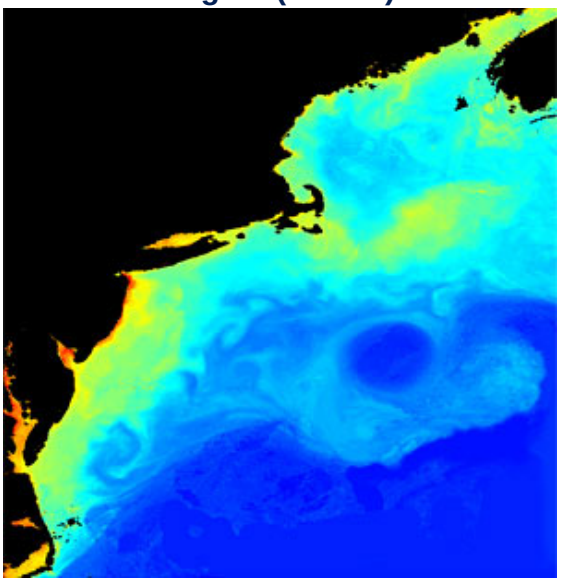
Print

2009 Annual Report: Cooperative Institute for the North Atlantic Region (CINAR)

In 2009, The National Oceanic and Atmospheric Administration (NOAA) awarded WHOI the Cooperative Institute for the North Atlantic Region (CINAR). The Institute, which began its operations on July 1, replaced the 10-year-old Cooperative Institute for Climate and Ocean Research (CICOR) which focused predominately on climate observations, with some emphasis on other areas of marine research.



Enlarge Image

A primary goal of the CINAR is to use data, such as those pictured here, to conduct research that identifies and evaluates linkages among productivity, fish and fisheries, pollution, climate change and ecosystem health. This image is a three-day composite SeaWiFS image showing chlorophyll concentration for 18-21 June 2001. Higher levels of chlorophyll on the continental shelf reflect enhanced net primary production within the Northeast U.S. Large Marine Ecosystem. (Map courtesy Heidi Sosik, Woods Hole Oceanographic Institution)

Related Links

» CINAR Web Site

Cooperative institutes are one of the important vehicles that enable NOAA to fund extramural research. The CINAR award from NOAA was a result of a competition that WHOI won in partnership with the University of Maryland Center for Environmental Science, Rutgers University, University of Maine and the Gulf of Maine Research Institute.

The geographic domain of CINAR is the U.S. northeast continental shelf from Cape Hatteras to Nova Scotia. Given the importance of large-scale climate and biological connectivity within the North Atlantic, CINAR's geographic scope includes basin and global-scale processes that affect the shelf ecosystem.

The overall goal of CINAR is to engage NOAA and academic scientists in cutting-edge research that enables NOAA to make informed decisions about sustainable and beneficial management of the U.S. northeast continental shelf ecosystem. CINAR activities are organized around five broad themes: Ecosystem Forecasting, Ecosystem Monitoring, Ecosystem Management, Protection and Restoration of Resources, and Sustained Ocean Observations and Climate Research.

A major focus of CINAR, and a departure from CICOR, is Ecosystem-Based Management or EBM. An ecosystem approach to management differs from current strategies that focus on a single species by considering interconnections within the ecosystem (for example, between trophic levels or species) and among environmental regimes (terrestrial, oceanic, atmospheric), and by integrating social, economic and institutional perspectives as well. CINAR has therefore been formulated with the explicit recognition that effective management of human activities on the northeast shelf requires an understanding of how these activities interact with each other and with other processes to affect the regional ecosystem and its resources. An understanding of climate variability must be integrated if the causes of variability in change are to be indentified and understood.

CINAR is still in its formative stages. During the first months of operation, more than $3 million of research funds were moved from NOAA to the CINAR partners. Among the funded projects are efforts to apply advanced technologies to the next generation of fishery stock assessment surveys, to understand whether there is a link between marine mammal health and entanglement in fishing gear, to better predict the occurrence and intensity of harmful algal blooms (red tides) in Northeast coastal waters, and to test and evaluate new forms of fishery management.

Another expected major activity is to develop and deploy arrays of underwater vehicles and instruments needed to continuously monitor the ocean as part of the growing ocean observatory network. Central to these efforts will be arrays of meteorological and hydrographic sensors deployed in the equatorial Pacific and other areas far from the northeastern U.S. where measurements are needed to understand global climate processes that ultimately affect this region and its valuable fisheries and ecosystems.

CINAR will support a WHOI Postdoctoral Scholar each year, beginning in 2010 and continuing through the five-year agreement. The postdoctoral scholar will work with a CINAR investigator on one of the five themes identified above. CINAR is also working to provide research and education opportunities for students at several minority-serving institutions (MSIs) in the Northeast region, with the expectation that these efforts will lead to opportunities for jobs and careers within NOAA programs.

CINAR is now working with investigators at all the partner institutions to strengthen existing relationships with NOAA programs and build new ones that lead to funded research in support of the Institute's themes. Administrative staff has been hired, office space renovated, a Memorandum of Agreement drafted, and institutional arrangements established to allow an efficient transfer of funds from NOAA to the CINAR partners. With the rapidly expanding interest within NOAA and other agencies on ecosystem-based management, climate change, ocean acidification and other important oceanographic issues, CINAR can be a major regional asset that will bring significant funding and resources to WHOI and its partners.

—Donald Anderson, CINAR Director

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