain public input



Inform amendments and updates to the Plan

IMPLEMENTATION WORK PLAN OVERVIEW

OTHER TOPICS, WORK GROUPS, & SUBCOMMITTEES



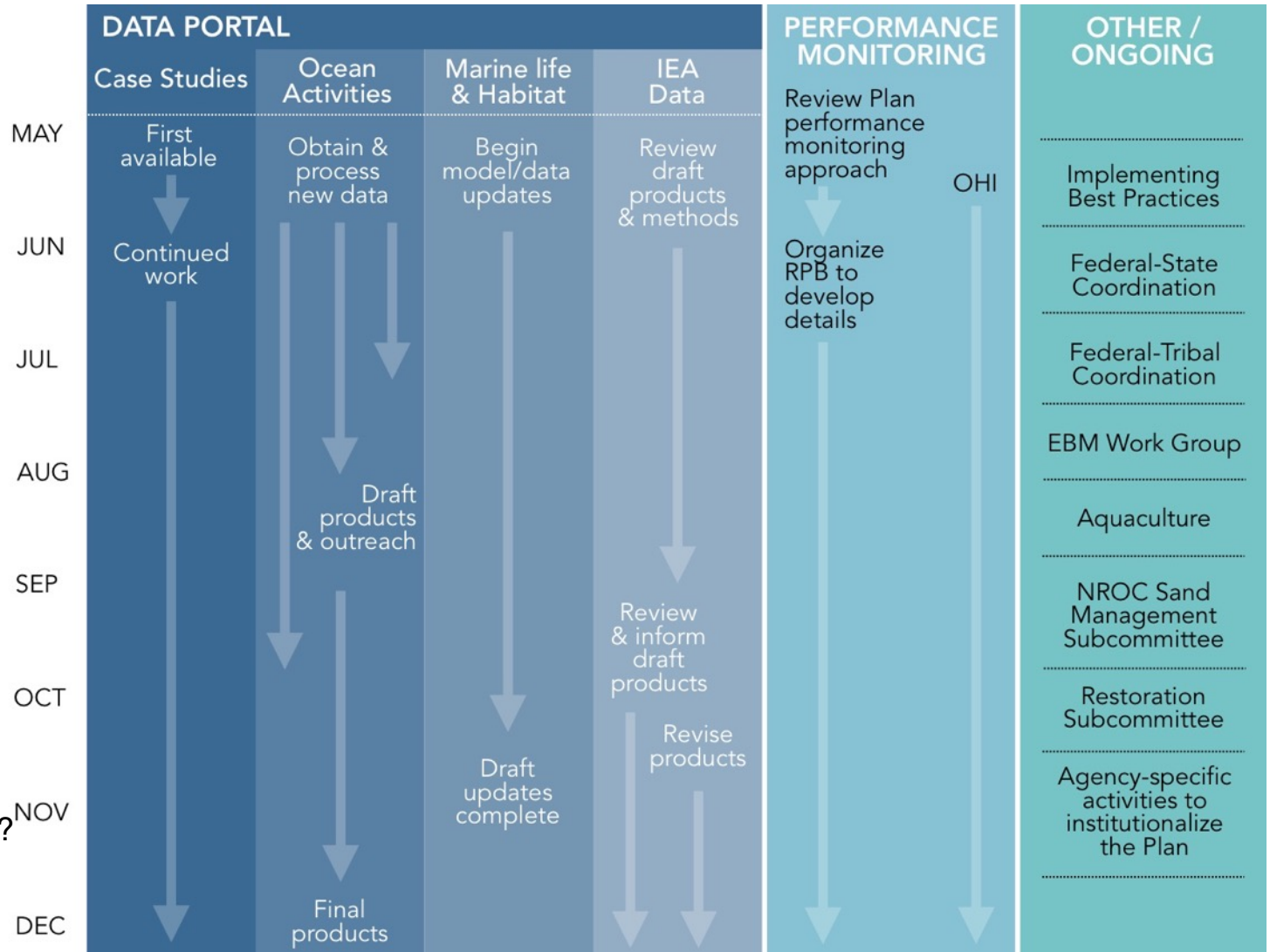
- Implementing Best Practices
- Federal-State Coordination
- Federal-Tribal Coordination
- Ecosystem-based Management (EBM) Work Group
- Aquaculture
- NROC Sand Management Subcommittee
- Restoration Subcommittee
- Agency-specific activities to institutionalize the Plan

IMPLEMENTATION WORK PLAN OVERVIEW TIMELINE



RPB MEETING

RPB MEETING ?



NORTHEAST OCEAN DATA PORTAL

MAINTENANCE AND USE



RPB activities to maintain the Portal as stated in Chapter 4:

2017

- Update priority data (priority data are those data cited in Chapter 3)
- Update contextual data
- Webinars and trainings
- Options for long term hosting and maintenance, considering the above

Also, importantly, understand and communicate Portal use

2018

Review long-term options

A screenshot of the Northeast Ocean Data Portal website. The header includes the title "NORTHEAST OCEAN DATA" with the subtitle "Maps and data for ocean planning in the northeastern United States", and navigation links for "HOME", "MAPS", "DATA", and "ABOUT". A search icon and social media icons are also present. The main content area is titled "DATA EXPLORER" and features a grid of interactive map categories: Human Activities (Aquaculture, Commercial Fishing, Culture, Energy & Infrastructure, Marine Transportation, Recreation, National Security), Marine Life (Mammals & Turtles, Fish, Birds, Eelgrass, Habitat, Habitat Classification), and Environment (Bathymetry, Water Quality, Restoration). Below the grid are sections for "FEATURED MAP" (Essential Fish Habitat And Multispecies FMP Fish Biomass) and "NEWS" (New Maps Show Fish Biomass in Long Island Sound Based on Trawl Survey Data, NEFMC Deep-Sea Coral Management Area Alternatives, New Basemap Options and Other Enhancements to Interactive Maps, Overlay New Marine Life Data with Human Use and Environmental Data, National Ocean Council Certifies the Northeast Ocean Plan).

NORTHEAST OCEAN DATA PORTAL MAINTENANCE AND USE



- Two rounds of focused outreach, with meetings in ports in each state attended by pilots, port operators, representatives from shipping companies, and US Coast Guard (USCG), state, and local officials
- Regular updates at harbor safety committee meetings in each port from Maine to New York
- Regular presentations at North Atlantic Port Association meetings and briefings with national-level trade associations
- Presentations at pilot association meetings, propeller clubs, and other local events

RESULT

The appropriate use of ship tracking data to map the footprint of commercial vessel traffic and maps of other existing use areas (e.g., pilot boarding areas, safety and security zones). Identification of ways the RPB can use this data in regulatory and management activities.

ACTIONS: MAINTAIN AND UPDATE DATA

MT-1. Maintain existing maps and data on the Portal:

Much of the marine transportation data on the Portal is provided by the Marine Cadastre including each of the datasets in the Navigation map except Pilot Boarding Areas and Safety and Security Zones. Those two datasets were developed by the Portal Working Group and reviewed by pilot associations and USCG staff in the region. At the time of the writing of this Plan, the Marine Cadastre began maintaining these two datasets as well. Therefore, the Navigation maps on the Portal will be maintained through updates provided by the Marine Cadastre, and regional USCG staff intend to ensure those maps are reviewed by marine transportation agencies and stakeholders.

The USCG is the original source for two vital datasets on the Portal: Aids to Navigation (ATON) and AIS vessel traffic. By law, the USCG has and will maintain the US Aids to Navigation System, which is reviewed and corrected on a regular basis by sector and district waterway managers and displayed on NOAA nautical charts.²² The USCG also developed and maintains the nationwide AIS.²³ The USCG Navigation Center (NAVCEN) gathers AIS data on a continual basis and provides real-time and historical annual data to government agencies, including ocean planning efforts such as this Plan. As of the publication of this Plan, USCG will provide annual AIS and ATON data to the

Chapter 2 describes process for developing and vetting priority data

Chapter 3 describes the data and actions to maintain and update priority data

Chapter 4 summarizes agency responsibilities for maintaining data

TOPIC	DATA LAYER	RESPONSIBILITY
Marine Transportation	Maintain and update existing navigation maps and data	RPB, with the Portal Working Group coordinating with the Marine Cadastre
	Maintain and update Aids to Navigation (ATON) and Automatic Information System (AIS) vessel traffic maps and data Provide additional AIS-based products (related to monthly and seasonal traffic patterns and counts of unique vessel transits)	The US Coast Guard (USCG) will provide updated data to the Marine Cadastre; the Portal Working Group will coordinate with the Marine Cadastre RPB with the Portal Working Group following review process
National Security	Maintain and update national security maps and data	Department of Defense (DOD) will update periodically as needed, such as when applicable permits are renewed or operations significantly change
Commercial and Recreational Fishing	Maintain and update existing products derived from Vessel Monitoring System (VMS)	National Marine Fisheries Service (NMFS) Office of Law Enforcement will provide annual updates to the Portal Working Group employing processing and analysis methods used for current maps
	Maintain and update fishery management areas related to VMS products	NMFS Greater Atlantic Regional Fisheries Office (GARFO) provides any updates to the Portal Working Group as VMS products are completed
Recreation	As resources are available, update boating, whale watching, scuba, and other maps derived from online surveys and participatory workshops	RPB in coordination with future partners
	Maintain and update maps of coastal recreation areas	RPB with the Portal Working Group, annually
Energy and Infrastructure	Maintain and update existing infrastructure and renewable energy planning areas	RPB with the Portal Working Group, which will coordinate with: • BOEM and the Marine Cadastre for energy and infrastructure data in federal waters • States for data about projects in state waters
Aquaculture	Maintain maps of current aquaculture operations and shellfish management areas	US Army Corps of Engineers (USACE), NOAA, and RPB state members review and provide updates annually to the Portal Working Group
Offshore Sand Resources	Maintain datasets related to the identification of sand resources on the outer continental shelf (OCS) and provide to the Portal Develop an Offshore Sand Resources theme on the Portal	BOEM RPB in collaboration with the Northeast Regional Ocean Council (NROC) Sand Management Subcommittee, with support from the Portal Working Group
Restoration	Maintain and update Restoration theme and data	Annual updates by RPB restoration subcommittee, through the Portal Working Group

NORTHEAST OCEAN DATA PORTAL

MAINTENANCE AND USE



**OVER 8,000
UNIQUE VISITORS
IN APRIL 2017**

**HIGHEST
MONTH
EVER**

Plan
submitted

Plan
certified

OCT 2016

**AVERAGE MONTHLY
VISITORS**

DEC 2016 -
PRESENT

2013-2016

**INCREASED
ALMOST
3-FOLD**

**SINCE
PLAN
CERTIFICATION
IN DEC 2016**

www.northeastoceandata.org

- Noticeable spike in Portal activity – hits and feedback
- Daily/weekly spikes potentially associated with agency announcements and events

NORTHEAST OCEAN DATA PORTAL

MAINTENANCE AND USE

- RPB and many others working on case studies
- Recent data releases provide opportunities and examples
 - NEFMC Draft Coral Management Area Alternatives
 - Long Island Sound fish trawl
- We want to know how you're using the Portal

NORTHEAST OCEAN DATA

Maps and data for ocean planning in the northeastern United States

HOME MAPS DATA CASE STUDIES ABOUT

[Back to Case Studies Overview](#)

Case Study:

Siting a New Wave-monitoring Buoy to Increase Maritime Safety and Improve Weather Forecasts

Northeast Ocean Data Portal User:

Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS)

In Consultation with:

- Massachusetts Department of Environmental Protection
- NOAA National Ocean Service
- NOAA National Weather Service
- Northeast Marine Pilots Association
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Geological Survey

Objective:

To identify the best location for a new wave-sensor buoy in Cape Cod Bay to provide data for ship pilots, weather forecasters, whale watch operators, recreational boaters, habitat restoration practitioners, and others.

Ships, tugs, and barges carry more than a billion gallons of petroleum through Cape Cod Bay every year. To ensure safe and efficient passage across those heavily trafficked waters, captains and pilots require accurate, up-to-date information about sea conditions.

"Ninety-five percent of loaded tugs and barges pass eastbound through the Cape Cod Canal, and it is critical that we know what the sea-state is in Cape Cod Bay before we enter the canal," said Captain Clint Walker of the Northeast Marine Pilots Association.

Until 2016, however, no real-time data on wave conditions were available for the Bay. That's when the Massachusetts Department of Environmental Protection (MassDEP), NOAA's National Ocean Service, and several other partners provided financial and logistical support to deploy a new high-tech wave-monitoring buoy approximately six nautical miles north of Sandy Neck in Sandwich, Massachusetts. The location was selected based in part on data and maps from the Northeast Ocean Data Portal.

Choosing where to place the buoy presented a number of challenges, according to Tom Shyka of the Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS), which collaborated with the other partners to plan the deployment. NERACOOS is responsible long-term operation of the buoy and delivers the data on its website. The wave sensors needed to be near the main routes through the Bay to provide useful data for the shipping industry. Yet the high-tech buoy—which will cost up to \$440,000 to acquire and operate for 5 years, is relatively small, and can easily disappear from sight in a wave trough—could not be placed in a heavily trafficked area because of the risk of collision. Additional factors needed to be taken into account to maximize the value of the data to other users, such as the National Weather Service, U.S. Coast Guard, U.S. Geological Survey, Army Corps of Engineers, commercial fishermen, recreational boaters, and whale-watching tour operators.

To help the partners make a well-informed decision, Shyka turned to the Northeast Ocean Data Portal for recent data on commercial ship traffic and recreational boating activity. On an interactive map of these data, he used the "draw" tool to indicate potential locations for the buoy, generated a static image of the maps, and emailed it to the project partners. In a subsequent web-conferencing session using the Portal, the group viewed the online map together and

"The Northeast Ocean Data Portal gave us critical pieces of information that helped us make our decision for where to locate the buoy."

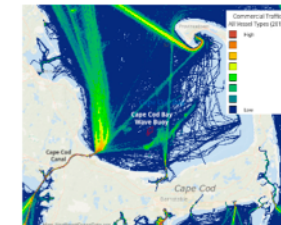
— Tom Shyka, NERACOOS



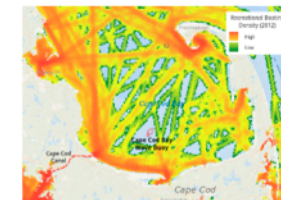
Deploying the new wave buoy in Cape Cod Bay.



A tug and barge transit Cape Cod Bay near Barnstable.



NERACOOS and partners used maps of commercial vessel traffic (above) and recreational boating density (below) from NortheastOceanData.org to identify a low-traffic area for siting the new wave-monitoring buoy. The new buoy's location, after it was deployed in 2016, is indicated by the red buoy symbol.



NORTHEAST OCEAN DATA PORTAL

DATA UPDATES AND OUTREACH FOR OCEAN ACTIVITIES

- RPB entities responsible for relevant ocean activities and associated Portal data themes
- Coordination with Marine Cadastre
- Data requests, processing and draft product development underway
- Draft products for many ocean activities available this fall for review
- Let us know how we can work with you to conduct outreach to inform the development and review draft products

Ocean Resources & Activities



NORTHEAST OCEAN DATA PORTAL

DATA UPDATES AND OUTREACH FOR OCEAN ACTIVITIES



Commercial Fishing

Datasets: Vessel Monitoring System (VMS); Vessel Trip Reports (VTR); Fishery Management Areas

Relevant RPB organizations:
NOAA NMFS, NEFMC

Schedule & outreach:

- Data requests in progress
- Draft products by end of summer
- Stakeholder review in fall 2017
- Update Portal by end of the 2017

Aquaculture

Datasets: Permitted aquaculture areas; shellfish management areas

Relevant RPB organizations:
States, USACE, NOAA

Schedule & outreach:

- Data request to states in progress
- Draft products by summer
- Stakeholder/agency review in summer/fall 2017
- Update Portal by end of the 2017

NORTHEAST OCEAN DATA PORTAL

DATA UPDATES AND OUTREACH FOR OCEAN ACTIVITIES



Marine Transportation

Datasets: Vessel traffic (AIS); Navigation & Safety (Aids to Navigation, Pilot boarding, Anchorages, Safety and security zones)

Relevant RPB organizations:
USCG, DOT, NOAA

Schedule & outreach:

- Data requests in progress
- Draft products by end of summer
- Stakeholder review in fall 2017
- Update Portal by end of the 2017

National Security

Datasets: Military installations; testing and training ranges; danger and restricted areas

Relevant RPB organizations:
DOD, USCG

Schedule & outreach:

DOD reviewing data and will provide updates to Marine Cadastre for distribution

NORTHEAST OCEAN DATA PORTAL

DATA UPDATES AND OUTREACH FOR OCEAN ACTIVITIES



Cultural Resources

Datasets: National Register Sites; Wrecks; Submerged archeological resources

Relevant RPB organizations: DOI (NPS, BOEM), NOAA, States, Tribes

Schedule & outreach:

- National Register historic sites: data request to go out to the NPS and states this spring
- All other activities are TBD

Recreation

Datasets: Boating; whale watching; diving; coastal recreation areas

Relevant RPB organizations: States, NOAA, USCG

Schedule & outreach:

- Coastal recreation areas data layer to be updated by fall 2017
- Several potential options to review and update the footprint of a range of different recreational activities

NORTHEAST OCEAN DATA PORTAL

DATA UPDATES AND OUTREACH FOR OCEAN ACTIVITIES



Energy and Infrastructure

Datasets:

Planning area status (operational, permitted, lease areas, wind energy areas, demonstration sites)

Existing infrastructure (cables, pipelines, energy facilities and transmission lines)

Relevant RPB organizations:

BOEM, DOE, States

Schedule & outreach:

Updated theme available this spring

Offshore Sand Resources

Datasets: Potential sand resources from recent investigations

Relevant RPB organizations:

BOEM, States, USACE, NROC Sand Subcommittee

Schedule & outreach:

Layers to be added when investigations and database completed

NORTHEAST OCEAN DATA PORTAL

DATA UPDATES AND OUTREACH FOR OCEAN ACTIVITIES



Restoration

Datasets: Potential restoration projects

Relevant RPB organizations:
States, USACE, Restoration Subcommittee

Schedule & outreach:
Subcommittee to put out a call for potential projects

STAKEHOLDER UPDATES



NORTHEAST OCEAN DATA PORTAL

Updating Marine Life and Habitat Data

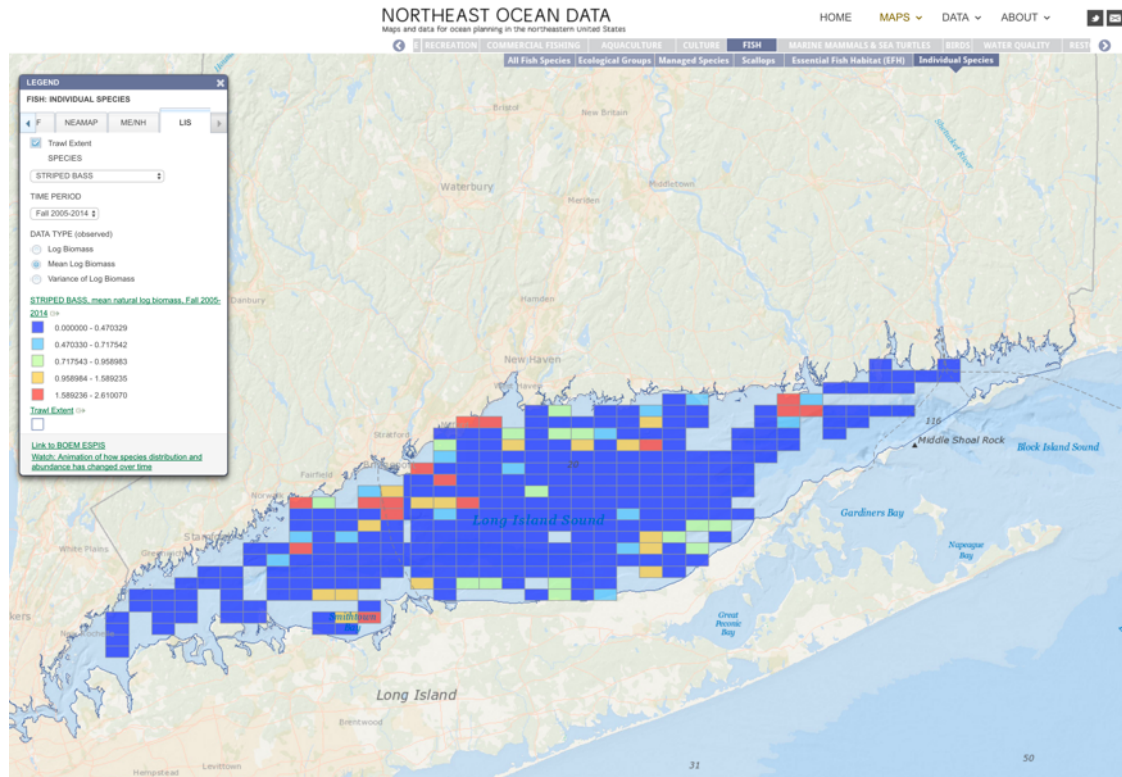


Marine Life and Habitat

Datasets	Relevant RPB organizations	Schedule & outreach
Fish trawl data for Long Island Sound	CT DEEP	Draft data March 2017; Release April 2017
Update marine mammals model	NOAA	Fall 2017
Sea turtles model	NOAA	Late fall 2017
Fish trawl data for coastal RI	RI DEM	TBD
Additional marine life ecological groups		TBD
Add VIMS data to scallop maps	NOAA	TBD
Incorporate additional avian data from USFWS Mid-winter Waterfowl Survey, SHARP, ESI, telemetry data for mammals, birds, fish, bats	USFWS, BOEM, NOAA	TBD

NORTHEAST OCEAN DATA PORTAL

Updating Marine Life and Habitat Data



Long Island Sound Fish Trawl

- 64 species
- 192 new layers
- Similar format as MDAT fish data
- No summary products (yet?)

NORTHEAST OCEAN DATA PORTAL

Updating Marine Life and Habitat Data



Marine Life and Habitat

Datasets

Relevant RPB organizations

Schedule & outreach

Update benthic habitat maps

NOAA, BOEM

TBD

Maps characterizing persistent phytoplankton bloom event

NOAA

Data obtained early 2017; maps will be added to IEA Data Evaluation this summer

Update submerged aquatic vegetation maps

States

Some updated data obtained early 2017; May need to re-convene eelgrass working group; maps to be updated by summer 2017

NORTHEAST OCEAN DATA PORTAL

Development and review of draft Important Ecological Area (IEA) data products



Habitat areas and species, guilds, or communities critical to ecosystem function, resilience and recovery. These areas are further defined and identified by the following **five components**:

1. Areas of high productivity
2. Areas of high biodiversity
3. Areas of high species abundance including areas of spawning, breeding, feeding, and migratory routes
4. Areas of vulnerable marine resources
5. Areas of rare marine resources

NORTHEAST OCEAN DATA PORTAL

Development and review of draft Important Ecological Area (IEA) data products



THE FIVE COMPONENTS ARE:

- An extension of the Marine Life and Habitat data on the NE Ocean Data Portal
- Eventually a resource of 50-100 peer-reviewed and vetted datasets that represent ecologically important patterns and help identify data gaps
- More than habitat and species distribution/abundance, in that they also characterize ecosystem processes and functions
- Easily updated with new data and information, just like all of the data on the NE Ocean Data Portal

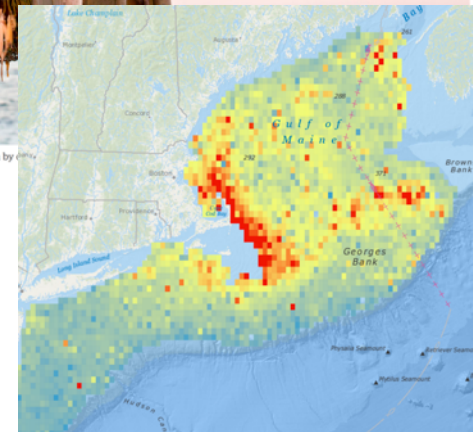
The New York Times

Fish Seek Cooler Waters, Leaving Some Fishermen's Nets Empty

By ERICA GOODE DEC. 30, 2016



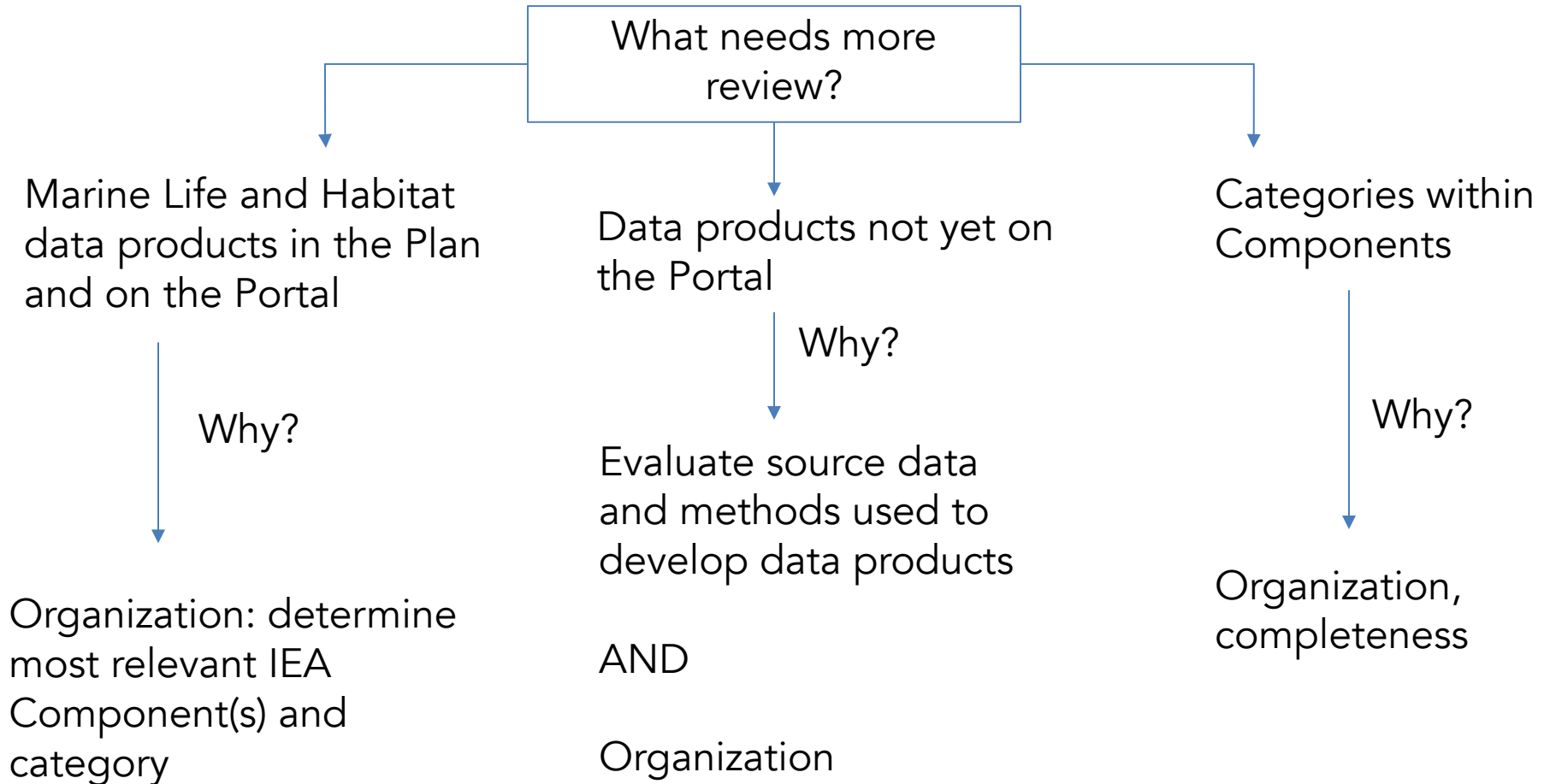
The fishing industry faces antiquated regulations that have been overtaken by warming seas force a variety of fish to seek cooler and deeper waters.
Christopher Cappozello for The New York Times



Total fish biomass (NEFSC fall survey)

NORTHEAST OCEAN DATA PORTAL

Development and review of draft Important Ecological Area (IEA) data products



Component 1: Areas of high productivity – Example: Chlorophyll-a Spring (median)

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Data Layers My Plans Participate

Surveys / IEA Component 1 Evaluation

1. Areas of High Productivity

The NOAA Northeast Fisheries Science Center will be the primary data provider for the data in this component. We continue to work with NEFSC staff to determine which available datasets best characterize productivity for the US Northeast Shelf LME. We expect to receive data representing: spring bloom frequency, magnitude and start day (1998-2015) from Friedland et al. 2015; primary productivity season means (1997-2015); and total zooplankton biovolume interpolations from bongo net surveys. CPR zooplankton data are currently available from NEFSC as time series data only (i.e., not spatial). We currently provide examples and approximations of the expected NEFSC layers using similar data sources and methods.

Below we first present data and questions for primary productivity (1a), then for secondary productivity (1b), and finally for proxies of high productivity (1c).

1a. Explore the following layers that represent primary productivity:

◆ currently also public on northeastoceandata.org

- ◆ Chlorophyll-a seasonal medians (2002 - 2015)
 - Chlorophyll-a Winter (median)
 - **Chlorophyll-a Spring (median)**
 - Chlorophyll-a Summer (median)
 - Chlorophyll-a Fall (median)

Bloom frequency (2002 - 2015)

- Spring bloom frequency
- Summer bloom frequency
- Fall bloom frequency
- Winter bloom frequency

Bloom magnitude (2002 - 2015)

- Spring bloom strength (median)
- Fall bloom strength (median)

Bloom start day (2002 - 2015)

- Spring bloom start day (median)
- Fall bloom start day (median)

Frequency of chlorophyll-a anomalies (2002 - 2015)
Anomalies that coincided with regional blooms were removed. As a result, these maps only show patterns not related to blooms.

- Spring anomalies frequency
- Summer anomalies frequency
- Fall anomalies frequency
- Winter anomalies frequency

Long-term annual mean chlorophyll-a fronts

- ◆ Elgrass beds
- ◆ Coastal wetlands

Is there one type of dataset or a subset of datasets that stand out as critical to representing areas of high primary productivity?

Click to select one or more options

KEY QUESTIONS

Which metric best represents primary productivity?

Are these appropriate analysis methods?

Esri, GEBCO, IHO-IOC GEBCO, DeLorme, NGS | Esri, GEBCO, DeLorme, NaturalVue | NOAA/NOS/Office of Coast Su... Powered by Esri and SeaSketch

Component 2: Areas of high biodiversity – Example: All cetacean species richness

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Surveys / IEA Component 2 Evaluation

2. Areas of High Biodiversity

Biodiversity products were produced as part of the M DAT mapping effort and include sampled/observed marine mammal, bird, and fish species. The intention for this component is to first display taxonomic metrics of biodiversity (2a, below) because they are complete, and they may adequately characterize patterns in biodiversity. Longer-term, we present the option to develop maps of functional diversity that include metrics of trophic richness (provided now as a proof of concept, 2b, below) but could also include metrics of mobility type, habitat preference, size, body form, and life span. There is a large body of functional trait research that could be used to choose metrics and assign taxa/species to trait categories (for example see <http://www.marinespecies.org/traits/>).

2a. Explore the following taxonomic metrics and indices of biodiversity:

◆ = currently also public on northeastoceandata.org

- ◆ All Cetacean Species Richness
- ◆ All Bird Species Richness
- ◆ All Fish Species Richness - NEFSC Fall Surveys
- All Fish Species Richness - NEAMAP Surveys
- All Fish Species - Gini-Simpson Index (NEFSC Fall Surveys)
- All Cetacean Species - Gini-Simpson Index

Note: Gini-Simpson Index cannot be calculated using M DAT bird relative abundance outputs

Which of the layers below adds particular value or shows an important pattern in diversity?

Click to select one or more options

Are there gaps or other features in the taxonomic metrics and indices of biodiversity data that affect overall interpretation?

If so, please indicate where: draw one or more polygons.

Add a Feature toggle visibility

2b. Functional metrics of biodiversity

We first presented this draft layer at the July 2016 EBM Work Group meeting. This layer is a proof of concept that could be expanded to other taxa and/or functional traits in the future.

Explore Avian foraging guild overlap: 2 species each

The graphic below explains how the layer was constructed.

KEY QUESTIONS

What is different about what Richness and Simpson index tell us?

Is functional diversity a useful concept and did we calculate the example appropriately?

Updated map to match bookmark undo change view details

Esri, GEBCO, DeLorme, NaturalVue | Esri, GEBCO, IHO-IOC GEBCO, DeLorme, NGS | NOAA/NOS/Office of Coast Su... Powered by Esri and SeaSketch

Component 3: Areas of high abundance – Example: All avian species rel. abundance

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Surveys / IEA Component 3 Evaluation

3. Areas of High Abundance

Below we present three ways to represent areas of high abundance: total abundance per taxa (3a), core abundance/biomass area per taxa (3b), and ranked relative abundance per taxa (3c). Lastly, we present a layer representing benthic faunal abundance (3d).

Abundance products for marine mammals, birds, and fish are readily available from the MDAT mapping effort, and they were produced with two different methods (simple summing of total abundance, and core abundance/biomass area richness delineation).

Total Abundance
total # individuals of all species in each cell

3a. Explore the marine life total abundance layers:

- ◆ = currently also public on northeastoceandata.org
- ◆ All cetaceans total abundance
- ◆ All avian species total relative abundance
- ◆ All fish species total biomass - NEFSC fall surveys
- All fish species total biomass - NEAMAP surveys

Core Abundance Area

species density or abundance map → smallest area containing 50% of all individuals of a species → # of overlapping core abundance areas for all species

3b. Explore the marine life core abundance/biomass area richness layers:

- Cetacean core abundance area richness - Atlantic scale
- Cetacean core abundance area richness - Mid-Atlantic scale
- Cetacean core abundance area richness - Northeast scale
- Avian core abundance area richness - Atlantic scale
- Avian core abundance area richness - Mid-Atlantic scale
- Avian core abundance area richness - Northeast scale
- Fish (NEFSC fall) core biomass area richness - Northeast shelf scale
- Fish (NEFSC fall) core biomass area richness - Mid-Atlantic scale
- Fish (NEFSC fall) core biomass area richness - Northeast scale
- Fish (NEAMAP) core biomass area richness - Northeast shelf scale
- Fish (NEAMAP) core biomass area richness - Mid-Atlantic scale
- Fish (NEAMAP) core biomass area richness - Northeast scale

A ranked relative abundance approach is another method tested by MDAT that has promise because with this method, relative abundances can be readily compared among taxa.

Ranked Relative Abundance/Biomass

KEY QUESTIONS

Is the taxa-level the right way to characterize abundance?
Higher temporal resolution?

What are the pros/cons of the different approaches to summarize abundance?

Updated map to match bookmark [undo](#) [change](#) [view details](#)

Esri, GEBCO, IHO-IOC GEBCO, DeLorme, NGS | Esri, GEBCO, DeLorme, NaturalVue | NOAA/NOS/Office of Coast Su... Powered by [Esri](#) and [SeaSketch](#)

Component 4: Areas of vulnerable marine resources – Example: Shellfish habitat

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Data Layers My Plans Participate

Surveys / IEA Component 4 Evaluation

4. Areas of Vulnerable Marine Resources

Data relevant to vulnerable marine resources come from many sources. Several sources were related to a management or regulatory framework designed to protect the resource, e.g., Critical Habitats defined under the Endangered Species Act. Layers were also derived from studies or efforts to quantify species' sensitivity to a particular stressor, e.g., the maps of avian species with higher collision sensitivity due to offshore renewable energy. Therefore, the available observational data and the chosen mapping approach may be skewed toward a particular concern/impact and less representative of more general inherent vulnerability. As a result, the layers in this category range in their ability to characterize species' fragility, inherent sensitivity, and sensitivity to specific stressors/disturbances.

For this Component, we relied heavily on existing data on the Northeast Ocean Data Portal, and also obtained new data from the [New England Fishery Management Council's SASI analyses](#) and [deep sea corals work](#), as well as the [Mid-Atlantic Fishery Management Council's deep sea corals work](#).

4a. Explore the layers that represent species' sensitivity to specific stressors:

♦ = currently also public on [northeastoceandata.org](#)

- ♦Relative abundance of avian species with higher collision sensitivity
- ♦Relative abundance of avian species with higher displacement sensitivity
- ♦Abundance of cetaceans sensitive to high-frequency sound
- ♦Abundance of cetaceans sensitive to mid-frequency sound
- ♦Abundance of cetaceans sensitive to low-frequency sound
- Habitat sensitivity to bottom trawling - NEFMC
- Habitat sensitivity to longline fishing - NEFMC

4b. Explore the layers that relate to fragile and inherently sensitive species/habitats:

- MAFMC discrete deep sea coral zones
- NEFMC draft discrete coral zones
- ♦Eelgrass beds
- ♦Shellfish habitat
- ♦Coastal wetlands
- ♦Sponges
- ♦Fish and shellfish EFH overlay
- ♦Highly migratory species EFH overlay
- ♦Total relative abundance of BCR30 highest, high, and moderate priority avian species
- ♦Habitat Areas of Particular Concern (HAPC)
- ♦Scallop habitat closure areas
- ♦ASMFC Herring Spawning Areas
- ♦Critical Habitat Designations
- ♦Bird habitat

What is missing from this component?
Please describe.

KEY QUESTIONS

What other stressor-sensitivity groups should be developed?

What other species and habitats are inherently vulnerable because of their life history?

Updated map to match bookmark undo change view details

seasket.ch/y077632Euy

BS | NOAA/NOS/Office ...

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Component 5: Areas of rare marine resources – Example: Total relative abundance of Northeast state-listed avian species

Northeast Ocean Planning
admin

English take a tour ? help Emily Shumchenia

KEY QUESTIONS

What are our options to address the many data gaps for this Component?

If rarity could be calculated mathematically, how?

Data Layers My Plans Participate

Surveys / IEA Component 5 Evaluation

5. Areas of Rare Marine Resources

For this component, we parsed rarity into regional and global scales. Due to data availability, we relied primarily on ESA status to determine the species that were relevant to this component. Layers representing individual species/group abundance are derived from the MDAT mapping effort. We recognize that there may be additionally spatially rare species and habitats not identified below, and we ask that you provide input on those gaps and citations/references to existing data where possible in the space provided.

See a list of marine mammal, ocean and coastal bird, fish, and sea turtle species listed as endangered, threatened, or of special concern in at least one New England state for which MDAT products do not exist or are limited in scope.

All of the following datasets are already publicly available on northeastoceandata.org as noted by (*).

5a. Regionally rare:

- ♦ Total relative abundance of BCR30 priority avian species
- ♦ Total relative abundance of state-listed avian species

5b. Globally rare:

- ♦ Abundance of all ESA-listed cetaceans
- ♦ Roseate tern annual relative abundance

Is there a species, group, or habitat that is currently missing but critical to include in this component?
If so, please describe.

Are there gaps or other features in the rare marine resources data that affect overall interpretation?
If so, please indicate where: draw one or more polygons.

Add a Feature toggle visibility

End of Component 5

If your answers are complete, hit the green "Submit Response". Once you hit Submit, you will not be able to edit these responses. You will, however, be able to return to the survey and start over with a blank evaluation - this action will save multiple copies of this evaluation under your name.

If you'd like to save your answers and return to the survey later to finalize them, hit the grey "Save Draft" button.

cancel Save Draft Submit Response

Esri, GEBCO, DeLorme, NaturalVue | Esri, GEBCO, IHO-IOC GEBCO, DeLorme, NGS | NOAA/NOS/Office of Coast Su... Powered by Esri and SeaSketch

NORTHEAST OCEAN DATA PORTAL

Development and review of draft Important Ecological Area (IEA) data products



- In the process of obtaining input
- Need more time to learn about data and get feedback – through June
- Incorporate new models, revise products, Fall 2017

The screenshot displays the Northeast Ocean Planning data portal. The main map shows the Northeast Ocean region, including the St. Lawrence River, Lake Ontario, Lake Erie, and the Atlantic coast. A large 'DRAFT' watermark is overlaid on the map. The interface includes a top navigation bar with 'Northeast Ocean Planning', 'admin', 'seasketch', and user information for 'Emily Shurchenia'. On the right, there are tabs for 'Data Layers', 'My Plans', and 'Participate'. Below these, a search bar contains 'Surveys / IEA Component 3 Evaluation'. The main content area is titled '3. Areas of High Abundance' and contains the following text:

Below we present three ways to represent areas of high abundance: total abundance per taxa (3a), core abundance/biomass area per taxa (3b), and ranked relative abundance per taxa (3c). Lastly, we present a layer representing benthic faunal abundance (3d).

Abundance products for marine mammals, birds, and fish are readily available from the MDAT mapping effort, and they were produced with two different methods (simple summing of total abundance, and core abundance/biomass area richness delineation).

Total Abundance
total # individuals of all species in each cell

3a. Explore the marine life total abundance layers:

- = currently also public on [northeastoceandata.org](#)
- All cetaceans total abundance
- All avian species total relative abundance
- All fish species total biomass - NEFSC fall surveys
- All fish species total biomass - NEAMAP surveys

Core Abundance Area
of overlapping core abundance areas for all species

species density or abundance map → smallest area containing 50% of all individuals of a species → species 1 core abundance area, species 2 core abundance area, species 'n' core abundance area

3b. Explore the marine life core abundance/biomass area richness layers:

- Cetacean core abundance area richness - Atlantic scale
- Cetacean core abundance area richness - Mid-Atlantic scale
- Cetacean core abundance area richness - Northeast scale
- Avian core abundance area richness - Atlantic scale
- Avian core abundance area richness - Mid-Atlantic scale
- Avian core abundance area richness - Northeast scale
- Fish (NEFSC fall) core biomass area richness - Northeast shelf scale
- Fish (NEFSC fall) core biomass area richness - Mid-Atlantic scale
- Fish (NEFSC fall) core biomass area richness - Northeast scale
- Fish (NEAMAP) core biomass area richness - Northeast shelf scale
- Fish (NEAMAP) core biomass area richness - Mid-Atlantic scale
- Fish (NEAMAP) core biomass area richness - Northeast scale

A ranked relative abundance approach is another method tested by MDAT that has promise because with this method, relative abundances can be readily compared among taxa.

Ranked Relative Abundance/Biomass

NORTHEAST OCEAN DATA PORTAL

Development and review of draft Important Ecological Area (IEA) data products



QUESTIONS?

What is Monitoring & Evaluation?



establishes two tracks

Plan Performance Monitoring

Measure progress toward implementing the Plan's actions and achieving the Plan's goals and objectives 

- Conditions before Plan
- Track implementation
- Obtain public input

Ecosystem Health Monitoring & Evaluation

Measure changes in the ecosystem, including human activities, to identify issues that may require management attention

- Baseline
- Indicators
- Obtain public input



Inform amendments and updates to the Plan

PLAN PERFORMANCE MONITORING



- RPB has developed an initial draft approach for monitoring plan performance
- Draft approach summarizes principles from NE Ocean Plan
 - Relate plan performance indicators to Plan outcomes, goals, objectives, and actions (or implementation activities)
 - Establish baseline
 - Balance specificity with availability of information
 - Establish fewer more effective indicators rather than many indicators
 - Obtain public input
 - Ensure indicators inform whether Plan amendments or updates are necessary

PLAN PERFORMANCE MONITORING



- Draft approach groups plan actions into **four major categories**:
 - Maintain and update data (Chapter 3)
 - Inform regulatory and management decisions (Chapter 3)
 - Enhance agency coordination (Chapter 3 and 4)
 - Advance regional science and research priorities (Chapter 5)

Each of the four major action categories:

- Identifies relevant actions from the Plan
- Includes draft outcomes either directly quoted or derived from the Plan
- Identifies relevant goals and objectives

2. Inform Regulatory and Management Decisions

Actions

Chapter 3 of the Plan summarizes the regulatory and management context in the region, including federal environmental and regulatory laws and management activities that are most relevant for Plan implementation. Each of the ten ocean resource and activity sections in Chapter 3 includes additional details about the regulatory and management context that is specific to the resource or activity. Each section also includes a series of actions under the heading “inform regulatory and management decisions” about how relevant agencies will use Plan data and information to inform decision-making. The following actions generally cover the intent of each of the individual actions under that section heading for each of the ten ocean resources or activities:

- Use the Plan and Portal to inform regulatory and management decisions.
- Use the Plan and Portal to identify potential conflicts and compatibilities.
- Use the Plan and Portal to identify and engage potentially affected stakeholders.
- Use the Plan and Portal to help determine the additional research or data collection necessary to make a regulatory or management decision.

Draft Outcomes

Throughout the Plan there are discussions and references to intended outcomes from this category of actions. The following attempts to summarize those outcomes for discussion purposes.

- Potential conflicts, compatibilities, affected stakeholders, and additional research considerations are identified early in relevant regulatory and management processes using the information in the Plan and the data on the Portal as two important regionally approved sources.
- Agency coordination, public engagement around agency actions and management activities, and stakeholder proposals and participation in the regulatory process are enhanced through the collective use of the Portal as a repository of regional data products that have been vetted as reasonable characterizations of the spatial extent of human activities and ocean resources.

3. Enhance Agency Coordination

Actions

Several of the ocean resource and activity sections in Chapter 3 include actions under the heading “enhance agency coordination.” These actions are primarily intended to ensure continued regional coordination around offshore human activities that are becoming or likely to become greater considerations over time, such as energy, aquaculture, and the use of offshore sand resources. The first section of Chapter 4 includes a series of best practices intended to generally enhance intergovernmental coordination and coordination with stakeholders across

PLAN PERFORMANCE MONITORING

Relevant Goals and Objectives

The following table is an initial attempt at linking actions from the 2016 Northeast Ocean Plan to the original planning goals and objectives from the [Framework for Ocean Planning in the Northeast United States](#) by identifying the planning objectives that are primarily relevant to each of the four previously described plan action categories.

GOAL	OBJECTIVE	Plan Action Categories			
		1. Maintain and Update Data	2. Inform Reg. and Mgmt. Decisions	3. Enhance Agency Coord.	4. Advance Science and Research Priorities
Healthy Ocean and Coastal Ecosystems	1. Characterize the Region’s Ecosystem, Economy, and Cultural Resources	X			X
	2. Identify and Support the Existing Non-regulatory Opportunities to Work Toward Conserving, Restoring and Maintaining Healthy Ecosystems			X	
	3. Produce a Regional Ocean Science Plan that Prioritizes Ocean Science and Data Needs for the Region for the Next Five Years	X		X	X
Effective Decision-making	1. Enhance Inter-Agency Coordination		X	X	X
	2. Implement Specific Actions to Enhance Informed Public Input in Decision-making		X	X	
	3. Incorporate Maps and Other Products into Existing Agency Decision-making Processes		X	X	X
	4. Improve Respect for the Customs and Traditions of Indigenous Peoples in Decision-making Processes			X	X
	5. Improve coordination with local communities in decision-making processes			X	
Compatibility Among Past, Current and Future Ocean Uses	1. Increase Understanding of Past, Current and Future Interactions Among Ocean Uses and the Ocean and Coastal Ecosystem	X	X	X	X
	2. Ensure Regional Issues are Incorporated in Ongoing Efforts to Assess New and Existing Human Activities			X	X

Potential Next Steps

- Organize RPB around four major action categories
- Category> Individual Actions> Intended Outcomes> Indicators> Baseline> Agency Reporting
- Communication options
- Determine whether and how each indicator can inform Plan amendments and updates and/or revisions to Plan goals/objectives/actions