



NOAA INTEGRATED OCEAN OBSERVING SYSTEM PROGRAM

highlights

NOAA'S INTEGRATED OCEAN OBSERVING SYSTEM (IOOS)[®] PROGRAM supports the development of a coordinated network of people and technology that work together to generate and disseminate continuous data on our coastal waters, Great Lakes, and oceans. Activities of the National IOOS include observations and data transmission, data management and communications, and data analyses and modeling.

Throughout fiscal year 2008, IOOS[®] continued partnership development to provide new products and tools to support integrated ocean observations.

INCREASING THE VALUE OF OCEAN DATA

The Data Integration Framework (DIF) project, led by NOAA IOOS, is a limited-scope, risk-reduction effort to make selected NOAA and non-NOAA ocean observation data compatible, thereby increasing their value and utility for decision-support tools, products, and services. In fiscal year 2008, NOAA IOOS achieved several important milestones on the DIF project by focusing on an initial set of five oceanographic observations – temperature, salinity, water level, currents, and ocean color; selecting three NOAA data providers for DIF implementation – the National Data Buoy Center (NDBC), NOAA CoastWatch, and the Center for Operational Oceanographic Products and Services (CO-OPS); and targeting four NOAA applications for data delivery – harmful algal bloom forecasts, coastal inundation predictions, integrated ecosystem assessments, and hurricane intensity forecasts. In April, the DIF launched a series of partnership agreements across NOAA to implement new data services and protocols in order to achieve interoperability among ocean observations from various platforms.



ADVANCING THE DATA MANAGEMENT & COMMUNICATIONS STANDARDS PROCESS

NOAA's IOOS Program provided new tools and resources to the Data Management and Communications (DMAC) standards process, an essential component of integrated ocean observations. Participants, including 17 Federal agencies as well as State, regional, and nongovernmental partners, now have access to a set of Web-based tools that facilitate communications about DMAC standards and simplify the process of submitting proposed new standards. These enhancements support execution of the National DMAC Plan adopted by the ocean observing community in 2006.

TRANSITIONING REGIONS TO A NATIONAL NETWORK

NOAA IOOS awarded \$20.4 million to various partners across the Nation. Funding was committed as part of an effort to develop a national network of 11 Regional Coastal Ocean Observing Systems and management structures, or Regional Associations (RAs). The national network of RAs will expand the availability of ocean-related observations, data, and products; improve regional implementation of NOAA and other Federal missions, and meet regionally specific needs for coastal and ocean information. In February, representatives from all 11 regions expressed support for the DIF and indicated their willingness to implement DIF standards and protocols. This regional participation supports the rapid expansion of data interoperability to provide, for the first time, widespread interoperable ocean data.

INCREASING ACCESS TO HIGH FREQUENCY RADAR DATA

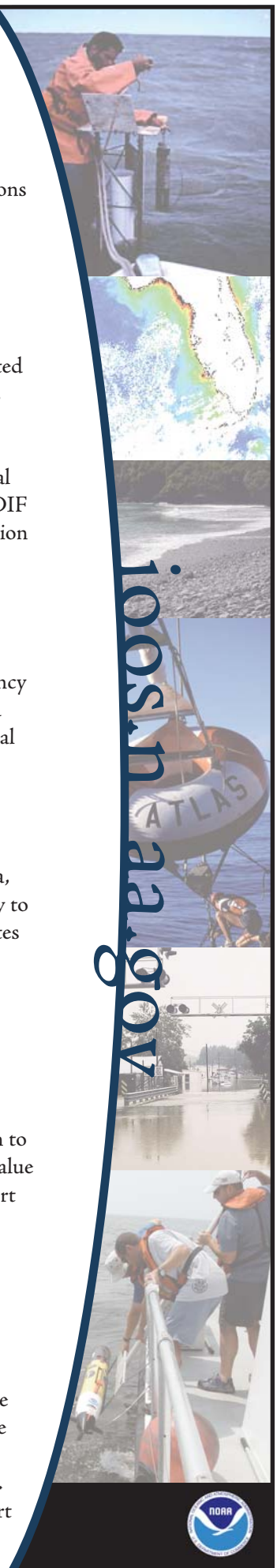
In 2008, NOAA's IOOS Program made significant strides in increasing accessibility to high frequency radar (HFR) data. HFR systems measure surface current speed and direction in near real time and support search-and-rescue operations, oil spill response, harmful algal bloom monitoring, and coastal water quality assessments. HFR data also provide value in ecosystem assessments and fisheries management, when evaluated retrospectively. IOOS partners at State and regional levels, as well as academia, devoted significant resources to develop HFR systems within their respective geographic areas. In 2008, the number of HFRs nationally surpassed the 100 mark; however, these data were not accessible on a national scale. Recognizing the potential benefits of access to national HFR data, NOAA IOOS supported NDBC, the Scripps Institution of Oceanography, and Rutgers University to develop a national HFR data delivery system to provide access to data produced by various radar sites around the country.

CURRENTS DATA ADDED TO HARMFUL ALGAL BLOOM FORECASTING SYSTEM

In July, NOAA's IOOS Program began testing the addition of surface currents data in its Harmful Algal Bloom Forecasting System (HAB-FS). The currents data, made available by CO-OPS and NDBC based on standards and protocols established by the DIF project, provide more information to HAB forecasters. The addition of currents data to the HAB-FS is one step toward validating the value of integrated data in improving nowcasts, forecasts, and models. The HAB-FS is a partnership effort among the NOAA Coastal Services Center, the National Centers for Coastal Ocean Science, CO-OPS, and NOAA's Coast Watch Program.

ADVANCING BATHYMETRIC SEA-FLOOR MAPPING

NOAA's IOOS Program partnered with the Office of Coast Survey (OCS) on a proposal to meet both the mapping needs of the State of California and NOAA nautical charting requirements. In October 2007, the California Ocean Protection Council (OPC) approved a \$15 million expenditure for the California Sea-floor Mapping Program (CSMP) to map the sea floor within California State waters. A series of discussions between OCS and OPC resulted in agreement by CSMP to collect bathymetry data according to standards that will allow NOAA to use the data in its nautical charts. The OPC approved \$7.5 million from its 2007/2008 fiscal year appropriation and indicated support for CSMP for an additional \$7.5 million from the following year's appropriation.



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