

Bi-Weekly IOOS® Z-GRAM - 22 April 2011

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

**Programmatic:**

- **DON'T BE SHY - WE NEED YOU: System Advisory Committee** [ICOOS ACT: Section 12304 (d)]: The FRN for membership is now out, please apply by **May 16th**. We are looking for all sectors of IOOS to apply: State, Local, Tribal Government, Academia, Industry, NGO. For the FRN visit: <http://federalregister.gov/a/2011-6063>.
- **IOOS Observation Asset Inventory:** Sam has finalized the Regional Asset Inventory working group (and design tiger team). He hosted a "kickoff call" with all members to set expectations and provide an opportunity to address key questions or comments. All RA's and NFRA were represented.

**Data Management and Communications (DMAC) V0.9 Subsystem of IOOS®** To get on the IOOS System Status list which announces service changes, please contact Jeff ([Jeff.deLaBeaujardiere@noaa.gov](mailto:Jeff.deLaBeaujardiere@noaa.gov)) or Rob ([Rob.Ragsdale@noaa.gov](mailto:Rob.Ragsdale@noaa.gov)).

- **IOOS/NCCOS Water Quality Project – Phase II:** A work plan was agreed upon for the second phase of this project that will result in water quality data collected by Florida International University (FIU) in the Florida Keys National Marine Sanctuary being available to the public through an IOOS SOS data access service. The project includes the University of North Carolina at Wilmington who will support data access and implementation of this service.
- **REMINDER: IOOS Data Catalog & Service Registry - Kick-off Meeting 4/25 in Silver Spring:** This will include technical partners from NOAA National Geophysical Data Center (Ted Habermann) and Gulf of Maine Research Institute (Eric Bridger). The Catalog is built by harvesting metadata from compatible data access services.
- **REMINDER: IOOS RA DMAC Workshop (April 26-28): We are looking forward to hosting all of the DMAC key individuals from the US IOOS Regions.**

**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 they all have project leads.

- **DMAC Steering Team:** A kick-off teleconference was held, in preparation for the first face-to-face meeting on 11-12 May. Sam Walker, Chair, is working with Consortium on ocean Leadership (COL) to launch the DMAC-ST web presence.
- **NEW the Fourth in the Series of IOOC Industry Work Shops - next one in the Great Lakes:** The Great Lakes Observing System, in coordination with the IOOC, will

be holding a workshop to explore how monitoring the Great Lakes delivers economic, environmental and safety benefits to industries, government and citizens. The event will be held Tuesday, June 21, 2011 at the Edison Boat Club in Detroit, Michigan. Industries represented at this event include: energy & water utilities, agriculture, manufacturing, marine operations, and others. For information and Registration please go to <http://www.iooc.us/stakeholder-outreach/great-lakes-workshop/>

- **High Frequency Radar/Radio (HFR):** For more information on all US National HFR efforts please contact the US Project Manager - Jack Harlan, [Jack.Harlan@noaa.gov](mailto:Jack.Harlan@noaa.gov)
  - Frequency Allocation: We continue to support NOAA leadership to coordinate between non-DOD and DOD in regards to securing frequency licenses. NITA and FCC are also discussing the draft proposals to come to a final US position ahead of the WRC-12 meeting.
  - Radio Operators Working Group (ROWG) Meeting: Thirty-five participants representing organizations from the USA, Taiwan, Korea, Canada and Italy will be attending
- **IOOS and Links to the National Water Quality Monitoring Network: No update**
- **IOOS and The National Science Foundation (NSF) - Ocean Observatories Initiative (OOI): No update**
- **IOOS Modeling Testbed and Related Modeling efforts:**
  - The following White Papers and Documents are in Review:
    - Establishing a Testbed to Evaluate and Improve Coastal Oceanographic Environmental Models (co-authors include: Doug Levin, Chris Mooers, Ming Ji, and Barry Choy): In summary, the document describes how establishing a perennially funded Testbed directly supports and advances a number of goals detailed in NOAA's National Weather Service Strategic Plan (2011-2020) and the National Weather Service Strategic Plan (2010 to 2025). Model improvements championed by a Testbed address 5 of the 7 Societal Goals defined by IOOS.
    - Terms of Reference Document for a Coastal Ocean Modeling Testbed: The document describes how the Testbed will oversee the process of accelerating improvements to coastal ocean models used to forecast environmental conditions in shelf and coastal waters.
    - Transition of a Model to Federal Operations Document: In summary, transitioning new or improved models into operational centers requires a clear and documented process. That process necessarily involves interaction between the developer and the operations center from inception through implementation. This stepwise progression requires the authoring of a formalized, mutual understanding of expectations, constraints, plans, anticipated challenges, funding requirements and timelines for milestone completion. Success also implies acceptance of a definition for an "operational model" (Ocean.US, 2008 (App. F).

#### Other:

- **CariCOOS in Action: Transfer of Products to NWS, State Officials, New Educational Textbooks, the Commissioning of 2 Buoys and the launch of CariCOOS**

**Buoy C - WHAT A WEEK:** There were over 125 attendees to the public meeting of the CaRA Regional Association. The morning started off with the unveiling of the new CDIP/Waves (USACE/Scripps Partnership) buoy that will be launched off the West Coast of Puerto Rico within the next several weeks. This was followed by remarks from The National Weather Service's Meteorologist in Charge, Israel Matos, accepting delivery of the CariCOOS developed Technical manual for near coastal SWAN wave modeling. Mr. Matos thanked US IOOS for their strong support to the NWS and acknowledged the buoys and coastal weather stations which gives his forecasters enhanced confidence in their forecasts which Puerto Rico and the Virgin Islands depend on for their safety. The next product that was delivered was the storm surge inundation product to State and west coast Emergency Managers. Mr. Ernesto Diaz, State CZ manger – stated this is a very important partnership to inform us of the issues we face, previous to this effort we have not had the scientific information to inform policy decisions. Since FEMA, Coastal Zone and the Department of Natural Resources are all on common space so we need to work together. Very thankful for the effort and the strategic alliance with the scientist and decision making process. We then heard from a number of stakeholders including the PR Sailing Federation and the Surfing community. Ruperto Chaparro – Sea Grant - briefed us on a partnership with CariCOOS, Sea Grant and Life guards on the issue of drawings in Puerto Rico. There have been 500 deaths in the last 20 years and a vast majority of them are Puerto Ricans, a serious issue that deserves more attention. In the education arena, CaRA announced a very exiting partnership with NORMA publishers, together they were updating the K1-9 textbooks on science. CaRa provided subject matter expertise and each grade level includes a coastal climate [section](#) in each book. For more exciting educational activities check out the CariCOOS website. We then traveled to the US Virgin Islands for the Commissioning of the CariCOOS Buoy C. The commissioning ceremony included remarks by the Governor John P de Joungh, Jr; Dr. David Hall, President of the University of Virgin Islands; Mr. Edward Thomas - CEO-WICO, and 2 CaRA stakeholders - Captain Marjorie Smith, who's family owns a ferry business in St. Thomas and Mark Sabinao operations officer for WICO responsible for safe operations for the commercial shipping into St. Thomas including the vibrant cruise-liners who dock there. Both Marjorie and Mark talked about how the new buoy greatly assists them in ensuring safe operations. Governor de Joungh, Jr then properly christened the buoy. The launching of the coastal buoy also represents another partnership between NERACOOS/University of Maine and CariCOOS, as the buoys are produced and maintained by the University of Maine. The buoy commissioning was very special and it was very gratifying to see the community involvement within CariCOOS - this is was US IOOS is all about.

- **Environmental Sampling Processor (ESP) Deployed - changing the way to measure Harmful Algal Blooms:** From Don Anderson, Woos Hole Oceanographic Institute (WHOI) - "We have just entered a new and exciting phase in the monitoring and management of Alexandrium blooms in the Gulf of Maine region. On Tuesday, we deployed an ESP off Portsmouth, near the Isles of Shoals. The ESP is a robotic instrument capable of filtering water and conducting DNA-based analyses for target HAB species and other microorganisms - in this case Alexandrium fundyense. The instrument has already processed two samples - both below the detection limit for Alexandrium. This ESP will be sampling approximately daily for the next month and a half, and then

will be replaced with a second ESP which will run for another 45 days. The instruments communicate to shore, sending data to our computers via the Internet. We can also communicate in the other direction and change the mission profile of an instrument as necessary. The instrument that was deployed belongs to the Monterey Bay Aquarium Research Institute (MBARI) which has been collaborating closely with us on this development effort for ESP technology in the region. We owe great deal of gratitude to Chris Scholin and his ESP team for their strong support. Bruce Keafer from my lab has also devoted enormous energy and time to this challenging enterprise. Partial funding for this year's deployments came from the NOAA Oceans and Human Health Initiative through a cooperative project with Rick Stumpf. In May, the ESP that will be deployed will be one that the EPA has provided to WHOI and NERACOOS - the first commercially available unit manufactured by McLane Laboratories in Falmouth. That instrument will be deployed on a new mooring design that we hope will make deployments, turnarounds, and recoveries easier. Gradually, in the coming months, I will take delivery of five more instruments which we hope to deploy in the Gulf of Maine next year, pending some funding decisions. Those were funded by a major instrumentation grant from the National Science Foundation." For those not familiar with ESP, videos are posted - <http://www.mbari.org/ESP/>

- **Call For Small Business Innovative Research (SBIR) grants - DEADLINE 16 May 2011:** NOAA is soliciting topics from small business concerns for FY2012. Initial grants, called Phase 1, are for \$95K with a six month period of performance. The National Ocean Service leadership has also suggested that program offices consider the following four areas of focus when developing their submissions: (1) Regional resiliency, (2) GIS visualization tools in support of CMSP, (3) Arctic research and investments and (4) Water quality related to HABs and ocean health. Additionally, the broader federal SBIR program is emphasizing technology transfer into commercialization rather than topics that simply fill data gaps. The NOAA SBIR website is <http://www.oar.noaa.gov/orta/>. Send your topics or questions to Jack Harlan [jack.harlan@noaa.gov](mailto:jack.harlan@noaa.gov) by COB Monday May 16.
- **AOOS In Action: New Data products hosted on the AOOS Data Portal:** Now available Multi-sensor Analyzed Sea Ice Extent (MASIE) data product was added to the AOOS portal which will provide users with access to near real time sea ice extent on a daily period current up to yesterday. Additionally, weather forecast components of the Arctic Regional Supercomputing Center High Resolution "Rapid Refresh" Model were added to the AOOS data system. Both of these new data products can be accessed through the AOOS model explorer: <http://data.aos.org/maps/coverage.php>.
- **SECOORA in Action: Improved Web Interface to Serve SABGOM Circulation Model Predictions:** Ruoying He and his team of researchers at North Carolina State University (NCSSU) have been working hard to increase the accessibility to their South Atlantic Bight and Gulf of Mexico (SABGOM) Coastal Circulation Nowcast/Forecast Model. NCSU recently released an updated site (<http://omgsrv1.meas.ncsu.edu:8080/ocean-circulation/>) that allows users to interact with the model predictions in a Google Map framework. Users can visualize simulated ocean circulation fields at different depths (surface to -2000m) with just a couple of clicks; sample temperature, salinity and velocity fields along a user-defined transect; sample temperature & salinity profiles; and compute 72-hr particle trajectory forecast. It is

anticipated that these updates will help scientists to determine where to deploy observational assets, facilitate coastal managers monitoring the ocean environment, and help the Coast Guard in their Search and Rescue work.

- **CeNCOOS in Action: New CDIP wave model viewer:** Check ocean wave size, period and direction across the state or in your locale, now or in the future, using an interactive model tool developed by the Coastal Data Information Program (CDIP). CDIP is a partnership between USACE and Scripps Institute of Oceanography. **Improvements to the CeNCOOS data portal:** CeNCOOS recently added PISCO oceanographic moorings data to the CDP. Additions planned for the CDP in Spring 2011 include: more stations, ocean glider data, webcams, surface currents data and mobile device applications.
- **PacIOOS in Action: New website launched** - check it out -[www.pacioos.org](http://www.pacioos.org). In addition to pages addressing the needs of various user groups, pages have been created specifically for each of the PacIOOS subregions. "Conditions at a Glance" are now available for each island group, allowing visitors to quickly locate up-to-date information on waves, tides, weather and more. **Acoustic Tracking for Sharks in Palau: PacIOOS** has purchased 4 receivers and 4 tags to deploy within the existing shark tracking array in Palau in partnership with both the Coral Reef Research Foundation in Palau and the Australian Institute of Marine Science at the University of Western Australia, organizations that operate the existing array of shark tracking systems in Palau. The existing system is deployed at some of the most popular dive sites in Palau to look at the ecology and movement patterns of reef sharks. The work is a collaboration with the government and one of the tourist operators. The government of Palau has declared its waters a national sanctuary, forbidding the capture of sharks by commercial fishermen. Despite these good intentions, lots of illegal fishing is going on in its waters, much of it targeting shark fin. The monitoring efforts stem from the wish of the government and local tour operators to understand more about the ecology of these animals and to look at the effectiveness of the sanctuary they have in place.
- **NANOOS in Action: NVS 2.5 - Released:** New features include settings for how units are displayed and the range of plot y-axis. If you are logged into your myNANOOS account, the settings are automatically saved. New forecast overlays from CMOP (Coastal Margin Observation & Prediction) and NAM (North American Mesoscale) are also available.
- **US IOOS Program Office met with NOAA's Regional Collaboration Team Lead:** The READ met w/ John Lyon, the National Coordinator for NOAA's Regional Collaboration team. READ provided an overview of IOOS and the development of the RAs/RCOOSs. Currently, 3 RA Directors sit on NOAA Regional teams, HI, AK, and Great Lakes. 3 other regions have IOOS knowledge on the teams, North Atlantic, SE & Caribbean, and West. READ will meet bi-weekly w/ Lyon and received an invitation to attend the annual meeting for Collaboration team in Silver Spring in Aug.
- **US IOOS Program Office met with BOEMRE and US Coast Guard :** Sam met with representatives from BOEMRE to discuss their ongoing and emerging needs in the Gulf of Mexico. Sam and Derrick met with Lt. Commander Jon Anderchik at the USCG-Sector Baltimore's Incident Management Division to discuss their ongoing and emerging ocean observing needs as well as the environment data system behind the USCG SAROP System.



**Congressional:** No updates

**Communications/Outreach and Website Updates:**

- IOOS Animal Telemetry Partnership was cited in April Sea Technology: The “Soundings” section of Sea Technology (April 2011, p. 9) carried a short paragraph on the Telemetry workshop that was picked up from a NOAA press release.
- AOOS in the Bulletin of American Meteorology Society: "An Ocean Observing and Prediction Experiment in Prince William Sound, Alaska." Go to <http://journals.ametsoc.org/toc/bams/0/0>

**IOOS Conference Involvement:** This section will highlight those conferences where US IOOS is a sponsor/has a session/relevant sessions of interest to US IOOS:

- **MTS/IEEE Oceans 2011:** The call for papers is now open. I have asked Carl Gouldman of my office to take the lead on our additional participation - with everything that has been going on with regard to the FY11 budget, we have been unable to turn our attention to this effort. We will look to do so over the next several weeks.
- **Coastal and Estuarine Research Federation: Biennial Conference in Daytona Beach, Florida, 6-10 November 2011.** Julia Bos, [jbos461@ecy.wa.gov](mailto:jbos461@ecy.wa.gov); Kimberle Stark, [kimberle.stark@kingcounty.gov](mailto:kimberle.stark@kingcounty.gov) and Stephanie Moore, [stephanie.moore@noaa.gov](mailto:stephanie.moore@noaa.gov), will co-chair the session - SCI-040; Integrating Automated Ocean Observing Systems with Traditional Monitoring. Please consider contributing an oral or poster presentation to a session they are convening titled “\*Integrating Automated Ocean Observing Systems with Traditional Monitoring\*”. This session builds upon the CERF 2009 session on Automated Monitoring which was very successful in showcasing examples of data from automated sampling systems being applied to ecosystems assessments and sharing some important "lessons learned". **ABSTRACTS due on-line by \*May 12\*** Please note the session title and number (#SCI-040; Technology and Methods Advancement and Application; Monitoring) when you submit your abstract. A description of the session can be found at <http://www.sgmeet.com/cerf2011/Monitoring.asp>.
- **Poster Session at the WCRP Open Science Conference - Research in Service to Society:** Eric Linstrum, NASA and IOOC co-chair will be co-chairing the session on Sustained ocean and sea-ice observations (C-14). Abstracts are due 30 April. The meeting will take place in Denver, CO - 24-28 Oct. For more information on the conference please see: <http://conference2011.wcrp-climate.org/abstracts.html>. If you have questions on the session please contact, Eric Lindstrom, [eric.j.lindstrom@nasa.gov](mailto:eric.j.lindstrom@nasa.gov).

**Upcoming Meetings:** To see the IOOS calendar, please visit:

<http://www.usnra.org/calendar.html> or <http://ioos.gov/calendar/>

- DMAC ST: 10-11 May - change to date
- IOOS RA DMAC Workshop: Ops. Div.; Silver Spring, MD; April 27-28, 2011
- Radio Operators Working Group Meeting (4/25-28): Jack; Santa Barbara, CA

- IOOS Biological Data Project Workshop 18-19 May: Hassan, Charly; Honolulu, Hawai'i
- IOOS Modeling Testbed: Storm Surge 5-6 May; First Year Program Results and Review (22-23 June – tentative); Doug; Washington, DC
- International Oil Spill Conference (5/22-27): Sam; Portland, OR
- Northeast Coastal and Ocean Data Partnership Annual Meeting and Metadata Workshop (6/8-9): Charly (tentative); Rye, NH

Cheers,  
Zdenka