



# FY2013: Regional Integrated Ocean Observing System (IOOS<sup>®</sup>) 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.

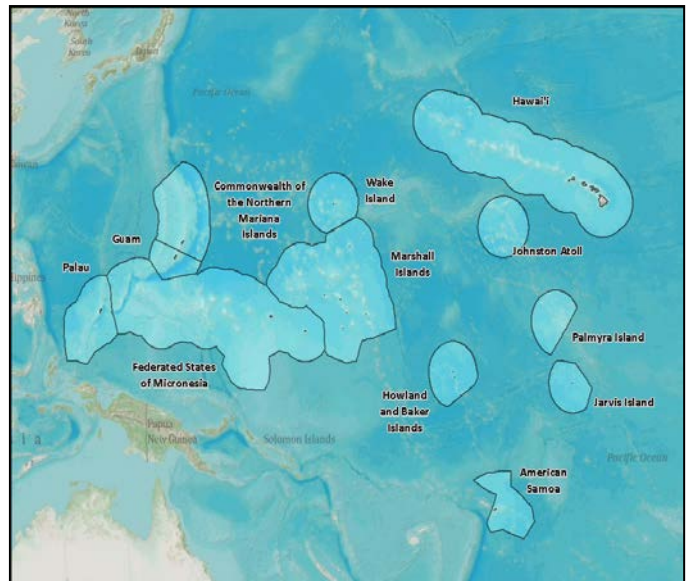
## PACIFIC ISLANDS REGION

The Pacific Islands (PacIOOS) region is defined as the State of Hawaii, the Commonwealth and Territories of the United States in the Pacific, the U.S. Pacific Remote Island Areas, and the Freely Associated States in the Pacific. PacIOOS is a partnership of data providers and users working together to enhance ocean observations and develop, disseminate, evaluate and apply ocean data and information products designed to address the needs of stakeholders who call the Pacific Islands home.

### 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 multi-year 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 - \$2,197,836  
FY 2012 - \$2,485,505  
FY 2011 - \$2,065,000  
FY 2010 - \$1,700,000 RCOOS, \$399,973 RA  
FY 2009 - \$1,869,134 RCOOS, \$398,802 RA  
FY 2008 - \$1,700,000 RCOOS, \$397,909 RA  
FY 2007 - \$1,700,000 RCOOS



### Regional Priorities and Objectives:

PACIOOS implements regional modeling, sensor deployment, data and information services, and outreach and education in four key product areas: Water Quality, Marine Operations; Ecosystems and Living Marine Resources; and Coastal Hazards.

PACIOOS key activities for the FY13 project period are:

- Supplying real-time observations of biological, chemical, and physical water parameters to improve the understanding of ocean acidification, more effectively protect healthy coastal marine ecosystems, and enhance the response to marine events that impact human health.
  - Providing predictions of high water level and inundation events in coastal areas, developing maps of coastline change and identifying areas of vulnerability, and providing beach condition forecasts to users and lifeguards to promote public safety and community resilience.
  - Supporting NOAA's Coastal Services Center by producing a series of sea level rise and coastal flooding inundation maps for the islands of Hawaii, Guam, Commonwealth of the Northern Marianas Islands (CNMI), and American Samoa. These maps were recently incorporated into the CSC Sea Level Rise and Coastal Flooding Impacts Viewer ([www.csc.noaa.gov/slr](http://www.csc.noaa.gov/slr)) for visualization. Additionally, PacIOOS will release an interactive tool that will allow users to examine shoreline erosion and inundation along various coastlines.
  - Providing timely, reliable, real-time, and forecast information on harbor conditions, coastal and open ocean currents, waves, and weather to improve search-and-rescue operations, spill response, optimize shipping routes, and develop better severe weather and event predictions.
  - Continue integrating information for effective ocean, coastal and marine planning including measuring and modeling parameters necessary for the development of climate change mitigation and adaptation plans and collecting and serving necessary information for renewable energy development.
  - Promoting the understanding and stewardship of the Hawaiian and insular Pacific's coastal waters and building capacity for the continued expansion of ocean observations and informational products.
  - Maintain and expand the network of directional wave buoys in Hawaii and the insular Pacific Ocean in partnership with the Coastal Data Information Program and to provide information and services to the National Weather Service, coastal engineers, planners, managers, mariners, and researchers.
  - Enhance the data management and communications (DMAC) system to facilitate easy data access and use by researchers, modelers, product developers, managers, and the general public. An interoperable data system, both within the regional association and across RAs, is an integral and important part of the national IOOS process.
  - Expand coverage and enhance wave (WWIII), ocean circulation (ROMS), and weather (WRF) models and forecasts.
  - Expand coverage and enhance HFR capabilities on Oahu and the Island of Hawai'i.
  - Advance animal tagging research by adding O2 sensor to tags.

Initial PacIOOS observing efforts focused on the development of an end-to-end observational system confined to the island of Oahu, Hawaii. This focused pilot-project explored the operability of various observational systems in an island setting to help determine the ideal design for a full PacIOOS observational network.

The success of this pilot project allowed for data system development, modeling, education and outreach, and stakeholder engagement through a collaborative governance framework that is focused not only on the Hawaiian Islands, but on each of the PacIOOS jurisdictions through the Pacific. Targeted deployment of instrumentation to address local stakeholder continues in all Pacific jurisdictions with deployments to expand under future funding cooperative agreements.

#### **Regional Contact Information:**

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