

Bi-Weekly Z-GRAM 20 March 2009

[www.IOOS.noaa.gov](http://www.IOOS.noaa.gov)

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.

NOAA welcomes Dr. Jane Lubchenco as the NOAA Administrator. We all very pleased that she has been sworn in and we will have a chance to meet her on Tuesday when she holds a Town Hall meeting in Silver Spring.

### **Programmatic:**

- Congressional Report: The report was returned to the NOAA IOOS office on 16 March and we are addressing Department of Commerce comments.
- FY09: NOAA IOOS spend plan has been approved. NOAA is recommending \$20.9M to be awarded to regionally competed awards. NOAA/CSC is providing my office support to process these awards and have begun coordinating with each of the PIs. I am asking for your support in meeting the 10 April deadline for input into Grants on-line. My sincere appreciation for the efforts you and CSC will undertake over the next several weeks to make this happen. To ensure a streamlined effort, CSC has the lead with Gabrielle Canonico and Carmen Solis as leads in my office. We will be meeting regularly with CSC to ensure that this goes a smoothly.
- FY10: **No change**
- FY11-15: **No change**
- 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 and the first 5 areas

- IOOS DMAC Standards Process: DMAC Steering Team meeting will be held in May 2009: Get Involved: <http://ioosdmac.fedworx.org/ioos/dmac.nsf/WhatsNew?OpenForm>
- What the DIF: For all documents and information, please visit the [www.ioos.noaa.gov](http://www.ioos.noaa.gov) website and hit the button that says IOOS Data.

- Integrated Ecosystem Assessment: ERDDAP - a co-funded project within IOOS receives a great review: OceanTeacher, an "online encyclopedia about marine data management and marine information management" managed by the UNESCO Intergovernmental Oceanographic Commission's (IOC) International Oceanographic Data and Information Exchange (IODE) program. As part of this online encyclopedia is a list of "Marine Hydrosphere Data Websites ([http://www.oceanteacher.org/oceanteacher/index.php/Marine\\_Hydrosphere\\_Data\\_Websites](http://www.oceanteacher.org/oceanteacher/index.php/Marine_Hydrosphere_Data_Websites)) with reviews of different marine data services. The review for the Environment Research Division's ERDDAP states: "ERDDAP Environmental Research Division's Data Access Program - Arguably the most powerful, comprehensive and best structured interface to major marine, atmosphere and remote sensing datasets on the web today. Separate menus and underlying protocol structures allow the user to access measurement tables, gridded results and WMS images of analyzed results. The extremely simple data selection forms are infinitely easier than many other services, and the number of available download formats exceeds all other known sites. This site should be the first resource to be consulted when a new data search is necessary."
- Monthly DIF Conference: The 14th monthly IPT conference call focused on updates on data provider and customer implementations of the DIF, reports/discussion on the recent Regional DIF Implementation Workshop and IOOS DMAC Briefs to industry (Industry Day) including the development/schedule for an RFI and the proposed approach for the analysis of acquisition alternatives, and status to date on the four new IPT working groups (Metadata, IT Security, Catalogs/Registries, Archives) meeting was an opportunity to hear DIF data providers and customers status updates; report out on the recent Regional DIF Implementation Workshop and DMAC Industry and outcomes of the these events, and discuss the recently formed IPT working groups.
- **Grand Slam HOMERUN! The Regional DIF Implementation Workshop:** THANKS go to Charly, Jeff DLB, Marcia and Rob for their super efforts on this meeting and to Sam Walker, SECOORA, Matt Howard GCOOS, and Rob Cermak AOOS for steering this meeting and facilitation and to John Ulmer, NOAA CSC for his tremendous facilitation and computer consulting skills.
  - 30 persons participated in the 2 day meeting including regional DMAC leads from each of the 11 IOOS Regions, seven additional technical staff from the regions, NOAA IOOS Program staff, and other invited guests.
  - The workshop was an outstanding overall success with in-depth technical and planning discussions on three priority topics:
    - DIF deployment across the 11 regions: status and planning for next steps, particularly the details/criteria needed for defining the successful implementation of DIF services/protocols
    - Registries/Catalogs: particularly the need for an effective tool documenting status of regional observation networks/instruments and available data services
    - Governance and Architecture: particularly the procedures/protocols for ensuring improved synchronization across the regions and with the DIF

- Next steps include completing a Regional action plan with milestones, schedule, and responsibilities, resolving a series of specific technical issues associated with data interoperability and web-based services, and establishing priorities for FY2010. In a follow up conference call attended by Charly, Jeff, Alex, Rob (NOAA IOOS) and Sam Walker (SECOORA), a list of top programmatic and technical actions were identified:
  - Complete workshop report
  - Develop a detailed planning matrix
  - Assess the best communications tools for continued work with the IOOS Regions
  - Criteria for be a “DIF Data Provider”
  - Evaluate KML formats per usability for DIF priorities
  - Develop/complete “cookbooks” based on agreed to encoding formats
- **DIF Enhancements:**
  - DIF Document Development
    - Guide for DIF Data Providers: Version 0.1 of the providers guide has been issued. IOOS is working to post on a Wiki.
    - Ocean Color Test Plan: The ocean color test plan has been updated to version 0.4.
    - Metadata Templates – Carmel and Alex have started work on SensorML templates support data providers and CI customer.
    - Registries – CO-OPS SOS services have been registered on the GEOSS Registry; Carmel and Alex are working with NDBC and CO-OPS to validate data.
  - Performance Assessment
    - DIF Benchmarking Methodology – Work is in progress; draft version 0.1 is complete. A metric-by-metric benchmarking approach is being developed.
    - A crosswalk between Regional Association metrics and DIF metrics from the IOOS RA Workshop (December 2009) has been completed.
- **SECOND Grand SLAM of the week - IOOS DMAC Briefings – “Industry Day”:** Thanks to Charly, LMI Program support team - led by Don Egan, NOAA Acquisition and Grants Office - Linda Brainard, and our Federal partners for a superb event.
  - NOAA and other Federal IOOS partners convened a morning of IOOS DMAC briefings followed by questions/answers in the NOAA Silver Spring auditorium on Thursday March 12th. 72 persons attended – including 38 of the 65 who pre-registered and another 36 “walk-ins.” A total of 23 companies were represented.
  - Jack Dunnigan, NOAA Assistant Administrator for Ocean and Coasts kicked off event and stayed through the briefings and fielded questions. Linda Brainard, Director of NOS/NMFS Acquisition Division, NOAA Acquisition and Grants Office were the host of the event.
  - In addition to the outstanding briefings provide by the NOAA IOOS team on US IOOS, IOOS-DIF and IOOS DMAC, superb briefings were presented by Federal IOOS partners:
    - John Lever – Deputy Director, Information Architecture, Commander Naval Meteorology and Oceanography Command (COMNAVMETOCCOM), U.S. Navy

- Jeff Lillycrop – Technical Director, Engineer Research Development Center, Coastal Hydraulics Lab, U.S. Army Corps of Engineers
- Dr. John Haines – Coastal and Ocean Program Coordinator, U.S. Geological Survey
- Dr. Brian Melzian – National Health and Environmental Effects Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency
- Following the briefings, we fielded 25 questions on a broad ranges of policy, process, and technical topics
- A summary report that will include participants and an overview of the questions and answers is in progress.
- **Briefs have been posted:** <http://ioos.noaa.gov/calendar/industryday.html>
- **Follow-up activities include** releasing “Request for Information” or RFI with a limited set of technical and process questions in mid-April.

**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.

- **IOOS® Announces Completion of a National Operational Wave Observation Plan:** Download the plan from [www.ioos.noaa.gov](http://www.ioos.noaa.gov) (top left corner of the website). This document is the result of an interagency effort coordinated through the NOAA IOOS Program and the U.S. Army Corps of Engineers, working in close partnership with the National Weather Service’s National Data Buoy Center and the Alliance for Coastal Technology. The plan lays out a strategic path for establishing a national wave observing network along the U.S. coastline. This network improves on the current *ad hoc* network by addressing the spatial coverage and accuracy requirements of the broadest number of wave information users. Such a network will improve on the ability to integrate data into useful products that will reap a multitude of benefits for navigation safety, search and rescue operations, and more. There are many folks who worked very hard on this plan but none harder than **Bob Jensen**, USACE and **Bill Burnett**, NDBC - BZ!. Send your comments on the plan to: [wavesplan@noaa.gov](mailto:wavesplan@noaa.gov).
- **GODAE Server MOA:** I signed this week, we have now transmitted the MOA to the Naval Research Laboratory for their signature.
- **Interagency Working Group on Ocean Observations (IWGOO) Sponsoring "Small Sea Changes: Big Business Impacts" Workshop:** The IWGOO is sponsoring a workshop in Silver Spring, Maryland on 14 April 2009 entitled Small Sea Changes: Big Business Impacts. The purpose of this workshop is to engage private industry and communicate the value of ocean science and ocean observations to business decision-making. The target audience is senior decision makers from the agriculture, aviation, construction, energy, finance, fishing, healthcare, insurance, leisure and tourism, manufacturing, mining, retail, transportation and utility sectors. This workshop will explore the improved business decision support that the IOOS can facilitate. For the ocean science community, this workshop provides an opportunity to identify a cadre of industry professionals willing to support the need for ocean science and the Integrated Ocean Observation System. For industry, this workshop will explore the opportunities for

better business decisions through examining the connection between weather forecasts, climate projections and ocean observations. The workshop flyer, registration and additional information are available at: <http://www.oceanleadership.org/iwgoo>.

- **Interagency Modeling Activities:** Thank you to Rich and the IOOS regions for answering the NOAA Environmental Modeling Plan data call. IMPRESSIVE response.
- **High Frequency Radar:** Jack Harlan (NOAA IOOS); Bill Burnett (NDBC) continue to work on the next version of this plan - due out mid-May.
  - The Radio wave Operators Working Group (ROWG) meeting information and registration website design has been completed and is online, but please note that content on the site is evolving. The Website URL is [http://www.joss.ucar.edu/joss\\_psg/meetings/meetings\\_2009/rowg/index.html](http://www.joss.ucar.edu/joss_psg/meetings/meetings_2009/rowg/index.html)
- **IOOS and Links to the National Water Quality Monitoring Network:** No change.
- **US GEO:** I have picked up duties as NOAA plus one to Helen Wood, our GEOSS lead, to represent NOAA on US GEO efforts. Jessica remains engaged in the US GEO - Strategic Assessment Group. Jessica attended the USGEO SAG Meeting on Carbon - first discussion on this topic for the Strategic Assessment Group, the agenda will focus on describing the problem and highlighting the urgency of the issue, discussing the potential USGEO role in informing U.S. policy and decision-making related to carbon, and outlining some next steps in the way forward.

#### Other:

- **Station 44020 - NANTUCKET SOUND:** The National Data Buoy Center launched a 3-meter discus buoy, located at 41.443 N 70.186 W (41°26'35" N 70°11'11" W) - [http://www.ndbc.noaa.gov/station\\_page.php?station=44020](http://www.ndbc.noaa.gov/station_page.php?station=44020)
- **NOAA Seeking "Shovel-Ready" Habitat Restoration Proposals:** NOAA is seeking proposals for coastal habitat restoration projects under the American Recovery and Reinvestment Act of 2009 in an effort to jumpstart the economy. The effort is designed to create resilient and healthy American communities by generating and saving jobs, employing several thousand people, and restoring valuable coastal and marine habitat. NOAA is formally seeking proposals for a variety of habitat restoration projects - including wetlands restoration, dam removals, shellfish restoration, and coral reef restoration. To ensure relevance, readiness and accountability to the American public, the 30-day solicitation requires that projects be "shovel-ready." Proposals are due by April 6, 2009. For more information about this federal funding opportunity, please visit: <http://www.habitat.noaa.gov/recovery>. You may also look for more information in the coming weeks as NOAA rolls out its implementation plan. If you have any questions, please contact NOAA at [RC.Newsletter@noaa.gov](mailto:RC.Newsletter@noaa.gov) or 301-713-0174.
- **Integrated Ocean Observing System (IOOS) Regional Coordination Workshop Summary Available for Review:** The summary for the 3rd IOOS Regional Coordination Workshop is now available, outlining the key themes and discussions from the workshop along with providing links to all the presentations. In December 2008, eighty people representing the eleven IOOS regions and federal partners came together in Baltimore, MD to share information and ideas on regional IOOS development. The workshop featured presentations on the results and progress of the NOAA IOOS Program-funded projects and discussions on the development of regional IOOS

performance metrics. The workshop continues a partnership between the National Federation of Regional Associations and NOAA to provide an opportunity for all the Regional Associations to gather with federal partners annually to gather input from the wider IOOS community, discuss recent accomplishments and challenges, and lay a path forward for the coming year. The summary is available on the workshop website at [www.csc.noaa.gov/IRCW](http://www.csc.noaa.gov/IRCW)

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- **Telecon with Beacon Institution:** Jack Harlan and I had a telecon with John Cronin, Beacon Institute and Jim Bonner in connecting the efforts of IOOS into the Hudson. Beacon Institute will be participating in the lower estuary deployments, as part of their larger River and Estuary Observation Network (REON) project (see attached PDF). We discussed relocating the HFR that Jim Bonner has been operating into the Hudson to support this effort. Jack will continue to interact with the Beacon Institute to explore the connection from mountain to the sea.
- **IOOS Partner - Stevens Institute of Technology - MACOORA Recognized by Department of Homeland Security (DHS):** Dr. Bruno accepted and Impact Award from DHS for Steven's Institutes of Technology's efforts during the rescue of the individuals onboard US Air 1549 and the recovery of the aircraft. This is a great example of what IOOS - interagency partners working together to fund capability that supports national missions. This award was given during DHS' annual meeting of their Centers of Excellence. The certificate reads: "The Department of Homeland Security, Science and Technology Directorate, Office of University Programs, recognizes Stevens Institute of Technology for aiding the maritime first responders by monitoring the environmental conditions of the Hudson River during the rescue and recovery operations in the US Airways Flight 1549 event on January 15, 2009." Signed Barry Buswell, Undersecretary for Science and Technology (acting). My added congrats to a well deserved recognition.
- **HEADS UP - REQUEST YOUR SUPPORT: Oceans 2009 – Biloxi, MS (October 26-29, 2009):** We began coordination with Dick Crout, heading the Technical Program about having a IOOS track during this meeting. We will be working with Dick and Bill Burnett on the details but I would like to ask as many of the Regions who are able to consider providing a paper on the IOOS products, services you are providing within your region. Details to follow soon.

### **Congressional:**

- **IOOS legislation remains alive; Senate Passes Omnibus Lands Package a Second Time:** The Senate passed an omnibus federal lands bill. The bill (H.R. 146) passed by 77-20. The Senate substituted the text of its lands bill that passed the House on March 3rd with modifications. H.R. 146 will not be open to amendment because it already passed the House once. Thus, when it returns to that chamber only a simple majority vote will be required for its passage.

**Communications:** Jennie and Deanna (NOAA IOOS) have been doing a great job in getting the word out on IOOS. The National Ocean Service has completely changed its web site to provide a much greater interactive website and **I urge you to check it out: [oceanservice.noaa.gov](http://oceanservice.noaa.gov)** - sign up for the twitter, let us know what you think



- First IOOS podcast (What is IOOS?) launched 9 March. New IOOS podcast is now available on the [www.ioos.noaa.gov](http://www.ioos.noaa.gov) and the [oceanservice.noaa.gov](http://oceanservice.noaa.gov). See attached PDF. Second IOOS podcast (Rutgers Glider Launch) to air on 3 APR. Two remaining proposals working with NOS CED. Got ideas - call Jennie
- Check out the IOOS linked to 1 pagers on our website at <http://ioos.noaa.gov/messaging/outreachmaterials.html>. We have completed IOOS linked to OOI; IOOS linked to the National Water Quality Monitoring Network and IOOS linked to Marine Protected Areas. Thank you to Deanna who had the lead and our interagency and program partners to help us on these. We are working on two more to complete the set: IOOS linked to the Integrated Ocean and Coastal Mapping and IOOS linked to Climate.

### Upcoming Meetings:

- 23 March: Christening of "Scarlet Knight II" - Rutgers University, we have invited senior NOAA leadership and local Congressional delegation to join us to bid the Rutgers students second attempt to cross the Atlantic. Jennie and I will be on hand for this event
- 25 March: We will provide an IOOS overview to Congresswoman Pingree (D-ME); we will also provide a similar brief to Jamie Krauk, staff to Sen. Inouye (D-HI)
- 6-7 April: GLOS annual meeting - Zdenka will attend
- 14 April: Small Sea Change: Big Business Impacts - IWGOO IOOS sponsored workshop. Silver Spring - A workshop to explore how enhanced understanding of the oceans improves weather and climate prediction enabling better informed business decisions. For more information: <http://www.oceanleadership.org/iwgoo>
- 11-12 May: The Marine Board of the Transportation Research Board will be holding its 2009 Spring Meeting at the Aquarium of the Pacific in Long Beach, California. Zdenka will provide an IOOS brief.
- 12-13 May: SECOORA board meeting - Zdenka will attend
- 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



# WHAT IS THE INTEGRATED OCEAN OBSERVING SYSTEM?

MAR. 9, 2009  
EPISODE




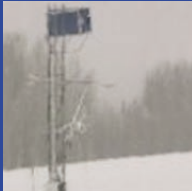



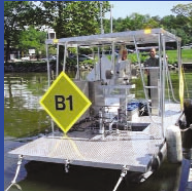

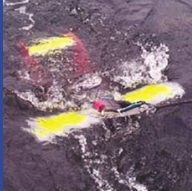

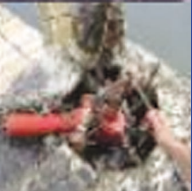

## DIVING DEEPER



## SCIENCE AND TECHNOLOGY

### REON SENSOR DEPLOYMENTS 2009-2010

In 2009-2010, Beacon Institute will continue to expand REON (River and Estuary Observatory Network) by deploying numerous environmental sensors and sensor platforms along the length of the Hudson River, in the Mohawk River and in sub-watershed (urban, suburban and wilderness) areas.

 <p>Sub-watershed (urban, sub-urban, wilderness) hydrology monitoring – hydrograph, precipitation (snow &amp; rain)</p>		 <p>Small scale profiling stations</p>		 <p>Advanced profiling stations</p>	
 <p>Mobile platforms</p>		 <p>Surface currents, acoustic current profiling and backscatter</p>		 <p>Biological sensors</p>	