

## Bi-Weekly IOOS® Z-GRAM – 10 August 2012

[www.ioos.gov](http://www.ioos.gov)

The Z-Gram is an informal way of keeping you up-to-date on US IOOS® activities. Please advise of additional addressees, or if you are receiving and no longer want to receive. If you think others could benefit from the Z-Gram please pass it on. To see previous Z-Grams go the IOOS website and view under [program updates](#).

### IOOS® - A Partnership supporting Lives and Livelihoods

#### Highlights:

**IOOS Asset Map version 2.0 Launched ([www.ioos.gov](http://www.ioos.gov)):** Version 2.0 of the IOOS Asset Map (observations) represents a major redesign of the underlying DMAC architecture. Most significantly we moved to Google Fusion Tables and Google Maps Version 3, which solved major performance issues. Recent updates to the Asset Map and the various supporting technologies enable faster browsing of support for most internet browsers. The information displayed by the Asset Map is harvested automatically from standardized web services delivering in situ and gridded (model and satellite) data. The Asset Map is part of a larger metadata management and display system that includes a service registry and a data catalog. This composite system is being designed to provide metadata management and discovery functions for IOOS data. Big thanks to our partners in this effort: NOAA's National Geophysical Data Center and the Gulf of Maine Research Institute.

**IOOS Summit: WHITE PAPER SUBMISSIONS NOW AVAILABLE ONLINE:** IOOS Summit Community White Papers are now available at: [www.iooc.us/summit/cwps/](http://www.iooc.us/summit/cwps/). We received 103 submissions on wide-ranging ocean observing topics. Online, you can view the titles and authors for each of the papers. The titles contain a link to the paper uploaded in Google Docs. The online list allows you to sort by title or author. Buttons in the lower right portion of the screen enable users to download the entire list in Excel or view it full screen in your browser. Comments/questions please email: [iooc@oceanleadership.org](mailto:iooc@oceanleadership.org)

#### Governance and Management Subsystem:

- **IOOS FACA inaugural meeting 29-30 Aug:** The Federal Register Notice announcing the meeting was published August 10 and can be found at: <http://www.gpo.gov/fdsys/pkg/FR-2012-08-10/pdf/2012-19759.pdf>.
- **GPR Development:** Jen Rhoades (IOOS Program office) and working group, Liz Davenport, Shawn Choy, Amanda Hunter, Kate Lambert, Carl Gouldman, Derrick Snowden and Josie Quintrell met and discussed alternative ideas to a GPR, but did not develop a final recommendation. After discussing the meeting outcomes with Liz Davenport, Jen and Liz plan to meet on August 28th to continue to analyze and refine the GPR based on the WG meeting discussion and other GPR development guidance from OMB and DOC.

### Observation Subsystem:

- **High Frequency Radar/Radio:** For more information contact the US IOOS HFR Project Manager, Jack Harlan, [Jack.Harlan@noaa.gov](mailto:Jack.Harlan@noaa.gov): No Update
- **Gliders:**
  - **Challenger Mission:** Silbo is back underway and his destination is Brazil. Follow his progress and the blog <http://www.i-cool.org/?cat=77> – including “why did he fly backwards.” Keep up with the daily progress on the US IOOS glider asset map: [http://www.ioos.gov/observing/observing\\_assets/glider\\_asset\\_map.html](http://www.ioos.gov/observing/observing_assets/glider_asset_map.html)
  - **Shell Oil launches glider in the Gulf of Mexico:** On 30 July, Shell Oil achieved a successful launch of the Seaglider. The glider was launched approximately 15 miles east of Shell’s Auger platform. The sensors on board the glider measure temperature, conductivity, salinity, dissolved oxygen and dissolved organic matter. The glider is expected to be on patrol through November. Data can be found at: [http://www.ndbc.noaa.gov/station\\_page.php?station=48911](http://www.ndbc.noaa.gov/station_page.php?station=48911)
  - **National Glider Strategy Development – SUCCESS:** Becky Baltes and a core team of regional experts led a successful workshop to kick-off the development of a National Glider Strategy at the Scripps Institute of Oceanography. Thank you to Dan Rudnick of SCCOOS who hosted the event. There were representatives from almost every Regional Association and various interested NOAA and Navy groups in attendance. Accomplishments include: defining the mission and scope of a National Glider Network; outlining a National Glider Network Plan; assigning authors to each section of the plan, and writing short, medium and long range goals for implementation. Near term goals include developing standardized data formats for glider data and an evaluation of the current state of glider operations to evolve cooperative planning. All of the presentations and a list of attendees are available on the US IOOS website, <http://www.ioos.gov/glider/strategy>, and we will continue to post updates there as the network planning efforts develop. If you did not attend, but are still interested in getting involved in drafting the plan, please contact Becky Baltes, [becky.baltes@noaa.gov](mailto:becky.baltes@noaa.gov).
  - **Wave Glider Demonstration:** The wave glider and one fetch have been recovered off of Mt. Desert Island, ME, in the NERACOOS Region. In Bar Harbor, ME, Neal Pettigrew's team recovered their VEMCO sensor from the Wave glider and will be analyzing the acoustic tagged fish data shortly. They will also analyze the fetch bottom pressure and temperature data as soon as it is available. The wave glider was re-launched this week, with a CTD addition, from a chartered vessel near New Bedford, MA. It will transit out to the OOI Pioneer array over the next week. One fetch will be redeployed near OOI's Pioneer Array using a WHOI vessel deploying Aug 20th. For this second half of the

demonstration only one standard fetch will be used. Additionally, we are arranging for another vessel to deploy a tsunami specific fetch near the DART buoy in the MARACOOS region. The wave glider will travel between the two. Once deployed, the tsunami fetch will stay out for one year to collect data for comparison with the DART and for consideration as a possible replacement in the future.

- **NATO Centre for Maritime Research and Experimentation (CMRE):** Chuck Trees, CMRE - Remote Sensing Branch, presented a talk to the US IOOS Program Office on, "Submerged Remote Sensing Technique for Estimating Local Diffuse Attenuation Profiles." His techniques for measuring absolute irradiance using gliders or Argo floats is new and exciting. If you are interested in his techniques or using the technology, Becky Baltés can put you in touch.
- **New Harmful Algal Bloom Observing System Platform in Tampa Bay, FL:** Florida Fish and Wildlife Conservation Commission (FWC) scientists Dr. Jim Ivey and Dr. Alina Corcoran are in the final stages of field testing a Harmful Algal Bloom (HAB) monitoring station partially funded by GCOOS. The platform will be deployed in Old Tampa Bay, FL, a system prone to blooms by the potentially toxic dinoflagellate, *Pyrodinium bahamense*. *Pyrodinium bahamense* produces saxitoxin, which can accumulate in shellfish and pose a potential health risk from paralytic shellfish poisoning. This species has been documented in Tampa Bay since the 1960s and extensive blooms have occurred almost every year since 2008. With platform permits in place, the team is wrapping up communications and system tests and initiating an in situ test run prior to launching. The platform will contribute to the Harmful Algal Bloom Marine Observation Network (HABMON) program (<http://myfwc.com/research/redtide/research/current/habmon/>) of the HAB group at the Fish and Wildlife Research Institute (FWRI), the research arm of FWC. The platform is equipped with a suite of sensors to measure numerous water quality and meteorological parameters, including current speed and direction, salinity, water temperature, turbidity, pH, dissolved oxygen concentration, chlorophyll and phycocyanin fluorescence, irradiance, wind speed, wind direction, air temperature, barometric pressure, relative humidity and rainfall. Water samples are collected from surface and bottom depths for measurement by on-board instrumentation. The HABMON platform is designed for rapid reconfiguration to accommodate new sensors and sampling regimes. All data will be collected hourly and telemetered to a FWRI server for manual download and quality control, then shared via the GCOOS Data Portal. As HABs continue to emerge in the Gulf of Mexico, resource managers will require a better understanding of HAB dynamics. In this context, the FWC/FWRI team will use the observing platform to link environmental drivers to bloom dynamics at high frequencies on local scales.

**Data Management and Communications (DMAC) Subsystem:** To get on the IOOS System Status list which announces service changes, please contact Derrick ([Derrick.Snowden@noaa.gov](mailto:Derrick.Snowden@noaa.gov)) or Rob ([Rob.Ragsdale@noaa.gov](mailto:Rob.Ragsdale@noaa.gov)).

- **National DMAC:**
  - **IOOS Data Providers: CO-OPS:** CO-OPS's redesigned IOOS SOS web page was launched on the CO-OPS web site (<http://opendap.co-ops.nos.noaa.gov/ioos-dif-sos/>) on August 8<sup>th</sup>. This new site includes a more user-friendly design intended to help data users understand better how to access observations of interest.
  - **QARTOD VI at NDBC July 31-Aug 1:** NDBC's Dick Crout and Ray Toll (SAIC) with technical support from Mark Bushnell and Helen Worthington, successfully hosted the QARTOD VI

meeting at NDBC. The focus was on standard quality assurance/quality control procedures for dissolved oxygen measurements. The 17 participants included representatives from the RAs, federal agencies, academia and industry. The team was well prepared and the representatives brought very important information to the table. Some called the data preliminary (researchers) or real-time (operations) and then did hands-on processing for a specific user. Dick anticipates including any QC available for the entire suite and then will have to make decisions on what can be used real-time (dependent on the processor's capabilities). The team plans to continue telecons with the invited guests for the foreseeable future to work out any details that get confused or are still needed to complete the manuals. Draft manual is scheduled to be completed by the end of Sept 2012.

- **Vocabulary Development and Management:**
  - **Chemical Vocabulary Discussion:** Initial conversation was held on a potential project that would involve IOOS and NODC on contributing to a common set of chemical terms and contribute to the Ocean Acidification effort by focusing on chemical terms that include carbon elements. The discussion germinated from a meeting between Hernan Garcia (NODC) and Emilio Mayorga (NANOOS) at an Ocean Acidification meeting earlier in the summer. Several individuals from NODC (Krisa Arzayus, Liqing Jiang, Pam Michael), NANOOS (Emilio Mayorga), SECOORA (Sara Haines), MMI (Carlos Rueda) and IOOS (Derrick Snowden, Rob Ragsdale) participated in the call. The call did not result in a clear path forward and more discussion on how this collaboration will proceed is needed.
  - **Platform Vocabularies:** A call was held with the objective of determining the next steps for how to proceed on platform vocabularies. The call involved individuals from MMI (John Graybeal and Carlos Rueda), NANOOS (Emilio Mayorga), NDBC (Frank Lodato, Mike Garcia) and IOOS (Rob Ragsdale and Derrick Snowden). In particular, the group discussed reaching answers toward consistently presenting how platforms are classified and defined, and discussed the need for a hierarchical structure (in regards to ontologies). The group arrived at several action items, some of which they are moving forward on, to address the issues from the meeting. They have put together a short list, using the platform names from the IOOS Asset Inventory, and sorted through duplicates and similar terms. Next, they will review the list against the platform ontology registered in the MMI ORR to identify any relationships. Another discussion with MMI will help guide how to develop a vocabulary for platforms that can be used by the IOOS community.
- **GLOS in Action: New Web Tool Displays Information for Recreational Boaters on St. Lawrence River:** GLOS' web-based tool was developed with the recreational boater in mind. [The Boaters' Forecast: St. Lawrence River](#) interactive web tool provides access to real-time river data, as well as NOAA river forecast models. In addition to the nowcasts and 12-hour forecasts of water currents and depth, the tool provides river condition alerts, details about boat launching locations, and information to aid trip planning. New York Sea Grant, NOAA's Great Lakes Environmental Research Laboratory, and the Gulf of Maine Research Institute helped develop this tool.
- **TOPP-ONR-IOOS Project: TOPP Team Conference Call (7/30):** Hassan led a conference call with the TOPP team with the purpose of continuing to develop recommendations for FY13 on ATN development. Recommendations that emerged from this meeting:

- A way forward for establishing U.S. Animal telemetry - create an animal telemetry data node with a front end that can be linked to the IOOS Portal.
- Initiate a demonstration project to explore the integration of ATN instruments with IOOS platforms (e.g. Buoys, Wave Gliders etc.) targeting specific areas (e.g. Central California (CenCOOS)) in collaboration with ONR, NOAA NDBC, NOAA Sanctuaries, BOEM, Navy.

These ideas and recommendations still need to be socialized with the larger animal telemetry community to ensure consensus on what to focus on in the coming years.

- **Animal Acoustic Telemetry:** The team working to improve access to animal acoustic telemetry data produced three documents: The final draft of the requirements document; A POST system description; and the first draft of the system concept/design. All these documents are now shared with the RAs involved in this project, including NANOOS, NERACOOS, GLOS, and AOOS, and with our partners from Global Ocean Tracking Network (OTN) and IMOS Australia and ATN groups (Atlantic Cooperative for Telemetry (ACT), Tagging Ocean Pelagic Predators (TOPP)), NOAA Fisheries and States and Tribal.

**Modeling and Analysis Subsystem:** For information on the US IOOS Coastal Ocean Modeling Testbed, please contact the US IOOS Modeling Testbed Project Manager, Becky Baltes, [Becky.Baltes@noaa.gov](mailto:Becky.Baltes@noaa.gov)

#### Interagency Collaboration:

- **IOOS Summit 2012 - A new Decade of Integrated and Sustained Ocean Observing, 13-16 November, Herndon, VA:** See above
- **DMAC Steering Team will meet Sept 5-6:** The ST will convene on Sept 5-6 in Washington, DC for their next meeting. EPA (Kevin Kirby) will be the “virtual host”, providing an inside look at their ocean observations data management issues/challenges. The agenda will focus on practical recommendations for executing the top priorities identified in their recently submitted IOOS Summit white paper.
- **USACE in Action: No update**
- **IOOS and Links to the National Water Quality Monitoring Network: Eye on Earth Update:** Dan Ramage and Rob Ragsdale talked with Jesse Goodman at the European Environment Agency and one of our POCs for Eye on Earth. Jesse was able to clarify steps for how IOOS data (salinity, water temperature and water level) from SECOORA and NANOOS will migrate from our working space on the Eye on Earth web site to a public gallery. A second task in the project that has been progressing is construction of templates that will provide for consistent KML files from SECOORA and NANOOS when transmitted to Eye on Earth.
- **IOOS and The National Science Foundation (NSF) - Ocean Observatories Initiative (OOI): No update**

**Other:**

- **Caribbean Regional Ocean Partnership Signing Ceremony:** Puerto Rico and the U.S. Virgin Islands [officially launched the Caribbean Regional Ocean Partnership](#) to better manage and preserve their coastal and ocean resources. The CROP will coordinate Regional Spatial Data Efforts and Develop Regional Data Management and Sharing Mechanisms to Support Future Planning Activities. These tasks will build upon existing and relevant regional spatial data efforts, such as those housed within the Puerto Rico Coastal Management Division, CarlCOOS, Sea Grant, the Caribbean Coral Reef Institute, universities and the governments, to coordinate regional management of key datasets to ensure consistency with territorial and federal regulations and guidelines and support planning processes. (source: **Ocean Planning & Policy News, August 2012**)
- **ACT pH protocols workshop:** The Alliance for Coastal Technologies (ACT) held a testing protocol development workshop for their upcoming pH sensor Verification at the University of Michigan June 18-21, 2012. Attendees included members of the expert, external Technical Advisory Committee, Alin Simone (NOAA-PMEL), Robert Byrne (Univ. South Florida), Andrew Dickson (Scripps Inst. Oceanography), Burk Hales (Oregon State University) and Kenneth Pratt (NIST), as well as ACT personnel from three universities and participating instrument manufacturers. Test protocols are being finalized and will be available on ACT's web site in the near future. Lab tests are scheduled to begin November 2012.
- **DOE Wind and Water Power Program:** Scott Kuester, IOOS Program Office and Josie, NFRA – attended an introductory meeting at the Department of Energy (DOE) in DC with five representatives of its Wind and Water Power Program. The Wind Program manages the public's investment in wind technologies to improve the performance and lower the cost of wind power. The Wind and Water Power Program is responsible for researching, testing, evaluating, and developing innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from water resources. This includes hydropower as well as marine & hydrokinetic energy (MHK) technologies. During the meeting the DOE reps indicated their need for data for “resource” characterization (e.g., winds, currents, etc.) and their interest in ways to share data. They also seek improved modeling of these resources (e.g., to forecast better when winds will die down, requiring a switch to an alternate energy source; and improved wave forecasting). They are also interested in the development of standards for various measurements, including currents and subsurface measurements. They seemed well-connected with NCEP, and some of their projects indicate they are working in IOOS' backyard (e.g., they are working with UW's, APL, and OSU). Josie and Scott shared some IOOS materials with them, including the recently completed informal survey of Regional Association energy efforts. They will review the inventory and contact us if they have questions about particular efforts. Get backs to them include assuring they are connected with Jack Harlan, pointing the group to US IOOS National Surface Current Mapping Program (HF radar) and the Waves Plan, and identifying the IOOC's DOE participants. They shared with Josie and Scott their DOE wave and tidal energy resource assessment reports. Get backs to us include letting us know when their request for information (RFI) is forthcoming. The RFI will cover resource characterization activities for both MHK (wave and tidal) and offshore wind (focused on instrumenting the Chesapeake Light Tower for use as a reference facility for offshore renewable energy (RFORE)).

#### Congressional:

- **U.S. IOOS Staff met with Representative Kathy Castor (D-FL - 11th District)** - Suzanne, Jen, and Christopher Holmes (OLA for Mike Jarvis) met with Javier Gamboa, Legislative Assistant to Representative Castor (D-FL - 11th District) on August 8. Javier is a new staff member for Representative Castor, so he

was provided with an overview of the ICOOS Act and U.S. IOOS, including the roles and responsibilities of the IOOC, RAs, and the U.S. IOOS program office. Javier asked many questions concerning the certification process. We provided him with responses explaining the tort liability protection certification will provide to the RAs, and how we have worked to ensure the certification process is not overly burdensome.

### **Communications/Outreach:**

- “Ocean Observing Systems: Stimulating Interest in STEM,” By James A. Yoder, Ph.D., Vice President for Academic Programs, Woods Hole Oceanographic Institution, Center for Better Live, emagazine – Livebetter – August 12, Issue 23:  
[http://www.centerforabetterlife.com/eng/magazine/article\\_detail.lasso?id=345](http://www.centerforabetterlife.com/eng/magazine/article_detail.lasso?id=345)

**IOOS Conference Involvement:** This section will highlight those conferences where US IOOS is a sponsor/or has a major footprint.

**Upcoming Meetings :** To see the IOOS calendar, visit: <http://www.usnfra.org/calendar.html> or <http://www.ioos.gov/about/calendar.html>

Cheers,

Zdenka