

Summary of options for identifying important ecological areas and conducting other assessments for ocean planning

The following are general categories of options to advance work under Action 1-2 of the Healthy Ocean and Coastal Ecosystems Goal in the [Framework for Ocean Planning in the Northeast US](#). They incorporate and build on the options discussed at the [June 24, 2014 Natural Resources Workshop](#), the [June 25, 2014 Northeast Regional Planning Body \(RPB\) meeting](#), and the [draft summary of marine life data sources and approaches to define ecologically important areas and measure ocean health](#). The intent of this document is to provide a concise set of options in order to obtain public input and initiate RPB consideration of the range of potential approaches to achieving regional planning objectives.

For many of the options described below, the RPB will likely need to conduct additional research to determine the management applicability through existing authorities and will need to consider its long term role in implementation - similar to the options currently under consideration for the Effective Decision Making goal. The RPB will also need to consider agency and staff capacity, budget, and the overall planning timeline. A summary of these practical considerations are provided with the options below.

Options for identifying important ecological areas

Options 1 through 5 represent a progression in terms of the likely increased level of effort. Agency and staff capacity, budget, science and technical support, and legal research requirements increase in order to develop scientifically sound products that can be implemented under existing authorities. Sequencing of activities is also a consideration as some options rely on outputs from previous options. Lastly, the RPB will need to consider historic and future trends, including changing ecological conditions, in each of the options and decide on long term maintenance of data products developed for decision making.

1. Summarize ecological areas currently designated through existing authorities in the Northeast

Compile maps of important ecological areas already designated through existing authorities and state planning efforts. Consider the protections already provided in those areas, especially in areas designated under multiple authorities. These include, but are not limited to:

- Critical Habitat designations under the federal Endangered Species Act;
- Essential Fish Habitat under Magnuson-Stevens Act;
- Special, Sensitive and Unique areas under the MA Ocean Plan;
- Areas Designated for Preservation or Areas of Critical Concern under the RI OSAMP

Considerations:

- A. The Northeast Ocean Data portal team, with input from relevant agencies, is already compiling areas identified by the above authorities and planning efforts.
- B. Areas related to the above authorities are designated for different management purposes, resulting in differences in how spatial areas are mapped and how those maps are utilized
- C. Potential actions:
 - i. Identify and consider other existing Federal and state authorities with similar spatial management measures and obtain designation area boundaries

- ii. Consider methods for merging boundaries to identify areas that have been designated by multiple authorities
- iii. Determine potential management implications for areas identified as ecologically important by multiple authorities

2. Develop distribution and abundance products for marine life species

The RPB is characterizing the distribution, abundance, and trends of marine life species that are protected through existing authorities or are socioeconomically and culturally important. The RPB has established three work groups composed of experts from state and federal agencies, tribes, academia, industry, and environmental organizations to inform and review product development. In combination with areas designated through existing authorities (1 above) and habitat and range maps already used by regulatory agencies, these products will provide additional context, previously unavailable at this geographic extent, about these species and their important habitats.

Considerations:

- A. An extensive effort is underway for marine mammals, sea turtles, birds and fish. This includes a large research team and three expert work groups composed of over 60 individuals. Additional experts have been identified and will be contacted as necessary.
- B. Final products are expected in the summer of 2015
- C. Potential actions:
 - i. Regulatory agencies will need to engage in product development and consider potential management applications (relates to options being discussed under the Effective Decision Making goal)

3. Identify abundance hot spots and other core habitat and occurrence areas

Derive regional abundance hot spots for individual marine life species from the products developed in option 2. If possible, identify additional habitats for each species that may not be captured by distribution and abundance maps, such as migratory corridors or spawning areas. As part of the Effective Decision Making goal, determine how hot spots and other habitats would be incorporated into existing regulatory efforts.

Considerations:

- A. The RPB will need final products from option 2 in order to complete this option. Some activities can commence before final products, such as consideration of methods and initial analysis.
- B. Potential actions:
 - i. Direct existing expert work groups to inform methodologies for identifying hot spots, migration corridors, and other potentially important habitat areas that are not captured by distribution and abundance maps. Ensure consistency of approaches across taxa
 - ii. Identify capacity and budgetary needs and obtain technical support for conducting analyses
 - iii. Regulatory agencies will need to engage in product development and consider potential management applications

4. Overlay abundance hot spots, core habitat, and other occurrence areas for protected and important marine life species

Combine maps indicating regional abundance hot spots and other core habitat developed in options 2 and 3 to identify areas important to multiple marine life species.

Considerations:

- A. The RPB will need to complete products from options 2 and 3 in order to proceed
- B. The RPB will need to develop a methodology for combining multiple species hot spots and other core habitat areas
- C. The RPB will need to identify potential management applications for final products
- D. Potential actions:
 - i. Establish a multi-disciplinary work group, composed of members of the three existing work groups and other potential experts, to inform methodologies for combining hot spot and habitat data for multiple species
 - ii. Identify capacity and budgetary needs and obtain technical support for conducting analyses
 - iii. Research and consider the legal implications associated with identifying important areas for multiple protected species and consider developing plan implementation guidance accordingly.

5. Explore options for advancing an ecosystem-based approach to identifying ecologically important areas

Define ecological importance and understand existing science and research for evaluating different ecological components that may not be characterized through species' distribution and abundance modeling. This could include consideration of issues such as identifying areas of high productivity and biological diversity, species rarity, persistence, vulnerability, function and resilience. Consider opportunities for utilizing products under existing authorities.

Considerations:

- A. Existing science and potential management applications should be researched in advance of conducting these analyses
- B. Products from option 1, 2 and other decisions will likely need to be completed in advance
- C. It will be challenging to reach agreement on the scientific definitions of ecological importance and on potential technical approaches
- D. This option will require an extensive and likely long-term effort to complete
- E. Potential actions:
 - i. Establish a work group composed of experts in the physical, biological, and social sciences to define ecological importance and to identify, evaluate and recommend approaches to identifying areas
 - ii. Conduct legal research and consider the opportunities for utilizing an analysis of important ecological areas under existing authorities
 - iii. Determine level of effort, capacity and budget required to advance an approach or approaches to identifying important ecological areas

Options for measuring ocean health and conducting other assessments

The following options focus on opportunities discussed at the June 24th Natural Resources Workshop to conduct other assessments for ocean planning, including measuring ocean health and conducting tradeoff analyses.

1. Coordinate with existing regional efforts to measure ocean health

Consider opportunities to coordinate and partner with existing programs and projects to measure ocean health, track changes over time and inform regional planning and regulatory decisions. Relevant existing efforts include, but are not limited to NROC/NERACOOS Sentinel Monitoring for Climate Change, the Gulf of Maine Council's Ecosystem Indicator Partnership (ESIP), the National Estuary Programs (NEP), and efforts to establish a Biological Condition Gradient framework or assess cumulative impacts. The potential outcome of this option would be the establishment of a regional baseline using indicators selected from existing regional programs.

Considerations:

- A. Existing programs have been developed to inform specific and likely different management efforts and therefore indicators of ocean health may not be ideally suited for regional ocean planning purposes
- B. Timing - additional progress may be necessary on other ocean planning activities in advance of identifying programs and indicators for measuring ocean health
- C. While selecting or developing indicators, the RPB will need to consider and articulate its long term role in ocean plan implementation
- D. Potential actions:
 - i. Identify opportunities to coordinate with existing programs and efforts
 - ii. Establish a work group composed of RPB staff and representatives from regional indicator programs to select indicators that are most relevant to ocean planning goals and to establish a baseline
 - iii. Identify capacity and budgetary needs to support a work group and establish a baseline
 - iv. Develop a strategy for using those indicators to track ocean health and plan implementation, including determining the RPB's long-term role

2. Consider customizing the Ocean Health Index (OHI) for the Northeast

The OHI (www.oceanhealthindex.org) has recently been developed globally and has been customized to inform regional scale management and planning in different areas. The RPB could review the OHI and consider adopting its framework for evaluating and monitoring the ecological, economic and cultural benefits of the ocean. The potential outcome of this option would be a framework for monitoring ocean health that is developed by the RPB to more directly support regional planning needs.

Considerations:

- A. The OHI provides the RPB with an opportunity to customize measures to ocean planning priorities and engage the public in defining ocean health in terms of ecological and cultural goals for the region.

- B. The RPB will be able to leverage extensive data development through the data portal, marine life, and baseline assessment projects. However, development of the index will require additional budget and capacity to customize goals, conduct analyses, and establish a baseline.
- C. Timing - additional progress may be necessary on other ocean planning activities in advance of developing goals and indicators for the OHI
- D. While developing indicators, the RPB will need to consider and articulate its long term role in ocean plan implementation
- E. Potential actions:
 - i. Establish a work group composed of ocean planning staff, RPB members or staff, and others to work with the OHI team to customize the OHI framework to measure the human and ecological components relevant to ocean planning in the Northeast
 - ii. Identify capacity and budgetary needs to develop the OHI
 - iii. Develop a strategy for using the OHI to inform plan implementation, including determining the RPB's long-term role

3. Revisit the opportunity to conduct tradeoff analyses

Tradeoff analyses typically require robust spatial and socioeconomic data and specific spatial management decisions. The RPB could consider revisiting the opportunity to conduct tradeoff analyses in 2015 after developing baseline data products, deciding whether and how to identify ecological areas or measure ocean health, and determining the use of plan data and information under existing authorities.