

**U.S. IOOS Advisory Committee
Virtual Meeting
September 24, 2013
10:00 am – 2:30 pm EDT
Minutes**

Committee Members and Staff Attendance:

Rick Spinrad, Chair
Tom Gulbransen, Vice Chair
Terence Browne
Ann Jochens
Val Klump
Lynn Leonard
Justin Manley
Brian Melzian (Ex Officio)
Chris Ostrander
Emily Pidgeon
LaVerne Ragster
Eric Terrill
Zdenka Willis – Designated Federal Official (DFO)
Victoria Kromer – DFO Administrative Support
Laura Griesbauer - DFO Administrative Support

Public Attendance:

Gabriel Alsenas – Southeast National Marine Renewable Energy Center
Paul Bunje - XPRIZE
Paul Bradley – National Oceanic and Atmospheric Association (NOAA) National Ocean Service
Robert Brock – NOAA National Marine Protected Areas Program
Eric Lindstrom – Interagency Ocean Observation Committee (IOOC) Co-Chair
Jerry Miller – Science for Decisions
Chris Moren – Global Science and Technology
Ru Morrison - Northeast Regional Association of Coastal and Ocean Observing Systems
Josie Quintrell – Integrated Ocean Observing System (IOOS) Association
Ralph Rayner – U.S. IOOS Industry Liaison
Jen Rhoades – U.S. IOOS Program
Mike Wooster – Global Science and Technology

Absent Committee Members:

Tony MacDonald
CJ Beegle-Krause

Introduction

The Chair began the virtual meeting around 10:10 am EDT by welcoming the group, taking attendance and setting the expectations for the day. He thanked the staff in Silver Spring for organizing the logistics of the meeting since the U.S. IOOS Advisory Committee (the Committee) was not able to hold the meeting in person as originally planned.

The expectations for the day were: to get input on how Committee products are used; learn the status of the Integrated Coastal and Ocean Observing System (ICOOS) Act (the Act) reauthorization; discuss business models.

The Chair then moved onto the next item on the agenda, introducing Zdenka Willis, Designated Federal Official (DFO) and Director of the U.S. IOOS Program, to give an update of the U.S IOOS Vision which the Committee submitted to the National Oceanic and Atmospheric Administration (NOAA) and the Interagency Ocean Observation Committee (IOOC).

Update on the Vision – Zdenka Willis

Zdenka Willis shared the status of the vision statement in NOAA. The Chair asked Eric Lindstrom to provide an update from the IOOC perspective.

Zdenka Willis expressed NOAA's appreciation with the Committee producing their first product and stated that NOAA is looking forward to working with the IOOC to move forward with the vision statement. The U.S. IOOS Program Office is comfortable adopting the document in whole and moving forward, however, Dr. Kathryn Sullivan, NOAA Acting Administrator, is currently in the process of formally responding to the Committee's vision. Dr. Sullivan's confirmation hearing has delayed her response and while we expect a response imminently, we cannot predict when it will come. After NOAA's formal response, the U.S. IOOS Program will then encourage working across all of NOAA to adopt the vision with consistent messaging. U.S. IOOS, the IOOC, and the IOOS Association will work to move forward together on this vision.

Eric Lindstrom thanked the Committee for putting together the Vision. From the IOOC's perspective, they agree with capitalizing on the successful IOOS response to Sandy and other disasters. There is a need to stress the non-government activities in IOOS enterprise. Highlighting IOOS data, responding to IOOS stakeholders, enabling IOOS innovation and technical capabilities are critical to advancing the IOOS enterprise.

Eric continued by providing background on the recently released IOOS Summit report. He gave a high level overview of the recommendations and highlighted the ones that mentioned the IOOS Advisory Committee.

The IOOC reviewed all of the recommendations in the report and developed activities and tasks to follow up on these recommendations. Eric displayed a "word cloud" graphic that summarized the report.

Tom Gulbransen noted that the Summit recommendations 6 and 8.1-8.5 are attributed to the IOOS Advisory Committee. He asked if there are other parties who will help to advance these recommendations or if these lie on the shoulders of the Committee alone. The expectation is that these are specific to the Committee.

The Chair made a request to have the DFO share the specific recommendations from the IOOS Summit report for the IOOS Advisory Committee to address.

Update on ICOOS Act Reauthorization – Jen Rhoades

Jenifer Rhoades, U.S. IOOS Program Office, gave an update on the ICOOS Act reauthorization which the IOOS Program Office and IOOS Association have been collaborating on for the past two years (the Act expires on September 30, 2013). In June 2013, the bill H.R. 2219 which would reauthorize the Act was introduced into the House. The reauthorization does not stipulate any major changes other than specify an appropriation level. The proposed modification appropriates \$29 million to the IOOS Program. Other recommendations include the making the level of funding equal to the President's FY2013 budget and requests that the IOOS Advisory Committee have staggered terms of office. While there is no bill currently in the Senate, Senator Cantwell (D-WA) is expected to be one of the sponsors of the bill. Additionally, there is no timeline for the introduction of that bill, though we expect bipartisan support. NOAA and the IOOS Program office will work with Congress upon request to support the reauthorization of the Act.

The Chair asked what the U.S. IOOS Program Office, the NOAA Administrator or the IOOC need from the Committee to support the reauthorization of the Act. The Committee needs to be somewhat careful on their approach because the Committee advises the government but cannot advise Congress. The Chair commented, on behalf of the Committee, that the Committee would encourage the use of the Vision Statement by NOAA and the IOOC to assist with messaging to the Hill.

Introduction of Investment Model Discussion – Rick Spinrad

The Chair began the introduction of guest speaker Michael Jones of the Maritime Alliance. Chair stated that reviewing investment models represent a fundamental next chapter for the Committee. The current business model needs to change, including engagement of new sectors, expansion of public-private partnerships, and reaching out to those people who are familiar with financing and investing. Michael Jones has been engaged with bringing various industry sectors and user groups into the IOOS enterprise.

Presentation by Michael B. Jones

In his previous experience, Michael was a commercial banker for 8 years and an investment banker since 1985. He started the Maritime Alliance in 2007 and became aware that there was a large cluster of marine technology organizations without the awareness that there was an important marine technology industry. For the past couple of years, the Maritime Museum of San Diego supported a publication of articles to highlight the activities of the oceanographic industry. This publication focuses on the blue economy and is being used as a way to highlight the activities of the industry with stakeholders and public officials. Michael gave an overview of the structure of the Maritime Alliance.

He relayed a story of his first meetings with the U.S. Commercial Service and Department of Commerce on the importance of blue technology and blue economy to the economic vitality of the United States. Michael Porter was hired to put together a list of economic resource clusters in the United States and the Maritime Alliance discovered that there was no place in this list for the maritime industry. Instead he was told maritime would be clustered within marine transportation. The Maritime Alliance has been working toward the creation of a more specific cluster to encompass the maritime industry, specifically blue technology.

Michael shared how the work that Maritime Alliance has been doing has resulted in bringing blue technology to the forefront for the state of California. Maritime Alliance commissioned ERISS to conduct a study of blue technology's impact on the blue economy. He noted that the maritime industry is quite diverse and growing. The biggest challenge has been getting companies to think of themselves as blue economy and blue technology. They think of smaller niches like aquaculture, desalination, etc., but bringing together all of these sectors into one larger cluster is very powerful.

The U.S. IOOS Program Office recently announced a national maritime industry study which is to be conducted by ERISS with assistance from the Maritime Alliance. No one has ever done a national study of this magnitude. The study is currently in the information collection stage. Recently the Maritime Alliance established a second non-profit that focuses on an advisory role. Through this role, Maritime Alliance connected the community college system in San Diego with industry companies to better understand their engineering needs.

Terry Browne asked if the Maritime Alliance has a relationship with any of the Regional Associations or with the Marine Advanced Technology Education (MATE) Center. Michael responded by stating that they reached out to MATE but not much has come from that as of yet. The Maritime Alliance has been working on a project to promote science, technology, engineering, and mathematics (STEM) fields and has 60 educational programs involved with that project. Workforce development is also something that Maritime Alliance supports, including reaching out to create partnerships with the Navy and Maritime companies. Michael has reached out to the Southern California Coastal Ocean Observing System (SCCOOS), the regional association geographically near the Maritime Alliance. The regional associations and Maritime Alliance are involved in maritime industry study and the relationship is managed through the U.S. IOOS Program Office.

Terry noted the market/cluster map on the Maritime Alliance webpage contains some interesting graphics and information. He asked if there is additional cross cutting for the blue technology sector that could be developed to better apply to the rest of the United States. Michael agreed that various places across the country have very different cultures using the example of San Diego, CA vs. Houston, TX. He further described how the clusters were developed, one blue technology cluster versus 14 sectors that the Maritime Alliance has identified to further break down the blue technology industry. Michael noted that the clusters form more organically, but Maritime Alliance can help to get those clusters formed.

Tom Gulbransen commented that Maritime Alliance may help us to better communicate with our customers in order to find out what they need and to communicate what the IOOS enterprise can provide.

Michael noted that the focus on the maritime industry study is on private sector companies that are either providing technology to IOOS or using IOOS data, repackaging it and providing it to end users. The outcome of this study will provide the beginnings of what the IOOS enterprise looks like and will better identify where partnerships can be developed.

The Chair commented that one of the goals for the Committee is to be able to have these higher level conversations to promote the industry.

Val Klump noted that based on information provided by Maritime Alliance, ocean observations services are projected to be one of the largest areas of growth for employment.

Michael Jones concluded by noting the importance of these studies to informing planning in marine areas.

Ralph Rayner commented on using the correct semantics in terms of the Maritime Alliance identified sectors and market capabilities.

The Chair noted much of the emphasis is on the manufacturing side and not the services side. There is an undervalued area of development in the ocean observation services. How will the study handle those types of companies? Michael noted that this study will capture these companies as well and will highlight how companies are connected from the manufacturers to companies providing business services and infrastructure. There are also companies, such as Liquid Robotics, that produce products and provide repackaged information

For clarification, Zdenka Willis defined U.S. IOOS in the broad sense and stated that the NOAA's Office of Coast Survey, Center for Operational Oceanographic Products and Services, and National Geodetic Survey are also participating in this study and that this was extended to the IOOC as well.

Brian Melzian commented that the Maritime Alliance website and graphics available are excellent. He also recommended rewriting some of the sections on marine spatial planning, including removing the term "coastal marine spatial planning" due to negative connotations in Congress.

The Chair wrapped up the session stating that these are important conversations to have. This has been very helpful to attend to the Committee's situational awareness and to understand the background for how this study was established. The Chair noted that this study could be beneficial to the Committee to advance the discussion on business models. He also noted that the Committee may help to advise the study with the background from the various members who are situated in industry. The Chair recommended a continued dialog on this study. Michael Jones noted that ERISS is the principal on the study, but agreed that the Committee providing help to identify companies would be very useful, and likewise would be happy to provide feedback as

the study moves forward. Zdenka noted that IOOS reached out to MTS and to U.S. Commercial Services, so it would be natural to reach out to the Committee for information on the study as well. Zdenka and the Chair agreed to work together to develop how the Committee can assist with the study and how to routinely provide updates to the Committee on the progress of the study.

Discussion with IOOS Association – Regional Reaction to the IOOS Vision and Perspective on Business Models – Josie Quintrell

Josie Quintrell presented the regional reaction to the IOOS Vision and perspective on business model. The IOOS Association is the non-profit arm of IOOS. Earlier this year, their name changed from the National Federation of Regional Associations (NFRA) to the IOOS Association. Josie provided an overview of a sampling of partnerships within the regional associations. She noted that the reasons to partner with the private sector include shared goals, business opportunities, sources of information, leveraging expertise and product development, implementation of data management, products and platforms, and better reaching stakeholders. These partnerships are diverse including service agreements, volunteered data sharing or ship time, added value and information products, and board and association members providing networking opportunities and a shared belief of existence value. These partnerships have also provided financial support from foundation grants, from membership dues, or for buoy support services, to name a few areas. Josie noted that financial support has been particularly challenging to cover the operation and maintenance costs items that grants or one-time gifts are less suited to cover.

Josie highlighted experiences of the public-private partnerships in the regions and noted that some of the large national companies' interest has dwindled because of the lack of federal support going to the regions. There are also evolving relationships of IOOS and the private sector at the regional level. Some companies don't want IOOS to produce products, yet IOOS is driven by stakeholder needs.

Josie highlighted insights or needs the RAs would like assistance with, particularly from FAC, including practical ideas for engaging the private sector, defining the goal of engaging the private sector, and market research that identifies IOOS' strategic potential and where resources should be focused. Josie also identified policy changes that are important to advancing IOOS and raised additional issues for the IOOS Association including challenging budget environments and how to sustain the system, certification and liability, effects of the new consolidation of the NOAA National Ocean Service budget line where the IOOS budget resides, and overall overall integration of the system beyond the items which grab a lot of attention, such as gliders..

Tom Gulbransen noted that it's good that partnerships are described as strong and asked Josie to spend some more time on the revenue piece of partnerships. He wanted to know if there are there any agreements to share revenue from the products Josie mentioned. Josie responded that there are not any at this time.

Eric Terrill commented that we need to better define what a partnership really means.

Ann Jochens commented that there are many challenges with the development of proprietary data streams including the perception that the public part of IOOS would then be competing with the private sector.

Tom Gulbransen added that perhaps it's not trying to sell but rather trying to seek reimbursement for producing the data in order to keep the system going. He posed the question, "What if IOOS focuses on the production of data and let the private industry focus on the value added products?"

Josie noted that in the future that may be the case, but right now the regions are establishing the value of the data, and eventually the private sector will hopefully move into that market. On the Hill, their ability to meet user needs with products and services is driving the funding for IOOS.

The Chair asked about what the role of federal laboratories is to the regional associations. Josie commented that there are examples in the regions of interactions with the federal labs, including work on ocean acidification and environmental data samplers. The synergies are there and more interactions could be developed.

Zdenka Willis was asked if she saw the interagency aspect of IOOS decreasing with the consolidation of the NOS budget lines. Zdenka explained that while the budget lines, also referred to as "PPAs," are being combined into one budget line, the offices themselves are not consolidating. Zdenka does not know how this will affect IOOS' push to become an established program office and there is a concern that the other agencies in the IOOC may worry that the lead federal agency (NOAA) is not taking IOOS seriously. Ann Jochens suggested that the Committee send a statement to NOAA that they recommend that IOOS stay a separate office and not be consolidated. The Chair commented that he shares Ann's concerns and recommended that he and Tom speak with the Chair and Vice Chair of the HSRP Advisory Committee, the advisory committee to the Office of Coast Survey and one of the offices being consolidated into the one budget line. The Chair asked Zdenka to coordinate that meeting within the next month.

Furthering the discussion on Josie's presentation, Emily Pidgeon asked what the value is of non-commercial use of data and how do we go about valuing that. Josie responded that there is a large amount of services and products served to non-commercial entities including search and rescue operations (United States Coast Guard). The value of these services is on the return of investment.

Ru Morrison, Vice-Chair of the IOOS Association, stated that what IOOS does with observations is provide the situational awareness of the oceans and that IOOS is an important part to move the blue economy forward. He noted that it will not be the same in each of the regions, the culture varies greatly and the drivers are different. He said from his perspective as the Executive Director of a 501(c)3, his job is to figure out how to be sustainable. If federal funds are not increased, he has to figure out how maintain operations and new business models is one thing to look closely at. Tom Gulbransen added if the enterprise continues to show the value of the data and show opportunities to use the data, we can help the market develop.

Presentation and Q&A on XPRIZE with Paul Bunje

Paul Bunje presented a brief summary on XPRIZE. He began by talking about the \$10 million prize that was launched in early September 2013 for teams to develop breakthrough pH sensors to incentivize development of inexpensive sensors. He presented XPRIZE as a potential platform for development within IOOS.

The Chair asked Paul what he sees as a valuable role of the Committee to the XPRIZE and Paul stated that the Committee could help to find partners who would be interested in participating on this prize and future prizes. The Committee could offer dialogs for what future prizes should look like and cover. After Paul left the teleconference, the Vice Chair asked whether the Committee should consider a more active role in response to the XPRIZE challenge, given that the challenge is within IOOS' mission to support the development of technologies.

Paul Bunje will send examples of previous XPRIZES to the Chair and the Chair will distribute these to the Committee. Paul exited the meeting.

The Chair started a new discussion on a plan of action through FY2014 and expectations and next steps for the Committee. A slide was developed to capture various “Operational Concepts and Business Model Elements” to be used to help guide the development of business models. For the next meeting, Rick asked the committee members to be prepared to present specific business models based on these elements.

The Chair will flesh out the list of elements and add a descriptor sentence or two of each of the items. He will then work with the Vice Chair and the rest of the Committee to better define the elements with the goal of at the next meeting to discuss translating these elements into recommendations.

Wrapping up this section of the agenda, Committee members briefly shared their thoughts on both presentations. Tom Gulbransen recommended the need to go a little bit further with specific investors to discuss what IOOS can do to be more attractive to investors. Justin Manley thought the presentation from Michael Jones was very beneficial and raised points that made things click for him. Ann Jochens commented that she thought the presentations today were a good first step to get into more of a business mindset, but agreed with Tom that we need deeper conversations on private investments. LaVerne Ragster raised her concern about time and the ability to accomplish activities.

Public Comment Period

Ralph Rayner suggested looking at the experiences of elsewhere in the world, specifically looking at Europe and meteorological services versus the meteorological services in the U.S. He recommended continuing on with the industry study to identify and express the benefits of IOOS services. Ralph cautioned that attempts to raise revenues through charging for data resulted in major reductions in enterprises which might otherwise provide value added products to the European weather market.

Jerry Miller noted his appreciation for the meeting and the presentations today. He referred to IOOS as being at the awkward teenage stage of investment. IOOS' federal parents have provided a particular amount of time and investment in its development and he sees the Committee as the much needed guidance counselor. He's spent a fair amount of time on Capitol Hill talking about the value of science and IOOS is part of that. Capitol Hill hasn't yet latched onto the potential of IOOS and he recommends shaping IOOS in the light of its federal parents. In other words, stressing the importance of fully building out the coastal components of observing systems and the engagement of federal partners of IOOS.

Final Wrap Up and Comments from the Committee

Rick concluded the meeting by asking if the Committee members had any last words. There was a good discussion and this meeting went much better than expected given the logistics. Other members of the Committee thanked the staff and presenters. Brian Melzian asked for the presentations to be posted on the IOOS website and thanked the IOOS staff for assisting with the logistics for the meeting. Lastly, the Chair thanked the IOOS Program Office staff, thanked the presenters, and remarked that he did not find this an acceptable substitute for an in person meeting.

Meeting adjourned at approximately 2:30 p.m. EDT.

**U.S. IOOS Advisory Committee
Actions from Meeting on September 24, 2013**

#	Action	Responsible Accountable Consultative Inform	Due Date
092413.1	Schedule a meeting for Chair and Vice Chair with the Chair and Vice Chair of the HSRP	R: Exec Sec C: Chair, VC	11/8/2013
092413.2	Provide a summary of the FY14 NOS budget consolidation to the AC.	R: Exec Sec I: Chair	11/8/2013
092413.3	Identify means for AC to assist with the Maritime Industry Study; Provide routine updates to the AC on the progress of the study	R: DFO C: Chair	11/15/2013
092413.4	DFO shares recommendations from the IOOS Summit Report for the IOOS AC to address.	R: Exec Sec I: AC	11/15/2013
092413.5	Send examples of previous XPRIZES to Chair; Chair distributes to AC to develop future partnership with XPRIZE.	R: Exec Sec A: Chair	11/15/2013
092413.6	Set date for an in-person meeting in Spring 2014.	R: Exec Sec A: Chair	11/22/2013
092413.7	Schedule virtual intercessional meeting prior to Spring 2014 meeting to prepare substantive document to present to investors.	R: Exec Sec A: AC	11/22/2013
092413.8	Complete draft operational elements slide by adding descriptor sentences to each item. Work with the Vice Chair and members of the committee to finalize the elements for discussion on translating elements into recommendations at next meeting.	R: Exec Sec A: Chair I: AC	12/6/2013
092413.9	Provide input on Chair on next topics for AC to advise NOAA and IOOC.	R: Exec Sec I: Chair	1/17/2013

- **Responsible:** person who performs an activity or does the work.
- **Accountable:** person who is ultimately accountable and has Yes/No/Veto.
- **Consulted:** person that needs to feedback and contribute to the activity.
- **Informed:** person that needs to know of the decision or action.