Bi-Weekly IOOS® Z-GRAM – 21 February 2014

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.

IOOS® - Enables Decision Making Every Day; Fosters Advances in Science and Technology

From the IOOS Program Office:

- **FY14 Budget Update:** NOAA is in the process of finalizing it's spend plan. From there, the IOOS Program Office will know our final allocation. We anticipate that this will be completed in the next two weeks. We have preliminary numbers and have started coordinating with current awardees. The Marine Sensor Initiative – Advanced Technology and Ocean Acidification federal funding opportunity closed on 21 February. We will now begin the review process.
- **Funding Opportunity**: Resilience Funding Opportunity Partners Scientists with Research Reserves. NOAA is seeking proposals on a $20 million, five-year funding opportunity that will foster resilient coastal communities and strengthen informed decision-making through the use of the nation's 28 national estuarine research reserves. University, state, and nonprofit researchers are eligible to apply, and proposals are due March 31, 2014. Successful applicants will partner with the reserves to support collaborative research, training, communications, and data sharing. The opportunity is offered through NOAA's Office of Ocean and Coastal Resource Management. Questions contact: Dwight Trueblood
- **US/EU Marine Working Group**: Under a State Department EU-US Science and Technology Agreement, the European Union (EU) and the United States (US) Joint Consultative Group (JCG) decided to establish a joint Marine Working Group at the 12th JCG meeting held on February 12, 2013. This cooperation is intended to increase our joint knowledge of the Atlantic Ocean and its dynamic systems, with a focus on five theme areas of cooperation: Ocean stressors, Aquaculture, Observing systems, Marine microbial ecology, and Ocean literacy. For the US, Craig Mclean, NOAA co-chairs this group along with John Bell of the EU. The collaboration process began with US agencies providing “stock takes,” short outlines of potential areas of collaboration, for each theme. For the Observing systems theme, Zdenka Willis and David Leglar of NOAA have been named as leads, and Libby Jewett, NOAA, has been named the lead for the Ocean stressors theme. The first meeting was held on 20 February where the US and EU presented the stock takes and had a chance to get acquainted with each other over VTC. In all of the theme areas, much collaboration is already ongoing. The near-term focus is on the Horizon 2020 call for proposals and how that funding initiative can further/accelerate the collaboration.

Observation Subsystem and Sensor Technologies

- **High Frequency Radar/Radio:**(Lead Jack Harlan, **Jack.Harlan@noaa.gov**):
  - International Workshop to discuss applications and deployment of HF Radar in South Africa: 17-19 February, 2014. - An international team of High Frequency Radar subject matter experts, including Scott Glenn (Rutgers University and IOOS-MARACOOS), and South African stakeholders met in Cape Town to discuss the development of a South African National HF Radar Network. The first 1.5 days included presentations by subject matter experts on HF Radar capabilities followed by presentations by stakeholders on their needs. This was followed by a half day of discussion. A wide range of South African stakeholders were invited, most invitees attended, and all attendees discussed a path forward. The South African Weather Service expressed interest as the

home for a South African HF Radar network and progress was made on a build out plan and how it could be supported. Initial efforts for validation/education proposal were discussed to take advantage of several opportunities, including but no limited to: (a) the interest of the European Synthetic Aperture Radar (SAR) satellite community to consider South Africa as the first Southern Hemisphere SAR validation site for their new SAR system if a small HF Radar network can be deployed for a several month study period starting not long after February, 2015; and (b) a collaborative HF Radar course in South Africa starting in February, 2015. The talks from the workshop will be posted soon.

- **Gliders**
  - **Profiling Glider Plan V2 – comments due 21 March:** We really want your input – send comments to Becky.Baltes@noaa.gov. The new draft and comment revision synopsis is available on our website here.

  - **GCOOS Glider Showcase - Industry, Government, and Researchers Partner for Glider Operations in the Gulf of Mexico:** The fourth story of this multi-part feature on gliders in the Gulf of Mexico (GOM) shifts from industry operations to collaborative research involving industry, government, military, and academic partners. GCOOS members Shell, the NOAA's National Data Buoy Center, National Centers for Environmental Prediction, United States Naval Academy, and the University of Southern Mississippi are operating a profiling glider to collect real-time data to aid in the improvement of hurricane intensity predictive models. Completing its second year of operations, the glider was deployed from July 5th unit October 9th and collected over 1080 profiles down to 1000 meter depth and covering a distance of over 1200 nautical miles. This project is a component of the Shell-NOAA collaborative agreement initiated in 2008 to improve tropical storm and hurricane forecasting in the Gulf of Mexico. Read more at:http://gcoos.tamu.edu/?p=5974.
- **CariCOOS Assets ESRI storytelling webmap**: Check it out! A great visual on the assets within CariCOOS. CariCOOS used ArcGIS Story telling map tour combining an interactive map of PR and USVI, CariCOOS assets photos, text panels including a brief description of individual assets and link to real-time data, and a thumbnail carousel. http://www.arcgis.com/apps/MapTour/index.html?appid=46d5bae798d94844a66e8e5fd5d38863&webmap=5e59ce36220840f49c1f2e10c2b60d80.
- **CO-OPS Brings Observing Systems Expertise to the Gulf of Mexico Region:** National Ocean Service – Center for Operational Oceanographic Products and Services (CO-OPS) has established a new team in Mobile, Ala., at the NOAA Gulf of Mexico Disaster Response Center (DRC). The team is responsible for communicating and managing assignments, providing technical oversight, and conducting maintenance and repair for approximately 90 CO-OPS observing systems in locations ranging from Florida to Texas. CO-OPS, in collaboration with the Office of Response and Restoration, can assist the DRC with enhancing emergency preparedness, response and recovery operations, and ensure timely and accurate delivery of relevant data and information to decision makers before, during, and after an incident. For more information, contact David Lane.

Data Management and Communications (DMAC) Subsystem and Tools Built on IOOS data: (Contact Derrick or Rob to get on the list serve for changes Derrick.Snowden@noaa.gov, Rob.Ragsdale@noaa.gov).

- **QARTOD**
  - IOOS Regional Associations' review of the Water Level draft manual is due March 7th.

- Are you an expert in Wind Speed and Direction? If you answered yes, we need your participation on the next QARTOD manual committee that will begin in early April. If you would like to participate, please contact ray.toll@noaa.gov.

- **IOOS DMAC Webinar:** Emilio Mayorga from NANOOS and Rich Signell from United States Geological Survey (USGS) demonstrated use of the Wakari work environment and IPython Notebooks. The IPython notebooks demonstration and links to resources about Wakari are accessible here.

- **Sea Surface Height (SSH) Resource Added to GCOOS Website "Resources" Page:** The GCOOS website "Resources" page has an added resource: SSH (http://gcoos.org/products/index.php/model-resources/ssh/). The SSH or height of the ocean's surface is affected by tidal forces, ocean circulation and variations in the gravitational field. The daily variations from the mean, called anomalies are observed by satellite altimetry and can be used to predict ocean currents and sea level rise. The gridded data sets available on the website cover the period from 2007 through 2012. They are the result of combining all available altimeter satellite data for the region and time frame. These gridded data sets were produced by Robert Leben (leben@colorado.edu) from the Colorado Center for Astrodynamics Research. For more information and to see which other years are available, visit the Colorado Center for Astrodynamics Research (CCAR) Global Historical gridded SSH data viewer website at http://eddy.colorado.edu/ccar/ssh/hist_global_grid_viewer

Modeling and Analysis Subsystem

For information on the US IOOS Coastal and Ocean Modeling Testbed (COMT), contact our project manager, Becky Baltes,Becky.Baltes@noaa.gov

- COMT projects up and running:
  - **"Transitioning an Estuarine Hypoxia Model to Operations via a COMT in the Chesapeake Bay,"** Principal investigator is Marjy Friedrichs (VIMS/Wm & M)
  - **"The US West Coast Component of the Coastal Ocean Modeling Testbed (COMT),"** Principal investigator is Alex Kuropov (Oregon State University).
  - **"A Puerto Rico/U.S. Virgin Islands surge and wave inundation model testbed,"** Principal investigator is Andre Van der Westhuysen (NOAA/PR)
  - **"Seasonal and Short-term Forecast System and Nutrient Load Scenarios for Hypoxia Prediction in the Northern Gulf of Mexico,"** Principal investigator is Katja Fennel (Dalhousie University).
  - **"ASA contribution to the US IOOS Coastal Ocean Modeling Testbed (COMT) – Cyberinfrastructure,"** Principal investigator is Eoin Howlett (ASA).
- **NOAA's Ecological Road Map – Connecting to the IOOS Regions:** NOAA has developed an ecological road map. The IOOS Regions have invested in observing systems, data access and models that can support NOAA's efforts. To that end we have started a set of webinars between these two efforts. The first one held this past week was between SECOORA and the team leads for the Ecological Forecasting Roadmap to identify specific activities that are suited for the Roadmap or that are already happening and can be connected to the Roadmap.

Interagency and International Collaboration/News

- **IOOC DMAC Steering Team (ST):** The ST has completed a draft report for the Interagency Ocean Observing Committee (IOOC) that includes detailed responses to DMAC-related recommendations from both the 2012 IOOS Summit and from the National Ocean Council's National Ocean Policy Implementation Plan published in April 2013. The report was submitted to the IOOC Co-Chairs on Feb 18. Nineteen ST

members and Invited Stakeholders contributed to the report which should be final and posted to the IOOC web site by the end of March.

- **Australia's Integrated Marine Observation System (IMOS) Releases new ocean portal**: The IMOS Ocean Portal has been re-designed to produce a website that is intuitive and engaging. The Portal improves both functionality and user experience with the goal that new and loyal users will be tempted to explore the possibilities with IMOS datasets. The new IMOS Ocean Portal was released on 11 February with an unchanged URL**.** Should you have any comments or require assistance please review the 'Help' link at the top right hand of the Portal – you may find your answer in our User Guide, or send details directly using the 'Contact Us' link or email info@emii.org.au. CONGRATS to our IMOS partners!

Delivering Benefits

- **AAAS Annual Meeting 2014**: The Ocean Tracking Network: Global Innovation in Technology, Science, and Management session was a success. Although weather prevented me from attending, Fred Whoriskey, Ocean Tracking Network (OTN) kindly delivered my presentation. My presentation has been posted at: http://www.ioos.noaa.gov/communications/presentations/welcome.html
- **Offshore Mariculture Monitoring Program meeting between SCCOOS and Catalina Sea Ranch.** The IOOS Program Office teamed up with SCCOOS and representatives from Catalina Sea Ranch to identify observations from SCCOOS that can assist the aquaculture farm. The Sea Ranch is interested in surface currents, waves, HABs, hypoxia, upwelling, storm prediction, models, ocean acidification monitoring, and information about nearby sewage outfalls. Dale Kiefer (University of Southern California) is working with Catalina Sea Ranch on their monitoring plan and will work with SCCOOS as he puts together his plan and explore data access opportunities.

Congressional: Upcoming Events

- **Science for Solutions: The Power of Innovative Partnerships in National Marine Sanctuaries:** Date/Time: Thursday, **Feb. 27th** at 3pm. Location: Capitol Visitors Center, Congressional Meeting Room North. NOAA's National Marine Sanctuaries can serve as sentinel sites— living laboratories with the long-term monitoring to detect physical and biological changes—that provide the basis for science-based, adaptive decision-making. Sanctuaries also leverage on-the-ground community partnerships, ensuring effective solutions incorporate surrounding communities. Join them to find out how sanctuaries are ideal places to focus investment when planning for our future.
- **2 Sessions: Making a Difference: The U.S. Integrated Ocean Observing System (U.S. IOOS): Date/Time:** Thursday, **March 6th**; 9:30 – 11:00 Senate 208 - Capitol Visitors Center; 1:30-3:00 2103 Rayburn House Office Building. You are invited to participate in a briefing and interactive dialogue highlighting how U.S. IOOS is making a difference to users. The U.S. IOOS provides information on our oceans, coasts, and Great Lakes to increase understanding so decision makers can take action to improve safety, enhance the economy, and protect the environment. IOOS is a partnership between 17 federal agencies and 11 regional observing systems, who incorporate private and public partners to serve regional stakeholder needs.

Communications / Outreach / Education

- **AOOS in the News: https://www.hcn.org/blogs/goat/groundbreaking-sea-ice-atlas-aids-arctic-planning-and-is-also-really-cool**
- **Article of interest - Drone that will Sail itself Around the World** (discusses LR wave buoys): http://www.wired.com/autopia/2014/02/saildrone/

- **NOAA Expertise Featured in North Carolina Water Quality Education Video**: A new educational video features National Centers for Coastal Ocean Science (NCCOS) scientists describing the importance of water quality in North Carolina estuaries for coastal ecology, human health, food supply, and the state's economy. The video was produced through a partnership with the Core Sound Waterfowl and Heritage Museum and the North Carolina Division of Marine Fisheries. Contact: James Morris

Upcoming Meetings with IOOS participation

- **Call for papers and exciting events OCEANS'14 MTS/IEEE**: Abstracts are due 26 March. U.S. IOOS has been a strong supporter of this conference and so again I encourage you to submit an abstract and be part of the program. One of the special topics is persistent ocean observing – which is intended to be focused on our ocean observing activities. As always if enough papers for a topic are received we can work with the technical chairs to call out a special session. We have begun initial discussions on 2 town halls: (1) U.S. and Canada partnerships in ocean observing and (2) focused on the ocean enterprise. We are also evaluating whether we will do another Ignite event as we did in OCEANS'12. Submit your abstract online through the conference website, www.oceans14mtsieeestjohns.org
- **Oceanology International 2014**: We have an exciting Ocean Observing Systems sessions planned at this conference with 3 key note talks: Advanced Intelligent Cyberphysical Systems for Marine and Coastal Monitoring, Dr. Harry Kolar, IBM; The Wendy Schmidt Ocean Health XPRIZE: Catalyzing Innovation to Address Ocean Acidification, Dr. Paul Bunje, XPRIZE and Kevin Hardy, Director of Design and Operation of Unmanned Landers, DEEPSEA CHALLENGE Expedition; Founder, Global Ocean Design. Response to the call for papers so good that we have 2 sessions. Our sessions will take place on **11 and 12 March 2014**, hope to see you there: http://www.oceanologyinternational.com/en/home/
- **Science Assessment of Chesapeake Bay Acidification: Towards a Research and Monitoring Strategy**: US IOOS-ACT (lead) with NOAA (NERRS, Chesapeake Bay Office, Ocean Acidification Program); CERC and IOOS-MARACOOS are teaming up to address effects of acidification processes in nearshore ecosystems. A workshop will be held in Annapolis MD, **March 11-13, 2014** designed to assess the science required for understanding coastal acidification in the Chesapeake Bay. Understanding the carbonate chemistry dynamics/acidification in the Chesapeake Bay will enable us to make better predictions of the ecological/environmental change in the Bay and in other similar coastal ecosystems. A prime goal of the workshop will be to pull together information on current monitoring assets, data sources and data gaps as they relate to measuring and monitoring carbonate chemistry with and eye toward designing a Chesapeake Bay Monitoring Network (CBAN). For more info contact Mario Tamburri, tamburri@cbl.umces.edu.

View the IOOS calendar: http://www.ioosassociation.org/calendar or http://www.ioos.noaa.gov/about/calendar.html

Cheers,
Zdenka
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Zdenka Willis
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