

Bi-Weekly Z-GRAM 15 May 2009

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The Z-gram is an informal way of keeping you up-to-date on 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.

Programmatic:

- Hail to CAPT Jamie Verlaque: Jamie joins us as the Division Chief for the IOOS division that has responsibilities over our Policy, Regional, Legislative, Communications and Education functions. A commissioned NOAA Corps officer, Captain Verlaque has a strong operational maritime background comprised of more than ten years of sea duty aboard four NOAA ships, two which he commanded, and five years on hydrographic field parties. Just prior to reporting to the IOOS Program Office, CAPT Verlaque was the Director of NOAA's Safety and Environmental Compliance Office. As Director, he was the senior safety and environmental manager for NOAA, with responsibilities for establishing safety goals and performance metrics throughout NOAA Welcome Aboard!
- **Marine Biologist ZP-401-3/4 Recruit Action:** The vacancy announcement is now on www.usajobs.gov. This announcement is to backfill Becky Shuford's position and will close on June 15, 2009.
- Congressional Report: Back in the review chain
- FY09: All of the recommended FY09 IOOS awards have been submitted to NOAA Grants Management Division. We will now monitor the progress to final award.
- FY10: The President released his detailed budget to Congress. The IOOS funding line included in the President's request is for \$6.5M for NOAA IOOS and \$14.5M for Regional IOOS. The details of the NOAA FY10 budget are contained in the Blue book (http://www.corporateservices.noaa.gov/~nbo/10bluebook_highlights.html.) Dr. Lubchenco has had a full schedule briefing Congressional members on NOAA's FY10 budget and we provided IOOS information for inclusion in her briefing material.
- FY11-15: Budgeting phase continues.
- FY12-16: **No change.**

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 (HAB-FS); 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) High Frequency Radar (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.

- IOOS DMAC Standards Process: Get Involved:
<http://ioosdmac.fedworx.org/ioos/dmac.nsf/WhatsNew?OpenForm>
- IOOS DMAC Steering Team: The DMAC ST met from 5-7 May 2009. The majority of members attended the meeting. Guest presenters included representatives of GEOSS, the Open Geospatial Consortium, and the NASA Standards Process Group. Major discussion topics included the status of DMAC, the standards adoption process, and coordination with related organizations. A number of recommendations were drafted regarding these issues and will be delivered to the IWGOO for consideration.
- What the DIF: For all documents and information, please visit the www.ioos.noaa.gov website and hit the button that says IOOS Data.
 - **Coastal Inundation:** SLOSH Display Program (SDP) load/operational test: The DIF Coastal Inundation project team will simulation of operational use exercise on May 21, in conjunction with a training session on the new SDP being conducted by NOAA's Tropical Prediction Center's (TPC) Jamie Rhome. Wakefield and Slidell NOAA's National Weather Service (NWS) Weather Forecast Office (WFO's), the TPC Storm Surge team, and several DIF members will make a simultaneous data call from NOAA's Center for Operational - Oceanographic Products and Services (CO-OPS) and National Data Buoy Center (NDBC) DIF services during a specified time frame. CO-OPS will monitor the database/server activity during the test and extrapolate the activity to estimate the load the DIF services can support during an actual hurricane or flooding event. This test will continue through June 30. If no major problems are encountered, the SDP will be released to all coastal WFOs for use during this hurricane season.
 - Visit with Slidell WFO: DIF team member, Carmel, met with our customers at the Slidell, LA WFO discussing issues associated with the SLOSH model refinements we've been facilitating on this project. These discussions were particularly useful per calibrating the pros and cons of expanding the availability of the enhanced version of SLOSH beyond the original project partners (Slidell, LA and Wakefield, VA WFOs).
 - **HAB-FS:** All the modeled currents data, provided by NOAA's Coastal Services Development Laboratory (CSDL) in DIF format, has been successfully transferred to NOAA's National Centers for Coastal Ocean Sciences (NCCOS) for analysis. NCCOS is working to see if modeled currents data can be used to forecast bloom transport and extent using spatially-articulated particle tracker. Initial results indicate additional factors may need to be considered for enhanced forecast method to be viable.
 - **Integrated Ecosystem Assessments:** Charly Alexander, NOAA IOOS, met with NOAA's National Coastal Data Development Center (NCDDC's) Sharon Mesick at Stennis on Tues 5/12 to, among other things, review the status of their work on the "REDM" tools (Regional Ecosystem Data Management) they are implementing to support the IEA project – focus is on facilitating the integration of IOOS core variables for ecosystem-level analysis. All of this work continues to be on schedule.
- **REGIONAL DIF IMPLEMENTATION:** Met with 8 of 11 RA DMAC leads to review the updated implementation tracking/status table to document progress by standard services and core variables. There was discussion on how the process for determining

how to reach 50% DIF implementation in the regions and a review of the actions agreed to in the Workshop. Service Implementation Options: We discussed the possibility of NDBC's Mike Garcia visiting RAs to assist with implementation of SOS schema/tools in the same manner that Rich Signell is providing to sites per modeling output tools. There is also the possibility of RA DMAC leads (e.g. AOOS's Rob Cermak) traveling to other sites to assist with implementation of tools/schemas.

- **DIF ENHANCEMENTS:**
 - DIF Interoperability Re-Testing: John Ulmer, NOAA's Coastal Services Center (CSC), continues to retest the IOOS DIF SOS Implementation at NDBC and CO-OPS for the DIF core variable data (except ocean color which is served by only one data provider, CoastWatch) for level of interoperability. The results of the retest are expected the week of May 22nd and then will be compared with previous interoperability testing conducted in June 2007 or December 2008.
 - Guide for Data Providers: We continue to coordinate with NOAA's GEO-IDE to post DIF Guide for Data Providers on the GEO-IDE Guidelines and Best Practices Wiki. Lewis McCulloch, NOAA's National Environmental Satellite, Data, Information Service (NESDIS), and Ted Habermann, NOAA's National Geophysical Data Center (NGDC), have agreed to allow for wider use of the GEO-IDE for IOOS activities such as the IPT Working Group.
- **DIF-DMAC/NATIONAL DMAC:**
 - **RFI:** Sixteen responses to the IOOS DMAC Industry RFI were received and will be used to inform both a forthcoming Analysis of Acquisition Alternatives and next steps on National DMAC planning/implementation. We are working on a synthesis of this material that will facilitate in particular a comparison of the responses by question. The NOAA IOOS Program will be meeting with a number of the responders in the coming weeks.

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.

- **GODAE Server MOA: No change**
- **Interagency Modeling Activities:** Rich Signell, USGS detail to NOAA IOOS, traveled to Great Lakes Observing System (GLOS). He worked with Stuart Eddy and Guan Wang from the Great Lakes Commission and Dave Schwab and Greg Lang from the NOAA Great Lakes Environmental Research Laboratory (GLERL) to serve their gridded data as CF-compliant OpenDAP using the THREDDS Data Server. GLOS has both uniform grid data (digital terrain models), curvilinear grids (POM model output) and unstructured grid (FVCOM model output). GLERL's Dave Schwab suggested creating a cookbook for IOOS model providers that would give recipes for serving different types of model output as IOOS-compliant data streams (OpenDAP + CF).
- **High Frequency Radar:** Next draft has been circulated to the NOAA's Ocean and Observation councils; Inteagency Working Group on Ocean Observing, the Hydrographic Services Panel, the IOOS Regional Associations and a number of NOAA offices. Comments are due 8 June 2009.
- **IOOS and Links to the National Water Quality Monitoring Network: No update**
- **IOOS and National Science Foundation (NSF) Oceans Observatory Initiative(OOI):** Charly met with the Consortium for Ocean Leadership's Tim Cowles to discuss OOI/CI

collaboration. Tim is COL's OOI project manager (which includes the "cyber infrastructure" component). This meeting is part of a continuing and likely expanding partnership between OOI/CI and IOOS/DMAC which includes John Orcutt (Scripps) and Matthew Arrott (Univ of Calif/SD).

Other:

- **The Scarlet Knight (RU27) underway:** The Scarlet Knight continues to make good progress. Highlights from the blog contain a nice narrative of the deployment to date. Currently Scarlet Knight is taking advantage of the mighty Gulf Stream. Get involved, sign up for the twitter and add your comments as she makes her way across the Atlantic. <http://www.i-cool.org/?cat=38>
- **2nd Annual SECOORA Storm Surge and Inundation Model Test Bed Workshop (May 5-6, 2009):** Marcia Weaks, NOAA IOOS, attended this workshop held at the University of Florida in Gainesville. The Principle investigators from the modeling groups involved in the project - Peter Sheng, (UF), Rick Luettich (UNC), Bob Weisberg (USF), and Huiqing Liu (NCSS) - attended, along with NOAA, FEMA, SECOORA, SURA, and local emergency managers from the Northeast Florida Response Center. Among the NOAA attendees were SLOSH representatives from NWS Meteorological Development Laboratory and TPC, National Ocean Service (NOS) Coastal Services Development Laboratory (CSDL) and Office of Oceanic and Atmospheric Research (OAR) Atlantic Oceanographic and Meteorological Laboratory (AOML) Hurricane Research Division. Initial model comparisons were presented, and the focus for the remaining 17 months of the project were discussed. An expert panel provided feedback to the PIs, for example focus effort on establishing more objective measures of model performance; provide an assessment of model strengths and weaknesses; consider running additional storms; and encourage the collection and exposure of observations. There was also quite a bit of discussion about how to transition this initial effort into a national test bed, including a suggestion to form a steering team and POC for the effort.
- **Speaking of Storm Surge and Inundation:** There are two efforts underway that IOOS is participating in. First under the NSTC Subcommittee on Disaster Reduction (SDR), an inter-agency storm surge/coastal inundation working group has formed. Margaret Davidson, NOAA Coastal Services Center (CSC) co-chairs the SDR and is the sponsor of this working group. This working group has representatives from US Federal Agencies and organizations: NOAA, USGS, EPA, CDC, OSTP, FHWA, NIST, FEMA, NASA, USFS, USACE, ONR. The first meeting was held last week to establish terms of reference. Secondly within NOAA - we are working on a Storm Surge/Inundation Road Map which has been a coordinated effort between NOAA's NOS and NWS. In both cases, the efforts of the IOOS Regions and projects are being well represented.
- **NOAA IOOS and US Navy Meeting at Stennis, MS – Wed 5/13:** Carmel, Jeff and Charly (NOAA IOOS) met with a technical team from Commander Naval Meteorology and Oceanography Command (CNMOC) and the Naval Oceanographic Office (NAVO) to review technical details of our mutual existing and planned Service Oriented Architecture capabilities for the management, access, transport, and application of ocean observations. Two key highlights were an improved understanding of the Navy's use of OGC standards and their internal JMBL (Joint METOC Broker Language) tools/code,

and the issue of the Navy as data provider to IOOS and NOAA as data provider to the Navy. We did not resolve these but had very useful/insightful discussions on both. The team identified two areas in particular for potential collaboration – common architecture (identifying commonalities, gaps and leveraging opportunities) and code sharing (existing code that meets the other’s existing or anticipated needs in particular) and a list of more straightforward “action” items per swapping some reports, tools, etc.

- **IOOS/NOAA National Estuarine Research Reserve System (NEERS) Meeting:** Marcia and Rob (NOAA IOOS) met with Whit Saumweber, Marie Bundy and Steve Rumrill from NERRS. Whit and Marie are both in Silver Spring; Steve is the Research Program Coordinator at the South Slough National Estuarine Research Reserve in Charleston, Oregon. The discussion landed on biological data and possible ways to incorporate this data type into an end-to-end application using DIF standards. Opportunities exist here, as well, to work closely with the Regional Associations and will benefit from the Regional DIF implementation effort that is moving forward. The meeting resulted in Whit, Marie and Steve agreeing to draft a 1-pager on potential ideas that will expand this discussion.
- **The Marine Board Spring meeting:** The Marine Board is part of the National Academies of Science -Transportation Research Board. I started my week in Long Beach California, briefing this board as a guest speaker. My IOOS presentation was well received. The follow up discussion centered around the need for the certification of data that is used by the Navigation community and the continued need for better resolution and highly accurate oceanographic data. I stayed for the day and listened to briefings on subjects that ranged from a special report on the Risk of Vessel Accidents and Spills in the Aleutian Islands; shortfalls in numbers of Naval architects/engineers and efforts in the National Naval Program for Naval Engineering; the Department of the Navy Science and Technology National Naval Responsibility Initiative; an update on efforts to reduce harmful air emissions, to reports on the investigations of M/V COSCO BUSAN allision with the San Francisco-Oakland Bay Bridge. Thank you to SCCOOS and CeNCOOS for sending slides on our LA/Long Beach project and support to the COSCO BUSAN and subsequent oil spill response. I incorporated them into my briefing.
- **SECOORA Board Meeting, Members Meeting and their DMAC/ODP/DMCC sub group:** I along with Dick Crout, NDBC attended the SECOORA members meeting and were joined by Jack Harlan for the DMAC/ODP/DMCC meeting. I had a lively discussion after my IOOS presentation on the challenges of maintaining existing operational systems, along with data management needs. A majority of the meeting was spent in three panels looking at Offshore Ocean Energy, Innovations in Utilizing Ocean and Coastal Observing Data, Ocean Observing Assets - a need for inventories, and developing models for Enhanced Coastal Resiliency. I would not do justice to the very well presented briefings and urge you to visit the SECOORA website as they post the presentations. The second day was devoted to looking at applications of HFR and the support that the Regional DMAC committee could provide. Jack provided a baseline history of HFR and both Dick and Jack were able to provide support to the members on the national data management efforts, NDBC's role and examples of efforts from other regions. On both days the discussion was lively and productive and I always appreciate and enjoy being part of these meetings.

- **NERACOOS Board Meeting:** Gabrielle, April (NOAA IOOS), Betsy Nicholson (NOAA Coastal Services Center), Jon Hare (NOAA's National Marine Fisheries Service/North East Fisheries Science Center) attended on the phone and in person the NERACOOS meeting. Judging from the emails and responses we are now working on, this was a lively meeting as well. I did not have a chance to get a full debrief on Friday from my team, but I look forward to receiving this next week.
- **US IOOS (IOOS and OOI) at MTS/IEEE Oceans 09 - Biloxi, MS Oct 26-29:** I sent out a request for support to the IOOS RA Ex-Directors and IWGOO members but want to encourage wide participation for this track. This is being coordinated by myself and Shelby Walker, National Science Foundation. We are looking to have a dedicated US IOOS (IOOS/OOI) track at Oceans 09. Here are the details: Sessions have 5 papers, our track will include as many papers that are submitted, so we are not limited to a session length. There are 4 sessions per day and we are shooting for 20 papers. If we get more we will extend over multiple days. We are looking for papers from the Global component of IOOS, the Coastal component that includes both the National (Federal Agencies) and the Regional Component. We are looking for papers that span the three subsystems and the 2 cross cuts. We are looking for papers on how IOOS is delivering benefits to users. We are looking for papers from all participants government, academia and industry. Abstracts need to be submitted by 1 June. Our track is BIX2.2, you can use my name for requesting submitter. <http://www.oceans09mtsieebiloxi.org/>. Paper format will be posted this week.

Congressional: No update

Communications:

- NOAA, U.S. Coast Guard: New Ocean Current Data to Improve Search and Rescue Activities: NOAA Press Release issued on 4 May http://www.noaanews.noaa.gov/stories2009/20090504_ioos.html. This story was picked up by a number of news outlets

Upcoming Meetings:

- 26-28 May: Visit to Humboldt State University
- 28-29 May: GODAE High Resolution Sea Surface Temperature Project meeting - CA: Zdenka will provide kick off the conference
- 27-29 May: 11th Annual Harbor Safety Committee Conference - Tampa, FL. Zdenka will join others from NOAA to participate in a panel on 29 May.

Cheers,
Zdenka