



FY2013: Regional Integrated Ocean Observing System (IOOS®) Development

U.S. IOOS is an operational system and a network of regional partners responsible for regional observations, data management, modeling and analysis, education and outreach, and research and development. The overarching purpose of U.S. IOOS is to address regional and national needs for ocean data and information. NOAA continued to provide merit-based funding in 2013 to further develop the IOOS regional network. IOOS regional partners provide coordination with regional stakeholders while contributing data and other outputs to the national system – supporting regional priorities while advancing national objectives.

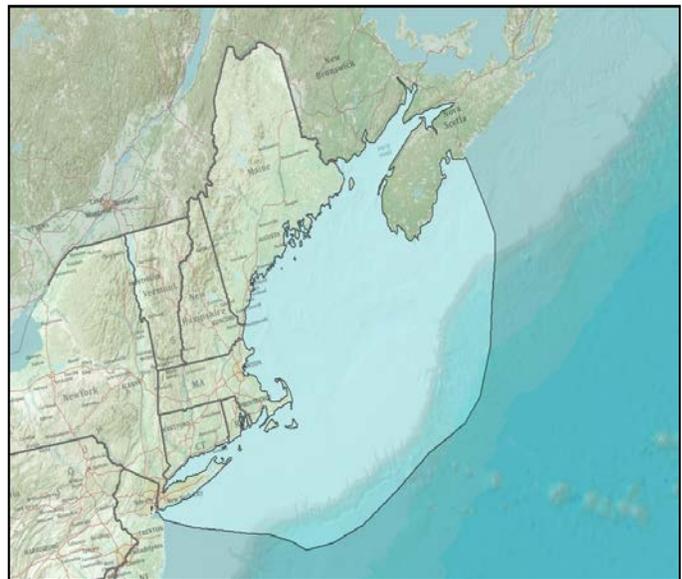
NORTHEAST ATLANTIC REGION

The Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) spans coastal waters from the Canadian Maritime Provinces to the New York Bight. NERACOOS provides weather and ocean data to fishers and commercial vessel operators for use in determining if conditions are safe for passage and to emergency managers issuing storm warnings. NERACOOS is also advancing efforts to use these data for water quality and ocean acidification monitoring, harmful algal bloom predictions and warnings, and coastal flooding and erosion forecasting systems.

NOAA Funding:

Prior to FY 2011, IOOS regional partners received two awards – one for development of the Regional Coastal Ocean Observing System (RCOOS), and one for planning and stakeholder engagement by a Regional Association (RA). Starting in FY 2011, IOOS made a single award to each region for management of these activities. Funds awarded by NOAA since establishment of the U.S. IOOS Program Office are as follows:

FY 2013 - \$2,444,161
FY 2012 - \$2,080,618
FY 2011 - \$1,770,000
FY 2010 - \$1,400,000 RCOOS (plus \$49,000 for High Frequency Radar support); \$400,000 RA.
FY 2009 - \$1,324,787 RCOOS, \$400,000 RA
FY 2008 - \$1,200,000 RCOOS, \$400,000 RA
FY 2007 - \$1,200,000 RCOOS, \$400,000 RA



Regional Priorities:

The Northeast region is geographically complex, with five states and two Canadian provinces, coastal waters and watersheds of the Scotian Shelf, Gulf of Maine, Southern New England Bight, and Long Island Sound. Regional user requirements identified inundation, harmful algal blooms, water quality, and living marine resources as specific concerns in the Northeastern Region.

In 2013, NERACOOS will continue the improvement and integration of the coastal ocean observing system through close collaboration with regional organizations, especially the Northeast Regional Ocean Council (NROC). The NROC is a state-federal partnership that provides a forum for tackling and prioritizing regional scale problems. This collaboration helps to ensure that NERACOOS directly addresses pressing regional scale issues of societal benefit. To that end, NERACOOS adopted four NROC priority theme areas and formalized the collaboration with a Memorandum of Understanding. NERACOOS and NROC merged committees and working groups in 2012 to form joint committees for Ocean and Coastal Ecosystem Health and Coastal Hazards Resiliency. In addition, NERACOOS will advance regional ocean planning and enable the ocean data portal to be incorporated into regulatory and management decisions by directly supporting activities of the Northeast Regional Planning Body under the National Ocean Policy.

In FY13 NERACOOS, in close coordination with these regional bodies, will continue activities in support of the following themes:

- **Maritime Operations** – NERACOOS will provide real-time observations and forecasts directly for maritime operational safety, inform US and Canadian Coast Guard Search and Rescue Operations, and introduce new and enhance existing weather forecast products.
- **Ocean and Coastal Ecosystem Health** – NERACOOS will expand harmful algal bloom forecasting, facilitate the development of a regional sentinel monitoring program to monitor climate and ecosystem variability, monitor ocean acidification and support the development of an ocean acidification monitoring network, enhance integration of water quality information, and enable ecosystem based fisheries management and marine spatial planning.
- **Ocean Energy Planning and Management** – NERACOOS will provide the necessary oceanographic information to facilitate the renewable energy sector to support a regional approach to facilities siting.
- **Coastal Hazards Resiliency** – NERACOOS will enhance and evaluate street-level inundation forecasting, expand forecasts for coastal flooding and erosion, and support emergency spill response.

With funding from the U.S. IOOS Marine Sensor Innovation Program, NERACOOS will expand upon existing efforts, funded by NOAA's Monitoring and Event Response for Harmful Algal Blooms (MERHAB) program, to deploy the Environmental Sample Processor (ESP) for harmful algal bloom detection. This is a major step towards establishing the ESP array envisioned as a future element of the NERACOOS regional observing system and an integral part of state and federal biotoxin monitoring programs.

Finally, continued development and implementation of a Data Management and Communication system is central to the delivery of information and products to users of the system; performance and evaluation metrics will enable tracking the return on investment; and education and outreach will engage NERACOOS users to ensure information and products meet their needs.

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