

Ocean and Coastal Ecosystem Health



Goal: The importance of ocean and coastal ecosystem health is recognized as critical to the long-term sustainability of our region. All levels of government have access to and utilize comprehensive information to manage ocean and coastal resources.

Summary: The Northeastern U.S. coast is a rich and diverse place, from the shallow sea of Long Island Sound to the beaches of Cape Cod, and the rocky shores and complex circulatory patterns of the Gulf of Maine.

These ecosystems have abundant resources and have supported coastal communities for generations. But these valuable ecosystems are vulnerable. The impacts of increasing human uses including many new industrial uses, and the effects of fractured management are showing in degraded water quality, depleted fish stocks, and damaged habitat, as evidenced by documented "dead zones" in the Long Island Sound and decreased anadromous fisheries in the Gulf of Maine. The New England states have also identified the links between human activity on the land with the health of our coasts and estuaries.

Literally thousands of people are working to protect and restore coastal and ocean ecosystem health in the Northeastern U.S. Because there are so many people, agencies and organizations already working on the coastal and ocean ecosystem health. The Northeast Regional Ocean Council's (NROC) role should be to enhance communication and collaboration amongst these parties, advocate for what is collectively determined to be the highest priority regional actions, and to help articulate a common vision for management and restoration. NROC has identified three areas of focus within coastal and ocean ecosystem health:

- Linking observations to management decision-making,
- Enhanced data collection, integration and dissemination, and
- Better governance, coordination and communication.

Accomplishments:

- **Coastal America priority restoration project list (April 2009)** The Coastal America Northeast Regional Implementation Team updated its list of coastal and riverine habitat restoration projects, and inventory of funding sources for habitat restoration work, in April 2009, and delivered it to the OCEH committee to help federal and state agencies coordinate ARRA funding for "shovel-ready" projects.
- **Regional ecosystem-based marine spatial planning workshop #1 with TNC (June 2009)** June 2009 workshop with NOAA and TNC on improving the understanding of principles and objectives of marine spatial planning, as well as assessing regional data availability. Discussions and results of this workshop indicated a need for additional opportunities to explore the data and regulatory context for ocean planning in the Northeast.
- **Regional ecosystem-based marine spatial planning workshop #2 with NOAA (October 2009)** October 2009 workshop to advance shared objectives of ocean planning through discussion of data and research coordination needs and regulatory efficiency possibilities, and through enhancing the region's capacity to "think and work like a community", including state-federal cooperation, to support "on the water" integrated ocean management efforts at every level.
- **National Ocean Policy comments from NROC (October 2009)** NROC participated in and provided official comments on development of National Ocean Policy including national CMSP framework.
- **Established working group for Coastal Land Conservation Initiative (January 2010)** As directed by New England Governors, worked with NEGC's Commission on Land Conservation to initiate a Safeguarding Coastal and Estuarine Land pilot project that builds

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on state and regional land conversation, climate, and wildlife plans to address joint goals for land conversation, climate change adaptation, and habitat protection.

- **Identified regional ocean and coastal ecosystem health priorities (June-October 2010)**
Worked through the New England-Canadian Maritime Collaboration and Planning Initiative—a new enterprise that includes more than 15 key regional councils, partnerships and NGOs—to identify key needs and priorities for ocean and coastal ecosystem health and define specific projects to meet those needs.
- **Successful expansion of the Gulf of Maine Ocean Data Partnership** to southern New England, now called the Northeast Ocean Data Partnership. Supported partnership projects to advance data discoverability, accessibility, and interoperability in the Northeast region.
- **Support for Sudbury Group** (technical arm of New England Regional Dredging Team) The Sudbury Group met five times during 2009-2010 and continued to make progress in working with the states to improve the scientific basis for the imposition of "time-of-year" restrictions on dredging and other coastal development projects. The Massachusetts Division of Marine Fisheries has completed a two-year project to update its TOY recommendations for all estuarine and coastal waters, and is serving as a model for the other New England states. Several Sudbury Group members also helped plan and participated in the National Dredging Team/Regional Dredging Teams meeting on April 21-23, 2009, in Point Clear, Alabama, which include a presentation by MA DMF on their TOY work.

Activity Details:

1. **Support ecosystem-based management and coastal and marine spatial planning through development of data/ mapping products and improved data discoverability and interoperability.** *[Note: with the convening of the NROC Coastal and Marine Spatial Planning (CMSP) ad-hoc committee, there will be some overlap with the Ocean and Coastal Ecosystem Health (OCEH) standing committee activities.]*

Actions:

- Develop regional data portal and network to serve as a single portal and distributed network for regional coastal and marine spatial data (**see also CMSP activity #3**).
- Work with the Northeast Regional Association of Coastal Ocean Observing Systems (NERACOOS), the New England-Canadian Maritime Collaboration and Planning Initiative, and other organizations to develop key data/ mapping products, including:
 - the production of high-resolution maps of the ocean floor spanning the region’s highest priority geographic areas;
 - creating an atlas (e.g., database or spatial data layers) of the spatial extent and intensity of consumptive and non-consumptive human uses of the ocean; and
 - develop and test a New England/Maritimes methodology that describes the economic value of ecosystem goods and services.

With Existing Resources	With Additional Resources
Initial development of Regional Data Portal and Network to serve as a single portal and distributed network for regional coastal and marine spatial data (see also CMSP activity #3).	Expand Regional Data Portal and Network to include key coastal and marine spatial data sets and enhance portal functionality and interoperability (see also CMSP activity #3).
	Produce high-resolution maps of the ocean floor spanning the region’s highest priority geographic areas.
	Create an atlas (e.g., database or spatial data

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	layers) of the spatial extent and intensity of consumptive and non-consumptive human uses of the ocean (see also CMSP activity #3).
	Develop and test a New England/Maritimes methodology that describes the economic value of ecosystem goods and services (see also CMSP activity #3).

2. Identify and track key metrics and indicators to measure coastal and ocean ecosystem health and climate change

Actions:

- Report on current indicator programs (e.g., Gulf of Maine Council Ecosystem Indicators Partnership (GOMC ESIP), National Estuary Programs (NEPs), National Estuarine Research Reserves (NERRs)).
- Workshop convening policymakers, managers and scientists to develop a consensus statement on definition of ecosystem health and to strengthen coordination and integration of regional indicator initiatives in New England.
- Report with workshop results and “next steps” to NROC and other New England decision-makers.
- Compile annotated bibliography of existing (and current) research on the effects of climate change effects on ocean and coastal ecosystem health as well as cumulative and secondary impacts from existing and future uses of the ocean.
- Support ESIP as regional portal for ecosystem status and trends data for the Gulf of Maine sub-region, and explore expansion to rest of the New England region.
- Support expansion of Long Island Sound Study (LISS) “Sentinel Monitoring for Climate Change” throughout the region; identify opportunities for workshop.
- Regional symposium on seafloor and marine habitat mapping status and technologies, marine habitat classification frameworks, and related info exchange. (See also Hazards activity #2)

With Existing Resources	With Additional Resources
Support GoMC’s Ecosystem Indicators Partnership and Long Island Sound Study’s Sentinel Monitoring for Climate Change as a model for sub-regional ecosystem status and trends indicators for the Gulf of Maine sub-region.	Compile annotated bibliography of existing (and current) regional research on the effects of climate change effects on ocean and coastal ecosystem health as well as cumulative and secondary impacts from existing and future uses of the ocean.
Workshop convening policymakers, managers and scientists to strengthen coordination and integration of regional indicator initiatives in New England.	Compile inventory of current indicator programs (e.g., Gulf of Maine Council Ecosystem Indicators Partnership (GOMC ESIP), National Estuary Programs (NEPs), National Estuarine Research Reserves (NERRs), Long Island Sound Study’s (LISS) Sentinel Monitoring for Climate Change) and examine strengths and opportunities for transfer in region; develop report.
	Regional symposium on seafloor and marine habitat mapping status and technologies,

	marine habitat classification frameworks, and related info exchange
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3. Work with the New England Governors Conference Coastal Land Conservation (LCC) Initiative and state coastal programs to develop a coastal climate change land conservation demonstration project for New England

Actions:

- Collaborative, pilot demonstration project to integrate state Coastal and Estuarine Land Conservation Program (CELCP) plans, Wildlife Action Plans, climate plans and others.
- Regional conservation priorities to incorporate climate change adaptation and wildlife habitat protection strategies into active land conservation programs.
- Inventory and analysis (maps, data, text) of priority ecosystems, natural resources, and coastal environments vulnerable to sea level rise and the impacts of climate change.
- Regional assessment criteria for identifying the highest priority conservation areas to achieve protection of regionally significant resources.
- Coordination and collaboration with complementary conservation programs and efforts such as US Fish and Wildlife Service (USF&WS) North Atlantic LCC, The Nature Conservancy (TNC), and GOMC.
- Stakeholder connection, input and dialogue.

With Existing Resources	With Additional Resources
Review state CELCP, Wildlife Action Plans, Climate Change Action Plans and other and other coastal conservation and adaptation documents to develop a set of regional conservation priorities for New England	Prepare an inventory and analysis (maps, data, text) of priority ecosystems, natural resources, and coastal environments vulnerable to sea level rise and the impacts of climate change
Coordination and collaboration with complementary conservation programs and efforts such as US Fish and Wildlife Service (USF&WS) North Atlantic LCC, The Nature Conservancy (TNC), and GOMC.	Stakeholder connection, input and dialogue.
	Regional assessment criteria for identifying the highest priority conservation areas to achieve protection of regionally significant resources.
	Compile a list, with supporting data, of project areas of regional significance to inform and guide coastal land conservation programs and efforts in the region

4. Support efforts and increase visibility of regional ocean and coastal ecosystem health initiatives and work groups

Actions:

- NROC will support and promote the numerous existing state-federal partnerships in New England that are working to restore and protect ocean and coastal ecosystem health, including but not limited to: Water Quality Standards Work Group and a Nutrient Criteria Regional Technical Advisory Group (RTAG) – New England Interstate Water Pollution

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Control Commission (NEIWPCC); New England Regional Dredging Team (NERDT) – Mid-Level Managers Group, Sudbury Group and State Dredging Teams; Coastal America; Atlantic Coastal Fish Partnership; Gulf of Maine Council ; the Northeast Aquatic Nuisance Species Panel, and Northeast Sea Grant Programs.

- These initiatives report to NROC on a periodic basis on progress to date and to identify obstacles to achieving their mission and how NROC could assist them.

With Existing Resources	With Additional Resources
Support and promote existing state-federal partnerships in New England that are working to restore and protect ocean and coastal ecosystem health	Advance specific elements of state-federal partnerships that would need regional support, such as regional forum on estuarine nutrient criteria or regional sediment management

5. Support regional associations for integrated coastal and ocean observation systems and improve coordinated planning and product usage

Actions:

- Enhanced coordination with NERACOOS through:
 - implementation of the Memorandum of Understanding between NROC and NERACOOS outlining shared priorities and describing relationship protocols
 - promotion of shared representation between organizations on respective work groups, and
 - collaboration of annual work plans through a series of workshops.
- Work jointly with regional partners and the New England-Canadian Maritime Collaboration and Planning Initiative to identify needs and priorities for enhanced data management and applications to improve decision making on environmental issues. Engages national, international, and regional partners.
- Work with NERACOOS and Northeast Coastal and Ocean Data Partnership (NeCODP) to help identify the data and product needs of NROC and its partners, develop the common schema and application to environmental management.

With Existing Resources	With Additional Resources
Enhanced coordination with NERACOOS through: <ul style="list-style-type: none"> ➤ implementation of the Memorandum of Understanding between NROC and NERACOOS outlining shared priorities and describing relationship protocols ➤ promotion of shared representation between organizations on respective work groups, and ➤ collaboration of annual work plans through a series of workshops. 	Fill the identified data and product need gaps of NROC, NERACOOS, NeCODP, and other partners.
Work with NERACOOS and NeCODP to help identify the data and product needs of NROC and its partners, develop the common schema and application to environmental management.	Work jointly with regional partners and the New England-Canadian Maritime Collaboration and Planning Initiative to identify needs and priorities for enhanced data management and applications to improve decision making on environmental issues.

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	Engages national, international, and regional partners.
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2010-2012 Committee Co-chairs:

Bruce Carlisle, MA Office of Coastal Zone Management (State Co-chair)

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