

## Bi-Weekly IOOS® Z-GRAM – 22 Aug 2014

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### IOOS® - Enables Decision Making Every Day; Fosters Advances in Science and Technology

#### From the IOOS Program Office:

- **Next IOOS Advisory Committee Meeting:** Scheduled for October 2-3, 2014, at the Large Lakes Observatory in Duluth, MN. Information will be posted on the committee website as it is available. [www.ioos.noaa.gov/advisorycommittee](http://www.ioos.noaa.gov/advisorycommittee). During this meeting, the committee will:
  - Complete their assessment of guiding principles for the IOOS business model
  - Hear from GLOS (Kelli Page) and local Great Lakes EPA reps (invited-TBD)
  - Discuss next topics on which to make recommendations
- **Farewell to IOOS Plank Owner:** For those not familiar with the term, “plank owner” is used for those individuals who are involved with the commissioning of a ship. In this case, we say a formal goodbye to Charly Alexander, a consummate IOOSian and a Plank Owner of the IOOS Program Office. Charlie has been on detail with NOAA’s Office of Marine and Aviation Operations (OMAO) where he has been working on strategic planning. Charly will officially transfer to OMAO on Monday and I wanted to have a chance to publicly thank him for his 7 years with IOOS and for the many things he was part of including but not limited to: foundation of DMAC, establishment of COMT, Joint Planning and loyal supporter of the national intent of US IOOS. We know that he will do great things for OMAO.
- **XPRIZE announces teams - please consider becoming a resource for these teams:** The Wendy Schmidt Ocean Health XPRIZE promises to improve our understanding of how CO2 emissions are affecting ocean acidification. With breakthrough pH sensors that will be developed by our competing teams, we can begin the process of healing our ocean. XPRIZE proudly announces they have 23 ground-breaking innovators from around the world with 27 entries competing for the \$2 Million Wendy Schmidt Ocean Health XPRIZE. **Become a resource for these teams:** Some examples of potential resource offerings: advice about integrating pH sensors into ocean observation systems in the U.S.; mass purchase agreements for winning sensor(s); contacts with potential investors or free deployment/testing of winning sensors on existing platforms. It would come at little to no cost to your organization. Resources for the Wendy Schmidt Ocean Health XPRIZE are meaningful contacts in the ocean research field that will be listed on a password protected part of the XPRIZE website accessible only to competing teams. The sign up process to be a resource is simply through an email to Matt Huelsenbeck at [XPRIZE, matt.huelsenbeck@xprize.org](mailto:matt.huelsenbeck@xprize.org). They will include on their website your name and contact information, a description of your organization, a website link, logo, and a description of the resource you are offering.
- **NOAA Seeks Applicants for Hydrographic Services Advisory Panel:** NOAA is soliciting nominations for membership on the Hydrographic Services Review Panel, a

federal advisory committee that advises the NOAA administrator on the agency's hydrographic programs, products, and technology. NOAA issued a [Federal Register Notice](#) that provides more information. Applications must be received by October 10.

## Observation Subsystem and Sensor Technologies

- **High Frequency Radar/Radio:** (Lead Jack Harlan, [Jack.Harlan@noaa.gov](mailto:Jack.Harlan@noaa.gov)): No update.
  
- **Gliders Deployments:**
  - **Gliderpalooza '14 is off and running.** The IOOS Glider Data Assembly Center and Rutgers University team are troubleshooting some data issues, because not all the glider missions are getting into the DAC yet. Those that are show up on the IOOS glider asset map [http://www.ioos.noaa.gov/observing/observing\\_assets/glider\\_asset\\_map.html](http://www.ioos.noaa.gov/observing/observing_assets/glider_asset_map.html). There are 10 gliders in the water now with more to come.
  
  - **Shallow Gliders now going to GTS:** NDBC reported the coding is now in place to allow profiles shallower than 40m to get onto the GTS. Over the course of Gliderpalooza we will have several gliders running missions in shallow water and have the opportunity to test this application.
  
  - **GCOOS has been running gliders this summer which are included in Gliderpalooza but were also part of the Gulf Glider Experiment.** From GCOOS newsletter: Autonomous Underwater Vehicles "Waldo" from Mote Marine Laboratory and "Bass" from the University of South Florida (USF) have been monitoring the offshore bloom of Florida red tide and surrounding ocean conditions since they were deployed on 1 August. Information from the sensors they carry is helping to shape short-term bloom forecasts. The bloom was recently reported to be eighty miles long and fifty miles wide, reaching from Dixie County to southern Pasco County, according to the Florida Fish and Wildlife Conservation Commission's (FWC) [statewide update on 1 August](#). The glider data are feeding into short-term forecasts of the red tide bloom developed by the Collaboration for Prediction of Red Tides, a partnership effort between the Florida Fish and Wildlife Conservation Commission (FWC) and USF. Find the latest reports at <http://myfwc.com/research/redtide/statewide/> and <http://coolgate.mote.org/beachconditions/>. Interactive maps with glider tracks are available on the [GCOOS website](#).
  
- **New Hurricane-Hardened Station Sentinels Being Constructed along the Texas Gulf Coast:** The federal Coastal Impact Assistance Program will fund the construction of four new Hurricane Hardened Sentinel Stations at Texas coastal passes. The stations will be built by faculty and staff at the Texas A&M University Conrad Blucher Institute with the support of the State of Texas General Land Office. NOAA is a cooperating partner on the stations for equipment and other components. By next year, every pass of coastal Texas will have a Sentinel Station operating for storm surge monitoring, environmental and restoration projects, spill response and navigation support. Real time water and surge monitoring, weather monitoring, including during major storm events (with GPS Continuously Operating Reference Station) will make this a great comprehensive network serving the coast. This system is part of the Texas Coastal Observation Network (TCOON) and is included in the GCOOS Build-out Plan V.2.0, Water Level Observations Network section

(<http://gcoos.tamu.edu/BuildOut/BuildOutPlan-V2.pdf> ). For more information, see <https://www.cbi.tamucc.edu/TCOON/>.

### **Data Management and Communications (DMAC) Subsystem and Tools Built on IOOS**

**data:** (Contact Derrick or Rob to get on the list serve for changes [Derrick.Snowden@noaa.gov](mailto:Derrick.Snowden@noaa.gov), [Rob.Ragsdale@noaa.gov](mailto:Rob.Ragsdale@noaa.gov) ).

- **Vocabularies:** A review of the current IOOS parameter vocabulary to CF standard name map was performed by Sara Haines. There have been several updates to the CF standard name table which required new mappings. Sara added 10 new mappings as a consequence of 358 new terms added. The new IOOS parameter to CF standard name map can be found [here](#).
- **Arctic Oil and Gas Industry Data Archived:** AOOS and NODC worked together to prepare oceanographic and environmental data collected in the Chukchi and Beaufort Seas' for archiving on the heels of a 2011 agreement between NOAA and Shell Oil, ConocoPhillips, and StatOil. As of last week, the data have been archived and a metadata record can now be found in the NODC Geoportal <http://data.nodc.noaa.gov/geoportal/rest/find/document?searchText=title:0120531&f=searchPage>. The data provided to AOOS by these oil companies were collected from three marine mammal surveys over a period of years between 1991 and 2010. The survey objectives were to update data on distribution and relative abundance in the Chukchi Sea and/or Beaufort Sea over a period of years or to determine the effects of exploratory drilling operations.

### **Modeling and Analysis Subsystem – No update.**

For information on the US IOOS Coastal and Ocean Modeling Testbed (COMT), contact our project manager, Becky Baltes, [Becky.Baltes@noaa.gov](mailto:Becky.Baltes@noaa.gov).

### **Interagency and International Collaboration/News**

- **GOOS Steering Committee appoints two co-chairs for the GOOS Biology and Ecosystems Panel:** Congrats to Nic Bax (Australia) and Sam Simmons (USA) on their appointment. Nic leads Australia's Marine Biodiversity Hub for the University of Tasmania and the Understanding Ocean Ecosystems stream in the CSIRO Wealth from Oceans Flagship. He has been involved in marine monitoring in many ways for 30+ years, and has worked over the last 3 years with the CBD to describe Ecological or Biologically Significant Areas in over 85% of the world's oceans.

Sam is the Acting Scientific Program Director of the Marine Mammal Commission (USA). She is a marine biologist by training with an emphasis on marine mammal biology, with a focus on the foraging behavior of pinnipeds and other marine mammals in relation to their environment, including impacts from natural or anthropogenic changes. She has strong interest in the "end-to-end" processes of ocean observations.

In addition, the Australian Institute of Marine Science and the Oceans Institute of the University of Western Australia are jointly sponsoring a Global Ocean Observing System Biology and Ecosystems Panel International Project Officer (IPO) as a 2 Year Term Appointment with possibility of extension dependent on ongoing funding. Interviews of a strong set of candidates took place in July, and the incumbent is expected to start in the

position by the end of 2014. I expect the new co-chairs will be reaching out to the community soon for support in getting this panel up and running.

### **Delivering the Benefits:**

- **CariCOOS Mobile App:** CariCOOS Coastal Weather app available for Android® is an ad-free app providing users an integrated view of ocean conditions in the US Caribbean. This app provides reliable information including real-time live buoy data (waves, wind and currents) and coastal mesonet wind stations. This is an excellent tool for surfing, boating, fishing, sailing, and marine operations. It includes all US Caribbean coastal regions (Puerto Rico and US Virgin Islands). The CariCOOS Mobile App is available on Google Play [Click Here](#). For more information visit: [www.caricoos.org](http://www.caricoos.org)
- **NANOOS Annual Meeting and Pacific Shellfish growers visit:** Jen Rhoades attended NANOOS' Principal Investigator and General Council Meetings held on August 11 and 12, respectfully. Jen provided a briefing covering the national IOOS Program including funding, FY15 DMAC goals, QARTOD accomplishments and plans, modeling, the Marine Sensor Innovation Process, the ICOOS Act Reauthorization, and certification. Jen Rhoades, along with SCCOOS' staff Jennifer McWhorter and Laura Lilly, toured shellfish farms along the Olympia Coast in Washington State on August 13th. During the tour, Bill Dewey, Taylor Shellfish gave an overview of Taylor Shellfish's Flupsy Facility in Shelton, WA where seed is sorted. John Adams gave a tour of Taylor Shellfish's Dosewallips Manila Clam Farm in Brinnon, WA and Dave Steele provided a tour of his Rock Point Shellfish Farm, Tarboo Bay, Dabob, WA. Jen let me know she really appreciated the visits as a great opportunity to learn more about the shellfish operations and the issues impacting farmers.
- **National Ocean Service - Coastal Intelligence - LA/LB Project:** NOAA's National Ocean Service (NOS) and National Weather Service have begun an effort to improve the delivery of environmental information to support our nation's ports. NOS' Office of Coast Survey, Center for Operational Oceanographic Products and Services, and the IOOS Program Office have teamed up with Coastal Services Center/Office for Coastal Resource Management and NWS' environmental modeling center and local weather forecast office to analyze how we can bring charting, observations, and modeling with shipping data to improve the movement of commerce. The LA/LB Project is divided into three phases: Phase 1 is an impact analysis to determine the full scope, restrictions and dependencies of an implementation. This first phase also consists of the implementation of a PROTIDE prototype. Phase 2 is the actual implementation phase, which contains all activities necessary to get PROTIDE and dependent systems ready to be used as an operational decision support system. This contains the desired technical set-up, data coupling, software changes, model evaluation and user instructions. In phase 3, PROTIDE can be integrated in the operational access policy.

In Phase 1, Charta Software is the lead in the impact analysis to find all relevant issues that need to be dealt with in phase 2 and 3. A higher resolution waves model is needed and we are working with NWS and SCCOOS to develop that model. The IOOS Program Office was able to use end of year funds to procure a wave buoy through SCCOOS. The buoy will be used to validate a wave model that will be used by Harbor Pilots to determine if harbor conditions are safe for transit of large vessels in and out of the Ports. This is possible to do cost effectively because the USACE and CA State Boat and Recreation has made available to IOOS partners the CDIP infrastructure as part of their contribution to IOOS.

- **Schmidt Ocean Institute (SOI) Workshop:** I had the honor of being invited to participate in the SOI Research Planning Workshop - Critical opportunities for advanced shipboard oceanography in 2017. SOI has a state of the art research vessel, RV Falkor, which, along with her on-board scientific research facilities, instruments, and expert technical support, is freely available to ocean scientists around the world to conduct scientific research at sea on a competitive basis. SOI invited a diverse international team of government, academic, and non-profit experts, including young researchers and those with decades of experience in ocean sciences, marine operations, and technology R&D to participate in the workshop. The goal was to agree to help SOI grow their program to find novel ways of collecting and integrating ocean information in a way that is helpful to the community. My thanks to SOI for reaching out to make those connections. The next call for Expressions of Interest in collaborative shipboard oceanographic research will be in December of 2014. For information on their next call: <http://schmidtocean.org/>.

#### Congressional:

- Senators Cantwell (D-WA) and Senator Begich (D-AK) visited NOAA's Western Regional Center in Seattle, WA on August 11 to request a national strategy to address ocean acidification and deploy more sensors to monitor the impacts of ocean acidification to the nation's commercial fishing industry. Cantwell and Begich joined NOAA Administrator Kathryn Sullivan, PMEL Director Chris Sabine, NANOOS Executive Director Dr. Jan Newton, and Bill Dewey of Taylor Shellfish to tour the agency's Western Regional Center in Seattle to see the high-tech buoys and sensors that NOAA uses to monitor ocean conditions and save jobs in Washington state's maritime economy. Links to media materials follow:
  - [Cantwell, Begich Call for National Strategy on Ocean Acidification](#) – Cantwell press release
  - [Calls for global network of buoys to monitor ocean acidification](#)– KING 5
  - [New Ocean Acidification Monitors Could Protect Nation's \\$70 Billion Fisheries Industry](#) – KPLU (NPR) – Bellamy Pailthorp
  - [Cantwell: Shellfish Growers Are The Canary In The Coal Mine](#)– KUOW (NPR) – John Ryan
  - [Begich to Introduce Legislation to Promote Ocean Acidification Monitoring and Protect Alaska Fisheries](#) – Alaska Native News & Alaska Business Monthly
- On Friday, August 8, Senator Cantwell also visited the U.S. Coast Guard's Air Station in Port Angeles to learn about search and rescue operations. Cantwell also discussed a need for high-frequency radar stations on Washington state's coast that would help the Coast Guard locate and respond to missing or distressed boaters. NANOOS Executive Director Dr. Jan Newton and NANOOS PI Dr. Mike Kosro, professor of earth, ocean, and atmospheric sciences at Oregon State University also attended the event. The event was featured in the Peninsula Daily News on August 10: <http://peninsuladailynews.com/article/20140810/NEWS/308109982/0/SEARCH>

#### Communications / Outreach / Education:

- **Catalina Sea Ranch talking about technology and shellfish farming:** <http://ktla.com/2014/08/15/connected-seafood-farm-grows-harvest-using-tech/>. Also on the Phil Lempert report. Phil Lempert has served as food trends editor and correspondent for NBC News' *Today* show as well as regular appearances on

ABC's *The View*, *The Oprah Winfrey Show*, *20/20*, CNN, CNBC, FOX. The Supermarket Guru website is now one of the leading food and health resources on the Internet, visited by more than 9 million people each year. Just posted overview of CSR innovations with captivating underwater scenes of teeming shellfish next to the ranch: <https://www.youtube.com/watch?v=z9OjF7DsYOI&feature=youtu.be>

**Upcoming Meetings with IOOS participation:**

- **OCEANS'14 MTS/IEEE St. John's - Oceans: Where Challenge Becomes Opportunity. September 14-19:**

We are coordinating two town halls at this meeting:

- Partnerships in Observing – Canada and USA: We will explore the existing partnerships and best practices for engagement, how the nations' ocean observing systems successfully delivering needed services to their citizens and can we provide more services if there were a more formal North American observing infrastructure.
- Developing the Marine Technologies and Services Enterprise: Marine technology and services companies are important partners and stakeholders of the ocean observing program and in have grown as a result of ocean observing programs. Quantifying their impact has been difficult. We will hear from both industry and government representatives on the opportunities, barriers and how we can clearly communicate the value of this enterprise to Canada's and the United States' economy.

View the IOOS

calendar: <http://www.ioosassociation.org/calendar> or <http://www.ioos.noaa.gov/about/calendar.html>

Cheers,  
Zdenka

**P.S. Congrats to IOOS Program Office, Becky Baltes – You are an Ironman! Becky completed her second Ironman -MONT-TREMBLANT 2014.**

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