

## U.S. INTEGRATED OCEAN OBSERVING SYSTEM (IOOS)

### RECOMMENDATIONS OF THE U.S. IOOS ADVISORY COMMITTEE

November 2, 2016

#### THE OCEANS AND COASTS – OUR BLUE ECONOMY

The coastal and ocean economy is the backbone of the U.S. economy—45% of the nation’s gross domestic product (GDP) is produced in coastal counties. It contributes more than \$282 billion to the U.S. GDP and supports more than 2.8 million jobs. This “blue economy” spans traditional fisheries and navigation, to tourism and recreation, to emerging marine biotechnology research and off-shore wind energy development. Sustainable job growth and opportunities supported by the blue economy, along with the health and vitality of our oceans, coasts and Great Lakes depend on the availability of timely, accurate and reliable coastal, ocean, and Great Lakes information. A commitment to expand and sustain observations through the U.S. Integrated Ocean Observing System (IOOS) is an important opportunity for the next Administration.

**Commented [TBC1]:** The “blue economy” is the economy associated with the coastal states. Most of these states are also colored blue in another context. Naive staffers may confuse this and think we are talking about the blue economy in contrast to the red economy in the interior of the country. I’m not sure what to do about this, but I could see it happening in which case the whole document would be discounted. (Sigh).

**Commented [JK2]:** include tourism and recreation

#### COASTAL AND OCEAN INTELLIGENCE

U.S. IOOS (33 U.S.C. 3601-3610 – The Integrated Coastal and Ocean Observing System (ICOOS) Act) consists of a leveraged network of regional, national and global buoys, gliders, radars, ships, satellites and other assets. IOOS provides the data and information -- the environmental intelligence -- needed to support the fishing industry, maritime commerce, and search and rescue operations, as well as to inform plans for mitigation and response to extreme weather events, ocean acidification, harmful algal blooms, oil spills and coastal flooding, among many other important economic and societal goals. IOOS also improves the Nation’s capability to measure, track, explain, and predict events related directly and indirectly to weather, climate change and natural climate variability.

The IOOS network includes 17 federal agencies and 11 regional observing systems, led by the National Oceanic and Atmospheric Administration (NOAA). The Interagency Ocean Observations Committee (IOOC) supports coordination among the federal agencies, seeking to linking global, national, and regional ocean observations to enable powerful new tools, scientific approaches for understanding, predicting, and managing our coastal and ocean resources.

IOOS is a mature system that is already delivering substantial benefits to the blue economy and science-based management; however, it is falling far short of its full potential to create jobs, especially in the context of a changing environment. Support for the following recommendations will build on the current foundation to fill critical gaps, provide sustained infrastructure support and realize even greater local, regional and national economic benefits from IOOS.

**Commented [JK3]:** It seems dubious to pin IOOS impact on its ability to create jobs.

## RECOMMENDATIONS

1. Enhance investment in the NOAA and IOOS Regional Associations to sustain critical observations in ~~local waters and remote observations in deep-water,~~ coastal, ~~and estuarine and deep-water~~ environments of the US EEZ, as well as data management and integration to ensure timely and reliable delivery to users across the nation.
  - *Increase funding from \$29m ~~to~~ \$44 m annually.*
2. Work with NOAA, the Regional Associations, potential users and Congress to identify and fill critical gaps in ~~the national IOOS~~ infrastructure system. For example, investment in the high-frequency radar system that ~~among other things~~ supports search and rescue, oil spill response, and tracking of harmful algal blooms ~~is has been identified as~~ a current priority.
  - *Identify data gaps, benefits and priority needs, and Support appropriation of ~~such funds~~ for high priority ocean observation infrastructure needs as necessary.*
3. Spur innovation, public and private sector collaboration, and the development of new, cost-effective technologies for observing and monitoring our oceans and coasts, and next-generation data management and visualization techniques to facilitate seamless user access to coastal and ocean data. The IOOS Ocean Technology Transition (OTT) grant program is one example of an effort that ~~seeks to accelerate the commercial development and transition of prototype research related to development of~~ sensors and ~~reliable measurement systems, other observing technologies.~~
  - *Increase the OTT budget from \$5m to \$10m annually, and identify other opportunities for NOAA and IOOC to invest in tech development and transfer in collaboration with private sector partners.*
4. Work with Congress to reauthorize the ICOOS Act of 2009. As noted above, the Act provides the support for IOOS, the national network of Regional IOOS Associations, and cooperation through the IOOC. Other important provisions would provide for continued development and maintenance ~~of ocean observation infrastructure,~~ and certification standards for the regional systems to ensure data quality.
  - *Support reauthorization the ICOOS Act of 2009*
5. Because IOOS is a networked system spanning from the global to the regional and local, it is important to continue support for interagency ocean observing efforts and interagency coordination through the IOOC. The U.S. should continue

Commented [JK4]: Unclear why we would want to restrict IOOS to remote observations in other than local waters

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its strong leadership role in the Global Ocean Observing System (GOOS); however, it is also important that the IOOC work closely with NOAA to assure links between global, national, and regional ocean observations.

- *Support interagency ocean observations efforts and the IOOC.*

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