The Alliance for Coastal Technologies: A Foundation for Environmental Monitoring

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Abstract

To better understand, manage and predict changes to coastal resources and processes, there is an emerging agenda for regional, national and international integrated ocean observing systems. Effective, reliable, and standardized sensors and sensor platforms to collect environmental data will be essential to the success of this initiative. Thus, the Alliance for Coastal Technologies (ACT) was established as a NOAA-funded partnership of research institutions, state and regional resource managers, and private sector companies interested in developing and applying sensors and sensor platforms for monitoring and studying aquatic systems. ACT goals include transitioning emerging technologies to operational use rapidly and effectively; maintaining a dialogue among technology users, developers, and providers; identifying technology needs and novel technologies; documenting technology performance and potential; and providing the Integrated Ocean Observing System (IOOS) with information required for the deployment of reliable and cost-effective networks. These goals are accomplished by providing three basic services: (1) a third-party testbed for evaluating existing and developing sensor and sensor platform technologies, (2) a comprehensive data and information clearinghouse on environmental technologies, and (3) a forum for capacity building through a series of annual workshops on specific technology topics.

A few specific examples of current ACT activities include: (1) supporting the NOAA National Data Buoy Center and U.S. Army Corps of Engineers in the development of an IOOS Operational Waves Observation Plan, (2) completing the ACT Technology Evaluation of in situ nutrient analyzers, (3) initiating Technology Evaluations of in situ salinity sensors (an IOOS core variable) and in situ pCO2 sensors (to address ocean acidification), and (4) holding a series of Technology Workshops on topics such as Biological Platforms for Environmental Sensors, Hydrocarbon Sensors for Oil Spill Response, and Environmental Sensing for Port Security.

Keywords

ACT, sensors, platforms, coastal