

Northeast Ocean Plan Outline
Chapter 5 Addendum
November 2015 Draft

This addendum to the Northeast Ocean Plan Outline focuses on science and research priorities related to topics highlighted in other chapters of the plan, particularly Chapter 3. It provides a framework for describing science and research priorities for each of these topics and categories including: updates to ocean plan data products, new research, and programs and efforts to leverage. Each section includes some examples to illustrate the concept. Input from the public, the RPB and the Ecosystem Based Management Work Group will inform the identification of priorities.

5.1. Natural and Cultural Resources

5.1.1. Marine Mammals and Sea Turtles

A. <u>Updates to Ocean Plan Data Products</u>	<ul style="list-style-type: none"> – Incorporate additional survey data into the model and update plan products – Develop a companion data product showing survey effort over time
B. <u>New Research</u>	<ul style="list-style-type: none"> – Identify geographies and times requiring additional observations and provide model criteria for use in designing any new survey to ensure data are used – Study the effects of various disturbances and develop products for species groups sensitive to those disturbances
C. <u>Programs and Efforts to Leverage</u>	

5.1.2. Birds

A. <u>Updates to Ocean Plan Data Products</u>	<ul style="list-style-type: none"> – Incorporate additional survey data into the model and update plan products – Develop a companion data product showing survey effort over time
B. <u>New Research</u>	<ul style="list-style-type: none"> – Identify geographies and times requiring additional observations and provide model criteria for use in designing any new survey to ensure data are used

	<ul style="list-style-type: none"> – Study the effects of various disturbances and develop products for species groups sensitive to those disturbances
C. <u>Programs and Efforts to Leverage</u>	

5.1.3. Fish

A. <u>Updates to Ocean Plan Data Products</u>	<ul style="list-style-type: none"> – Incorporate additional survey data into the model and update plan products – Develop a companion data product showing survey effort over time
B. <u>New Research</u>	<ul style="list-style-type: none"> – Study the effects of various disturbances and develop products for species groups sensitive to those disturbances
C. <u>Programs and Efforts to Leverage</u>	

5.1.4. Habitat and Important Ecological Areas

1. Regulated Habitat Areas

A. <u>Updates to Ocean Plan Data Products</u>	<ul style="list-style-type: none"> – Update regulated habitat areas, such as Essential Fish Habitat, as new data/information are made available
B. <u>New Research</u>	<ul style="list-style-type: none"> – Habitat classification, see also Section 5.3 Ecosystem Based Management
C. <u>Programs and Efforts to Leverage</u>	

2. Important Ecological Areas and Ecosystem Considerations

*The following are example **long-term data needs** corresponding to **draft** components of Important Ecological Areas as defined and **under review** by the Ecosystem Based Management Work Group (EBM WG) using definitions included in the National Ocean Policy Task Force Recommendations and from similar international efforts. Many long-term data needs for IEAs will also be addressed in Sections 5.1 and 5.3. Examples given here in the specific context of each draft IEA component are provided to illustrate the concept. Please refer to EBM WG documents for more information. This section will be formatted similarly to others and will include updates to ocean plan products, new research, and programs to leverage once the IEA components have been finalized.*

- Areas of High Productivity
(for example, identify areas of high productivity from benthos, SAV, and macroalgae)
- Areas of High Biodiversity
(for example, a more complete assessment of biodiversity that incorporates additional taxa including corals, large-bodied fishes (e.g. sharks), macroalgae, SAV, benthic infauna and epifauna)
- Habitat Areas and Distribution of Species Critical to Ecosystem Function and Resilience
(for example, a more complete understanding of distribution and abundance of keystone species, foundational species, and ecosystem engineers in the region)
- Areas of Functionally Vulnerable Marine Resources
(for example, identify and map species vulnerable to warming waters and acidification – see also Section 5.4 Changing Conditions)
- Areas of Spawning, Breeding, Feeding, and Migratory Routes
(for example, integrate breeding, nesting and feeding areas for avian species)
- Areas of Rare Marine Resources
(for example, identify species encountered x% of the time or that occur in less than x% of the region in MDAT products)

5.1.5. Historic and Cultural Resources

A. <u>Updates to Ocean Plan Data Products</u>	– Update the map of National Register of Historic Places as sites are added
B. <u>New Research</u>	<ul style="list-style-type: none"> – Continue and expand research to identify submerged paleocultural landscapes – Expand efforts to incorporate traditional knowledge, specifically: <ul style="list-style-type: none"> ○ Develop a database of navigational place names ○ Develop a database of tribal traditional knowledge to be accessible along with other data/information products
C. <u>Programs and Efforts to Leverage</u>	

5.2. Human Activities

5.2.1. Marine Transportation

A. <u>Updates to Ocean Plan Data Products</u>	<ul style="list-style-type: none"> – Update AIS vessel density products annually – Expand on monthly time series data to better understand variation in intra-annual traffic – Develop and implement a methodology for counting unique transits
B. <u>New Research</u>	<ul style="list-style-type: none"> – Develop a tool to select areas with a certain number or percentage of unique transits
C. <u>Programs and Efforts to Leverage</u>	

5.2.2. National Security

5.2.3. Commercial Fishing

A. <u>Updates to Ocean Plan Data Products</u>	<ul style="list-style-type: none"> – Update VMS vessel density products annually
B. <u>New Research</u>	<ul style="list-style-type: none"> – Develop a method to characterize fishing effort using VMS, VTR, state permits, and other sources of information – Develop a method to link areas of fishing effort to specific communities
C. <u>Programs and Efforts to Leverage</u>	

5.2.4. Recreational Fishing

5.2.5. Recreation

5.2.6. Energy and Infrastructure

5.2.7. Aquaculture

5.2.8. Sand and Gravel

5.3. Ecosystem Based Management

A. <u>Updates to Ocean Plan Data Products</u>	– Update existing data that comprise IEA components – see Section 5.1.4
B. <u>New Research</u>	<ul style="list-style-type: none"> – Develop and implement a regional habitat classification – Advance methods to understand and incorporate ecosystem service production and value into decision making – Advance methods to quantify cumulative impacts – including better mapping of stressors and ecosystem vulnerability to those stressors
C. <u>Programs and Efforts to Leverage</u>	

5.4. Changing Conditions

A. <u>Updates to Ocean Plan Data Products</u>	– Update oceanography/hydrography products as new data become available
B. <u>New Research</u>	– Identify and map species and habitats vulnerable to warming waters and acidification – see Section 5.1.4, IEA Component “Areas of Functionally Vulnerable Marine Resources”
C. <u>Programs and Efforts to Leverage</u>	