



FY2012: U.S. Integrated Ocean Observing System Development

U.S. IOOS® is an operational system and a network of 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 providing merit-based funding in 2012 to further development of U.S. IOOS, which included funding to the Alliance for Coastal Technologies for the activities outlined below.

ALLIANCE FOR COASTAL TECHNOLOGIES (ACT)

ACT is a partnership of research institutions, resource managers, and private sector companies dedicated to fostering the development and adoption of effective and reliable sensors and platforms for use in coastal, freshwater and ocean environments. ACT was established by NOAA in 2001 – and continues to be supported by NOAA through the U.S. IOOS Program – to bring about fundamental changes to technology transitioning and adoption practices in coastal and ocean monitoring.



NOAA Funding:

- FY 2012 - \$996,350
- FY 2011 - \$975,000
- FY 2010 - \$3,439,500
- FY 2009 - \$1,200,000
- FY 2008 - \$1,200,000
- FY 2007 - \$1,100,000



Project Priorities:

The public and private sectors have an increasing demand for accurate and reliable environmental observations, which allow for a better basic science understanding, forecasting abilities, and informed management decisions. To meet this demand, the federal government: (1) has established operational systems and services, which provide the basis for production and dissemination of official assessments, predictions, and warnings, and (2) supports technology and systems development to improve operational observation capabilities, such as higher quality data through the introduction of new or enhanced environmental sensors. By fostering the development and adoption of effective and reliable instrumentation for coastal, freshwater and ocean science, monitoring, and long-term environmental stewardship, ACT is a critical link between these two national priorities.

ACT's goals are to: (a) Rapidly and effectively transition emerging technologies to operational use; (b) Maintain a dialogue among technology users, developers, and providers; (c) Identify technology needs and novel tools and approaches to meet those needs; (d) Document technology performance and potential; and (e) Provide U.S. IOOS with information required for the deployment of reliable and effective networks.

ACT has made advancements in support of NOAA's efforts to validate and exploit new ocean observing approaches by serving as:

1. A third-party testbed for quantitatively evaluating the performance of new and existing coastal technologies, both in the laboratory and under diverse environmental conditions;
2. A forum for capacity-building through technology-specific workshops that review the current state of instrumentation, build consensus on identification of future trends, and enhance communications between users and developers; and;
3. An information clearinghouse, provided through a searchable, online database of environmental technologies and community discussion boards.

In FY 2012, ACT is continuing work on evaluations of in situ pCO₂ sensors (to address ocean acidification) and hydrocarbon sensors (to address oil spill detection and response). ACT will also continue work on an evaluation of pH sensors, as part of a consistent effort to support ocean acidification monitoring for a range of applications.

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