

Bi-Weekly Z-GRAM 31 October 2008

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The Z-gram is an informal way of keeping you up-to-date 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 under program updates

IOOS® - Our Eyes On Our Oceans, Coasts and Great Lakes.

Programmatics:

- Welcome Aboard: Deanna Eastman, previously of Ocean.US, will be with us for the next month. She will be working on IOOS briefing materials for the upcoming GODAE meeting, the United States' participation in the I-Global Ocean Observing System (GOOS) Regional Alliance meeting and IOOS transition communication material.
- Vacancy Announcement: The Management Analyst ZA-343-3 position is announced (closes Nov. 7th). This position will be responsible for regional grants coordination and administration and for managing some number of regional projects. The status announcement number is NOS-AA-2009-0003. The non-status announcement number is NOS-AA-2009-0005.
- Congressional Report: It has been cleared by NOAA's Deputy Under Secretary and should be signed out of NOAA shortly.
- FY09: **No Change.** IOOS does not plan to issue a Federal Funding Opportunity for FY09.
- FY10: **No change.**
- FY11-15: Program plans were due by COB on 29 October and we made with at 11:40pm on 29 October. For those of you reading from the outside it is impossible for me to convey the effort that the Modeling Observation Infrastructure (MOBI) sub-goal has been putting in to tell a compelling story on the importance of the IOOS, Environmental Modeling Program (EMP) and the Technical Requirements, Planning and Integration (TIPO) to NOAA and national missions. Within IOOS this includes not only the IOOS Program Office and Data Management and Communications (DMAC) work but the IOOS Regional Enterprise and the National Data Buoy Center. Further the MOBI sub-goal has to take the individual programs and show how we provide an end to end support to NOAA. A tremendous amount of work over the summer through the earlier phase has to get distilled into the Program plan and that requires a late surge of effort. I would like to thank Carl Gouldman, Jessica Geubtner, Tanya Corrie and Danny Weinstein who led this effort with help across the IOOS program, to Kathleen O'Neil who led the National Data Buoy Center (NDBC) effort. This was matched by strong efforts by Alan Leonardi and his team in EMP and Pam Taylor and her team for TIPO. Pam Taylor is also the sub-goal lead who then provides the leadership to the entire goal and my hat goes off to her for an OUTSTANDING job. Our sub-goal is also supported by a great staff: Neil Wise,

Martin Yapur and Sherry Bushmann who really went the extra mile to push the program plan over the finish line. A lot of late nights and weekends from all. This is important and critical work. Next up is the finalizing of the Program briefing that will be given to a combined NOAA Executive Panel and NOAA Executive Council on 14 November so it is no rest for the weary.

Initial Operating Capability - Data Management and Communications (DMAC) subsystem of IOOS®

In FY09 we are focused on 6 areas for this subsystem: (1) Data Integration Framework (DIF) support to Customer Applications: Harmful Algal Blooms forecast system; Integrated Ecosystem Assessments (IEAs); Coastal Inundation; Hurricane Intensity; (2) DIF Regional Implementation; (3) DIF Evolution & Enhancements; (4) Development of the best approach to DMAC (5) HFR – A National Network; and (6) Continue strong support, with the Inter Agency Working Group on Ocean Observations (IWGOO), to the IOOS DMAC Standards Process and working with the DMAC Steering team and the first 5 areas

- IOOS DMAC Standards Process: DMAC Steering Team meeting 8-10 December.
Get Involved:
<http://ioosdmac.fedworx.org/ioos/dmac.nsf/WhatsNew?OpenForm>
- What the DIF:
 - **Check it out:** Want to know everything there is to know about the Data Integration Framework and our movement to a National DMAC - hit the new button on the www.ioos.noaa.gov website called IOOS Data. It will take you to a new page that in a single place provides for the documentation and software to be part of the DIF. This has been a large effort by our OPS and Communications team to bring this to you and we really hope you will check this out and **jump onboard the DIF effort**. IOOS is no longer PowerPoint we are delivering capability NOW.
 - **Ocean Color Implementation Delay:** CoastWatch lead Paul DiGiacomo has informed us on a delay in implementing the THREDDS server in NESDIS OSDPD. It is now scheduled to be online sometime in January 2009. Originally the server was to be operational September 25, and then it was delayed until November 10 due to delays in getting approval from the NESDIS CIO due to security concerns. This server will be used to provide operational ocean color products for the Gulf of Mexico using DIF standards.
 - **High Frequency Radar (HFR):** Jack Harlan has had a busy briefing week. On 23 October he briefed the NOS Remote Sensing Working Group; on 27 October the Global Navigation Satellite Systems Workshop and on 30 October the US Telecommunication Training Institute Workshop on HFR Remote Sensing for Developing Countries.

Interagency Project Collaboration: The Z-grams are certainly focused on providing information on IOOS® connections to these projects and it is not intended to provide programmatic updates of these specific projects because all of them have project leads.

- NSF Ocean Observatories Initiative (OOI): The OOI team has been very hard at work preparing for the final design review that will be conducted over the next two weeks. GOOD LUCK.
- Army Corps of Engineers collaboration on a National Waves Plan: Next version for comment will be ready by 15 November.
- NOAA-Navy collaboration on the GODAE server: Originally the MOU was to be between NOAA, Commander Naval Meteorology and Oceanography Command (CNMOC) and Navy Research Lab(NRL). DOC just informed us that the MOU must be between NOAA and Navy Research Lab only since DOC could not oversee activities between CNMOC and NRL. This should not affect operations, we just need to continue to work the MOU to just between NOAA and NRL.
- National Water Quality Monitoring Network: The NOAA IOOS Program, EPA and USGS are working in collaboration to better understand each agencies data framework (i.e. NOAA IOOS DIF, EPA WQX, USGS NWIS) to define an effort that will lead to improved interoperability and integration of water quality data. A small "working group" of NOAA IOOS, EPA and USGS staff met on October 17 for an initial discussion of where to focus our efforts. There was some initial discussion on the architecture, formats and Web Services. After discussion during the MACOORA annual meeting and MACOORA's effort in water quality and the recent Delaware River Basin Report that was part of a National Water Quality Monitoring Network Pilot Study, Eoin Howlett has agreed to participate in the next conference call on 6 November. The focus of the next conference call will include discussion, in more detail, on data management components, such as architecture and Web Services that were started in our first meeting.
- IOCM - Thanks to Jack Dunnigan's weekly - I provide the following update - Integrated Ocean and Coastal Mapping (IOCM). Roger Parsons is heading this NOAA-wide effort from the NOS Office of Coast Survey (OCS). For example, we have been partnering with the State of California on coastal mapping, under the West Coast Governors' Agreement on Ocean Health – a regional collaboration that we help to support. The state needs the data for habitat and climate studies, we need it for charting and navigation. Using one of our contractors, one survey in a small area (that had not been surveyed for decades) found 110 new dangers to navigation. At a meeting in Seattle this week, Oregon and Washington indicated that seafloor mapping was the top priority for foundational science and assessments. Another example: a recent NOS National Centers for Coastal Ocean Science activity off of the west coast of Puerto Rico focused on gathering information about corals and other ecologically significant factors in offshore canyons. This week OCS accepted the data for navigation purposes, and it will show up on our NOAA charts. "Map once – use many times" is the IOCM mantra. Yet another example: this week there was a shallow-water surveying conference at the Center for Cooperative Ocean Mapping, one of our many partnerships with the University of New Hampshire. Presentations from

around the world focused on cooperative ocean mapping, including Canada, the United Kingdom and Ireland. Because of the work we have done across NOS, the U.S. is at the forefront of this global revolution in hydrographic technology.

Other:

- **Rutgers University - Across the Pond:** <http://rucool.marine.rutgers.edu/atlantic/> - A GREAT MISSION COMES TO AN END - reads the title of the blog. Scarlet Knight reported a leak detect, and about a day and a half later, the communications were lost. The time for ejecting the emergency ballast weight has now expired, and there are no ARGOS transmissions. Please go to the blog and read the full story. As this was unfolding, the Rutgers team was representing the US IOOS at an international glider community meeting. The entire community worked with our team to provide thoughts and offers of assistance for a recovery mission. This speaks volumes about the importance of such missions. In Scott's email to me over the weekend he wrote - despite the apparent loss, we have a wide range of successes and lessons learned that we only found by trying. More importantly, it has and will continue to inspire a new generation of students. I could not have said it any better. On behalf of NOAA and the many who have followed this endeavor, I say to the students who put this mission together - you have done an outstanding job and you should be very proud of your efforts, you have brought new excitement to ocean observing. Since the news hit me hard when I read Scott's email, I know you are disappointed but I also know that you are not defeated. We will be with you on your next long-duration flight towards Europe that you are beginning to plan for 2009.
- **Ocean Innovation - World Summit on Ocean Observing:** Zdenka provided a US IOOS briefing, she was joined by Shelby Walker, NSF who provided an Oceans Observatories Initiative (OOI) briefing. It was a nicely coordinated effort that had a chance to show how the United States is moving forward with two strong ocean observing programs. The conference was nicely done as it brought together an international audience. In the morning Ralph Rayner, Chair of the GOOS Scientific Steering Committee, Mike Tanner, detailed from NOAA to GEO, and Lesley Rickards of the British Oceanographic Data Center set the stage for the international programs and the importance of Ocean Observing. In the afternoon national efforts such as IOOS, OOI, Australian Integrated Marine Ocean System (IMOS) and Japan provided a look from in the trenches - how we are making it work. The second day followed with a number of other National systems in the case of Canada, and regional and sub-regional systems within the United States and Canada. The third day was a workshop devoted to data integration. Jeff attended this workshop via VTC with Luis Bermudez (SURA), John Davidson and Paul Daisey from Image Matters. During this workshop, there was a demonstration of DIF Web services that have been implemented by NDBC and CO-OPS. Leading up to this workshop Jeff worked with NDBC, CO-OPS and Compusult to have IOOS SOS published in Registry for Oceans Innovation Conference 2008 demo. Publication was successful though the effort revealed

some assumptions that the Registry was making about service metadata that conflict the needs of NOAA (in particular, the desire to offer data from individual stations that comprise several sensors).

- **MACOORA Annual Meeting:** Zdenka attended the MACOORA annual meeting and provide a IOOS program overview. The meeting was very engaging as MACOORA provided panels on their areas of support: Coastal Inundation, Maritime Safety, Water Quality and Fisheries. Then the group broke into working groups to determine concrete next steps in these areas. On day two there was a discussion of the opportunities and challenges of the sub-regional observing systems within MACOORA and a briefing and discussion on ocean observing support to the offshore wind energy sector. I continued to be impressed with the Regional enterprise. All the panels provided real support being provided right now and talked about challenges on how to provide better support. I can't do justice to all the presentations and look forward to seeing them all posted on the MACOORA website. IOOS is about providing support to real folks. Jarratte Drake, representing the Lobster men Association (2283 members strong) talked to us about what the observational data means to him everyday. I can tell you that no one was on their computers or PDAs during his talk. He explained that he gets up at 2:45am and has a half hour to determine whether he can take his boat (42 foot) and crew safely out for their daily job. His top three - all the sensors working on buoys, all the data integrated in one place in an easy to use format and 1 additional buoy. It is about livelihood and safety for his crew.
- **NOAA IOOS® Partnership for Information System Architecture:** NOAA IOOS met with the National Environmental Satellite, Data, and Information Service Office of Systems Development (OSD) staff to identify mutual priorities on systems architecture. Team members met again this week to discuss development of an information system architecture to improve management of observation data. The IOOS Data Integration Framework team is developing and adopting standards and protocols for ocean and coastal data exchange to enhance data and service compatibility, while OSD's Ground Systems team is preparing for data from the next generation of Geostationary Operational Environmental Satellites and Polar Operational Environmental Satellite. The teams expect to identify areas of intersection to leverage resources and expertise, improve data products, and avoid duplicated effort.
- **NWS Marine Program Managers Meeting Briefing (Oct. 23):** At the invitation of the chief of NWS Marine Program Branch Therese Pierce, Marcia Weeks gave an IOOS briefing to the annual NWS marine program managers meeting. The briefing was focused on items requested by NWS that included the kinds of projects that IOOS supports, activities within regions, and modeling work that is being done.
- **OceanObs09:** Almost a decade has passed since the OceanObs'99 symposium played a major role in consolidating the plans for a comprehensive ocean observing system able to deliver systematic global information about the physical environment of the oceans. Now, for the first time in history, the world's oceans are being observed routinely and systematically by means of satellite and in situ techniques. The availability of these observations has led to rapid progress in

ocean analysis and forecasting as well as new scientific understanding of oceanic variability and the role of the oceans in weather and climate. This information and knowledge supports a wide range of societal and business benefits. It is now critically important to ensure sustainability and further development of the present system and to realize the full extent of the benefits across all stakeholders and for all participating nations. It is equally important to define a clear plan for extending the present system to include comprehensive observation, analysis and forecasting of the biogeochemical state of the ocean and the status of marine ecosystems. The OceanObs'09 symposium will celebrate a decade of progress and make a major contribution to chart the way forward for the coming decade.

- The National Coastal Components of the I-GOOS have been asked to participate in Oceans09 as we have started to see our programs deliver capability. We had a small conference call on Friday - 31 Oct - with Molly McCammon, Harvey Seim, Mike Johnson, Josie Quintrell, Becky Shuford and myself to discuss ways we can support this effort. Within the United States NOAA and NSF have provided funding support. What is being asked for is a set of community white papers - Abstracts are due in 15 November. If accepted the 5 page white papers will be due in March. Below are what we talked about - sorry for those who are reading this for the first time! Nothing set in stone and if you have an idea please pass them to Becky Shuford and copy Zdenka. We decided that we do want to ensure that all the papers do tie to IOOS (National System) so we will come up with a coordinating statement so that folks can understand how these papers tie together. There is no maximum limit on the papers.
 - Arctic: Molly McCammon will take the lead; to include co-authors with NSF and the Snow and Ice Data Center
 - International infrastructure: Harvey Seim will take the lead; we will ask for co-authors from Australia and Europe, as well as NOAA IOOS (Becky Shuford)
 - Data management infrastructure: Jeff de La Beaujardiere will take lead; to include co-authors Derrick Snowden (NOAA Office of Climate Observations), Steve Hankin (Pacific Marine Environmental Lab - will be invited), and [selected] Regional Associations (TBD)
 - Global needs for hurricane activities: Mike Johnson will follow this up for feasibility with Gustavo Goni of Atlantic Oceanographic and Meteorological Lab and NOAA IOOS LCDP
 - Global needs for ecosystems activities - possible California Current/ Salmon link: Josie Quintrell will follow this up for feasibility with Paul Siri (CenCOOS), Jonathan Phinney (PaCOOS/ SWFSC); another potential is the efforts on gliders and NMFS efforts John Manderson (NMFS), Josh Kohut (MACOORA); possible other connects to make are with Steve Ramp of CenCOOS, Ned Cyr of NMFS Science and Technology (he has also been directly solicited by the meeting organizers), and David Demer of SWFSC who's program owns and operates a

glider for fisheries research purposes (connect to work being conducted by MACOORA)

- GODAE workshop paper - Mike Johnson will review for relevancy

Congressional:

- 28 October: NOAA Administer signed the NOAA response to Honorable Barbara A. Mikulski, Chair, Subcommittee on Commerce, Justice, Science, and Related Agencies Committee on Appropriations, United States Senate letter regarding the IOOS implementation plan that was requested by this committee.

Communications:

- 24 October: Ellsworth American, Inc. Mount Desert Islander (Bar Harbor, Maine) - Vital buoy funds are found - "An observation buoy in Penobscot Bay used by fishermen, boaters, scientists and the U.S. Coast Guard will continue to collect oceanographic data for another year, thanks to recent funding secured from the National Oceanic and Atmospheric Administration (NOAA) by Maine Sea Grant."
- Offshore June 2008' www.offshore-mag.com Shell, NOAA use novel technology to better predict Gulf of Mexico hurricanes - Ian Voparil, Ph.D. Shell Global Solutions and Richard Crout, Ph.D. NOAA NWS National Data Buoy Center

Upcoming Meetings:

- 3 November: 14th Florida COOS Caucus - hosted by Florida Gulf Coast University in Fort Myers. The theme is: Climate Change: Florida's Changing Coastal Ocean Environment. POC -Jyotika I. Virmani, Executive Director, FLCOOS Consortium
- 10-15 November: Final GODAE Symposium, Nice France: I will present the US Ocean Observing Initiatives paper attached in a previous Z-gram. I will attend 13-15 Nov. Candyce Clark, Office of Climate Observations will attend for the entire meeting.
- 18-20 November: Zdenka and Brian Melzian will attend from the IOOS Federal partnership. There will be a panel on Integrating the National System of MPAs and Ocean Observing Systems, myself and Josie Quintrell will be part of this panel
- 25-27 November: Fourth Forum of the GOOS Regional Alliances - Ned Cyr will represent the United States - NOAA IOOS Program is preparing his briefing
- 2-4 December: Annual National Federation of Regional Associations (NFRA) meeting, Baltimore, MD.
- 9-10 December: CaRA Stakeholders meeting 9 December, site visit 10 December (Zdenka, Jack Harlan)

Cheers,
Zdenka

