

Bi-Weekly Z-GRAM - 1 October 2010

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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 and view under program updates.

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

Programmatic:

- **CR Resolution:** The President signed H.R. 3801 on September 30 that keeps NOAA operating at fiscal year 2010 levels through December 3, 2010.
- **Public, Private - Policy Process - Seeking Your Comments:** The Federal Register Notice: <http://www.oceanleadership.org/wp-content/uploads/2010/08/2010-19762.pdf>
- **LOOK FOR: Federal Register Notice re: Certification Standards:** Due to be published during the week of 10/04.
- **ICOOS Act Progress:** Check U.S. IOOS progress in enacting the ICOOS legislation! <http://www.ioos.gov/icoosact/welcome.html>

Initial Operating Capability - Data Management and Communications (DMAC) Subsystem of IOOS® http://ioos.gov/library/dmac_implementation_2010.pdf

- **Customer Projects: Contact Charly Alexander** at Charles.Alexander@noaa.gov if you want to be part of the action.
 - **IOOS Biological Efforts:**
 - **IOOS Biological Observations Project Workshop:** The goal of this workshop was to conclude the requirements phase and to kick off the implementation phase. Overall, the group made good progress on the review of the accomplishments and on moving forward with the project implementation planning. The workshop generated new ideas and recommendations. The project system design was presented and discussed in detail and the list of project risks/constraints was updated. A list of tasks for the next 60 days was generated; the project's high-level goals were reviewed. Over 20 individuals, representing the project partners, attended: NOAA/IOOS; NOAA PIFSC/Coral Reef Ecosystem Division (CRED); Pacific Islands Ocean Observing System (PacIOOS); NOAA/Papahānaumokuākea Marine National Monument (PMNM); U.S. Geological Survey/Ocean Biogeographic Information System (USGS/OBIS-USA); Hawaii Institute of Marine Biology, School of Ocean and Earth Science and Technology, University of Hawaii, Manoa (UH/HIMB); U.S. Census of Marine Life (U.S. CoML); Southwest Fisheries Science Center/Environmental Research Division (SWFSC/ ERD); NMFS/Pacific Island Regional Office; San Diego Supercomputer, University of California.

- Biological Data: Ocean Telemetry Observing Network: IOOS convened a call that focused on biological observations and how IOOS could facilitate/coordinate a U.S. biological observing/monitoring network based on telemetry observations and animal oceanographers. The call participants were very supportive of an IOOS role facilitating broader collaboration across the existing tagging/telemetry community per data standards, improved access to/use of data, etc, and offered a number of constructive ideas. An outcome of the call was an agreement to organize a community meeting/workshop in Santa Cruz, CA in February-March 2011 to discuss establishing a possible "network" of biological observing based on the existing U.S. tagging/telemetry programs. Call participants: Hassan Moustahfid and Charly Alexander (NOAA/IOOS); Barbara Block (Tagging Ocean Pelagic Predators [TOPP]); John Payne (Pacific Ocean Shelf Tracking [POST]); Churchill Grimes (NOAA/SWFSC Santa Cruz); Dewayne Fox (Delaware State University); Tom Savoy (University of Connecticut); John Manderson (NOAA/NEFSC J.J. Howard Marine Lab); John Kocik (NOAA/NEFSC, Maine Field Station); Tom Grothues and Ken Able (Rutgers/Institute of Marine and Coastal Sciences); and Kim Holland (University of Hawaii/Hawaiian Institute of Marine Biology).
- **DMAC Functional Areas:**
 - Archive: Jeff and Derrick reviewed the first draft of the NDBC Archive Submission Information Package (SIP) and discussed the results with the NDBC development team. Next steps include a more focused effort on the format and content of the metadata in the SIP.
 - IOOS Data Scheme: IOOS GML schema pages have been migrated from a CSC server to an IOOS server. The new location is <http://www.ioos.gov/gml/schema.html>. Data providers have updated their XML output to reflect the new schema location. This change should not impact normal data users.
 - Waves Data Assessment: CO-OPS is now serving CDIP (Coastal Data Information Program) waves data from Scripps as part of their PORTS® system. Alex Birger has completed a preliminary data format assessment comparing the waves data formats at NDBC as exposed through their IOOS web service (SOS) to the same data currently being exposed at CO-OPS through PORTS®. The test compared datasets served by each provider to each other, and to the latest official Data Content Standard (DCS) v0.4 that was used as a baseline. Since NDBC serves data in XML (IOOS GML and KML), and text (CSV and TSV) formats, both of them were tested. The test results show that the NDBC and CO-OPS waves data are not interoperable at the moment. Alex will be following up with Jeff and our partners at NDBC and CO-OPS to discuss the assessment and possible next steps.

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.

- **High Frequency Radar/Radio (HFR):** HF Radar Technical Steering Team - Meeting documents have been posted on the IOOS Website: <http://ioos.gov/hfradar>
- **IOOS and Links to the National Water Quality Monitoring Network:** No Update.
- **IOOS and National Science Foundation (NSF) - Ocean Observatories Initiative (OOI):** No Update.

Other:

- **Response to Deepwater Horizon:** The focus of our effort has been in finalizing the Gulf of Mexico observing plan that includes academic institutions, interagency and White House concurrence.
- **Atlantic Crossing, Three-Time Award Winner:** "Atlantic Crossing" received the the John Muir Film Award at the Yosemite Film Festival in the Environmental Film Competition. The documentary also won the following awards at the Los Angeles Reel Film Festival: Best Documentary Feature (2nd place); Best Documentary Feature Visual Effects. Visit: http://www.lareelfilmfest.com/10_Documentary_Feature_Winners.html.
- **MTS/IEEE Oceans 2010:** Congrats to MTS/IEEE for a successful event. David Martin (NANOOS) was one of the technical chairs. We had two solid sessions on IOOS and our contributions were very well received. I am told that up to 87 folks attended our first session. My sincerest thanks to April, IOOS, Josh, and the IOOC staff for their very fruitful town hall on certification standards. Dave Martin was a very engaging facilitator. Finally, I had the chance to be on a panel to discuss how new observing techniques through HFR, gliders, and satellites were used during the Deepwater Horizon response.
- **Visit with UW/APL:** Thanks to Geoff Shilling, who spent time with myself and Simon Allen (Technical Director, Australia's Integrated Marine Observing System [IMOS]), who discussed the sea glider operations at UW. At the time we visited, Craig Lee and his crew were out with several of their sea gliders in the Davis Straits.
- **NANOOS Assisting in Monitoring Fish Kill in Hood Canal:** Just as we were kicking off MTS, Jan Newton (NANOOS) was very busy in providing monitoring results. The buoy profile at Hoodspout, Hood Canal, showed very low oxygen concentrations at the surface, which was consistent with what was predicted to occur with south winds. NANOOS provided plots from their NANOOS Visualization System (NVS) and the actual buoy site. This information was provided to Washington State Fish and Wild Life for their efforts in assessing and managing this issue.
- **NOAA and IOOS Modeling Experts Help Identify Needs for Coastal Ocean Prediction and Forecasting:** Modeling experts from the Office of Coast Survey, National Centers for Coastal Ocean Science, Office of Response and Restoration, and the Integrated Ocean Observing System Program joined approximately fifty academic and government representatives in the Eastern Pacific Ocean Prediction Forum to present NOAA and IOOS capabilities and plans for ocean, coastal, and estuarine hydrodynamic and ecological modeling. Forum participants identified the need for "super-regional" models to bridge a gap between global models and more regional models on the scale of single estuaries. NOAA helped organize the forum to incorporate the best scientific ideas and technical best practices into the design, development, assessment, operation, and

utilization of a coastal ocean prediction system for the U.S. west coast. For more information, visit <http://www.epopf.org>.

- **Liquid Robotics Wins Tech Innovation Award:** Liquid Robotics, of Sunnyvale, CA, is featured in the Monday, September 27, 2010 edition of the Wall Street Journal (WSJ) as one of the prestigious newspapers' 2010 Technology Innovation Awards. The company's Wave Glider was honored in the "Robotics" category, a significant achievement as the subsea industry rapidly expands the capability and scope of its unmanned underwater systems. The Wave Glider is touted for its ability to transfer the motion of the waves into forward thrust, helping to radically extend the length of mission at sea.
- **ACT releases Demonstration Statements for pCO₂ Analyzers:** The continual production of anthropogenic carbon dioxide from the burning of fossil fuels is increasing CO₂ gas in the atmosphere and, by absorption into the ocean, acidifying surface water around the world. Ocean acidification has become one of the most significant and urgent issues facing ocean resource harvesters and managers, and monitoring the open oceans and coastal waters, for CO₂ levels will become paramount in assessing impacts and developing regulatory criteria, both nationally and internationally. To address the need for instruments to provide accurate and reliable field measures of pCO₂ in surface waters, ACT has completed a Demonstration of four individual in situ pCO₂ analyzer. Reports on the performance of each of the four instruments, and ACT test protocols, can be downloaded at www.act-us.info.
- **Biodiversity Information Systems/Taxonomic Database Working Group (TDWG) Annual Conference:** Hassan (IOOS) and OBIS/University of Colorado's Phillip Goldstein (project partner on the Hawaii IOOS Biological Observations Project) presented a well received a poster about the Hawaii project.
- **NANOOS releases Beach and Shoreline Mapping Portal: Announcing the release of NVS 'Beach and Shoreline Mapping.'** The beach and shoreline mapping portal provides seamless access to beach cross-section information collected by the states of Oregon and Washington. The information derived from these repeat surveys provide a direct measure of the state of the beach at multiple locations to variations in offshore waves, sea level, climate events, and climate change. For more info visit www.nanoos.org
- **PacIOOS in Action: PacIOOS announces a new Near Shore Water Conditions map for Hawaii.** You can view real-time conditions (salinity, temperature, chlorophyll, turbidity, and oxygen) and recent warnings, advisories, and postings from the weekly bacterial testing, conducted by the Hawaii Department of Health – Clean Water Branch. http://www.soest.hawaii.edu/hioos/data_product/WQ/. **Collaborations with USACE - Ordnance Reef Partnership:** PacIOOS researchers are part of a joint effort between the office of the Deputy Assistant Secretary of the Army for Environmental Safety and Occupational Health (project lead), the Honolulu office of the U.S. Army Corps of Engineers, NOAA's National Marine Sanctuary, and NOAA's Office of Response and Restoration to 1) conduct a remedial investigation (RI) to assess the potential environmental effects of DMM on the coral reef ecosystem near disposed military munitions (DMM) and 2) better understand the influence of ocean circulation on the transport of DMM. Dr. Eric Heinen De Carlo (University of Hawaii [UH]), leads the RI study, which includes measuring DMM constituents in water, sediment, and biota in this coastal area, and an assessment of the potential risks that these might pose to human and ecological health. Drs. Margaret McManus (UH) and Brian Powell (UH) lead the

circulation study in which a total of nine Acoustic Doppler Current Profilers (ADCPs) were deployed off the Waianae coast between July 2009 and August 2010 to measure ocean currents throughout the water column. In-situ current velocity data spanning thirteen months have been collected and are now being analyzed to determine the general flow patterns within the disposal sites. The data will then be included in circulation models to help identify factors affecting ordnance transport onto the beaches and possible retention mechanisms. Communicating the findings of this study with the public is an important component of this project, and is being carried out through regular meetings with the neighborhood board and Ordnance Reef Coordinating Council.

- **NERACOOS buoys hanging tough despite 30+ foot waves and hurricane force winds:** NERACOOS buoys kept on ticking through the storm that left hundreds of thousands without power in Maine, New Hampshire, and Massachusetts overnight on Thursday and Friday of last week (February 25 and 26). Forecasters at the National Weather Service in Gray, ME were monitoring reports from the buoys and using the observations and model predictions to assess the situation and potential damage to coastal communities. In the middle of the storm that night, one forecaster wrote, "Quite a bit of damage up and down our coastline despite being at one of the lowest tides of the winter! Nomogram picked up on it. A very rare... unbelievable event. Winds were sustained at hurricane force over the coastal waters. Peak wind gusts 91 mph. Highest winds over you in Rye. NERACOOS buoys hanging tough despite 30+ foot waves!" The nomogram mentioned above is an online tool used to assess coastal flooding and erosion that was developed by the Gulf of Maine Research Institute and the National Weather Service, and it can be found at <http://neracoos.org/products/nomogram/>. This combines water levels predicted by the Northeast Coastal Ocean Forecast System (NECOFS) run by the University of Massachusetts at Dartmouth and wave height predicted by the Bedford Institute of Oceanography. NERACOOS buoy and model information are routinely used by the NWS and are seen as critical to their operations. The highest wave height reported at Buoy B, just north of Portsmouth, NH was 31.4 feet just after midnight on the night of the storm. Maximum sustained winds that night were from the ENE at 46 mph with gusts up to 60 mph. A little further south at the Isles of Shoals, wind speeds reached 90 mph.
- **CAMEO Call for Proposals:** NOAA National Marine Fisheries Service and National Science Foundation Division of Ocean Sciences are both pleased to announce a call for proposals for the Comparative Analysis of Marine Ecosystem Organization (CAMEO) Program, which is implemented as a partnership between the two agencies. The purpose of the CAMEO program is to strengthen the scientific basis for an ecosystem approach to the stewardship of our ocean and coastal living marine resources and ecosystems. The goal is to provide an understanding of and predictive capability for marine ecosystem organization and production, particularly as the dual drivers of climate variability and how fishing pressure affects them. Comparative analyses provide an ideal way to achieve this goal. They can be employed in lieu of direct experimentation where controlled manipulation at relevant temporal and spatial scales is not possible. Well-designed comparative studies use existing gradients in ecosystem features to reveal how those features are manifested in processes and structures. Comparative analysis may be applied across ecosystems, within ecosystems through time, or across modeling approaches. A key aspect of these proposals is the emphasis on collaborative partnerships between the academic and NOAA NMFS scientists with mission responsibilities to inform ecosystem

management activities. The full Announcement of Opportunity and further information on the CAMEO program is available on the CAMEO website (<http://cameo.noaa.gov>). Proposals must be submitted through the NSF FastLane System no later than January 7, 2011. For more information, please contact: NSF: Cynthia Suchman (csuchman@nsf.gov) or Dave Garrison (dgarriso@nsf.gov); NOAA: Mike Ford (Michael.Ford@noaa.gov) or Lora Clarke (Lora.Clarke@noaa.gov). For more information, please visit the CAMEO website: <http://cameo.noaa.gov>.

- **NOAA Regional Ocean Partnership Grant Opportunity Announced:** NOAA has announced the availability of the FY11 competitive grant opportunity to support the Regional Ocean Partnership Funding Program (subject to Congressional appropriations). NOAA is soliciting proposals focused on advancing effective coastal and ocean management through regional ocean governance, including the national ocean policy goals set out in the July 2010 Final Recommendations of the Interagency Ocean Policy Task Force. The full grant announcement includes details on the funding priorities, eligibility, deadlines, review process, and how to apply. The announcement and application can be found online at: <http://www07.grants.gov/search/search.do?&mode=VIEW&oppId=57212>.

Congressional:

- **Congressional Staff Update, Meetings on September 29th:** Met with House Natural Resources Majority staff (Dave Jansen), Senate Commerce Committee Majority and Minority staff (Catherine Hazelwood, Leah Abramson, Sean Houton and Kelly Pennington), and Heather Havens (Rep. Capps, D-CA). IOOC Co-Chair Bob Houtman attended as well. Staff were generally pleased with the update presented and they were glad to hear that the Registry and the Progress Report were available online.

Communications and Outreach: No update.

IOOS Conference Involvement: This section will highlight those conferences where IOOS is a sponsor or has a session:

- **November 3-4: Renewable Ocean Energy & the Marine Environment: Responsible Stewardship for a Sustainable Future.** Don't miss this important opportunity to interact with researchers, developers, policymakers, and scientists to discuss and identify gaps in the current state of knowledge regarding the environmental impacts of renewable ocean energy. SECOORA is a major sponsor this conference and is helping to coordinate the "Coastal and Marine Spatial Planning" plenary session and also a "Managing Information to Support Decision Making" track. **Register today at:** <http://www.ces.fau.edu/coet/>. SECOORA will also be hosting a workshop entitled, "Data and Information for Offshore Energy Development in the Southeast: How Ocean Observing Can Help to Fill the Gaps," on November 2, 2010, just prior to the conference.
- **ONLY 7 days remaining to submit your abstract: IOOS and ASLO Meeting - Call for Abstracts:** The next ASLO meeting will be the 2011 Aquatic Sciences Meeting in San Juan, Puerto Rico, February 13-18, 2011. The call for papers is now available and the

website (<http://www.aslo.org/meetings/sanjuan2011/>) is live. We look forward to your attendance. The deadline for both abstract submission and early registration is **October 11, 2010**. Please consider submitting a paper for Session S75: Coastal and Marine Spatial Planning: Current Needs and Future Challenges; Conveners: Dr. Nasseer Idrisi, University of the Virgin Islands, nidrisi@uvi.edu; Simon Pittman, NOAA Center for Coastal Monitoring and Assessment, simon.pittman@noaa.gov; and Zdenka Willis, NOAA IOOS Program, zdenka.s.willis@noaa.gov. This will be a great opportunity to showcase IOOS regional association activities in the Administration's priority of Coastal and Marine Spatial Planning.

Upcoming Meetings: We have merged our calendars and now there is single calendar that allows you to view the IOOS-related meetings. To see this calendar, please visit: <http://www.usnfra.org/calendar.html> or <http://ioos.gov/calendar/>

- **MACOORA Annual Meeting:** October 28-29, 2010; Stevens Institute of Technology, Hoboken, NJ.
- **Annual Ocean Tracking Network Conference:** Hassan Moustahfid; November 2 – 5; Halifax, NS, Canada.
- **Ocean Energy Conference:** Jack Harlan; November 2 – 5; Palm Beach, FL.
- **Seventh Plenary Session of the Group on Earth Observations (GEO-VII) & Beijing Ministerial Summit:** November 3-5 in Beijing, China; Dr. Robinson will be the NOAA principal attending; Zdenka will attend as NOAA's representative to U.S. GEO along with other NOAA colleagues who are on the U.S. delegation and are supporting this summit.

Cheers,
Zdenka

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