2008 IOOS Regional Status Assessments
Summary Report, February 2009

Background

During the period February 29-June 12, 2008, the NOAA Integrated Ocean Observing System (IOOS) Program Office conducted "regional status assessments" with the 11 IOOS Regional Associations for Coastal and Ocean Observing (RAs). The meetings were intended as business meetings between NOAA IOOS and the principal investigators and coordinators from each RA to give NOAA a baseline understanding of RA key players, governance and management, regional stakeholder engagement and accomplishments, and related issues. While some of this background had already been provided by the RAs in writing, these meetings were intended to encourage a dialogue, provide an opportunity for NOAA IOOS to communicate about national objectives and progress, and allow RAs to raise regional concerns or issues with NOAA IOOS leadership.

Prior to the meetings, NOAA IOOS sent all RAs a list of objectives and proposed topics for discussion. Each RA was asked to prepare a power point presentation based on a template provided by NOAA in order to guide the discussions and ensure consistency of the information provided. The final presentations are an important and useful reference and are available on the NOAA IOOS website at: http://ioos.noaa.gov/library/statusassesments2008.html.

Most RAs were asked to meet in groups; we met individually with some where logistics and timing were an issue. The schedule and groupings were as follows:

- Great Lakes Observing System (GLOS) – February 29 (Silver Spring, MD)
- Alaska Ocean Observing System (AOOS) – April 18 (telcon)
- Southeast Coastal Ocean Observing Regional Association (SECOORA), Caribbean Regional Association (CaRA), and Gulf Coast Ocean Observing System (GCOOS) – April 23 (Houston, TX)
- Northeast Regional Association of Coastal Ocean Observing Systems (NERACOOS) and Mid-Atlantic Coastal Ocean Observing Regional Association (MACOORA) – April 30 (New Brunswick, NJ)
- Southern California Coastal Ocean Observing System (SCCOOS), Central and Northern California Coastal Ocean Observing System (CeNCOOS), and Northwest Association of Networked Ocean Observing Systems (NANOOS) – June 4 (Seattle, WA)
- Pacific Islands Ocean Observing System (PacIOOS) – June 12 (telcon)

The NOAA IOOS objectives for the meetings were to understand:

- RA governance and structure;
- Current activities and stakeholders;
- Benefits of the RAs to the regions
- The mix of funding (NOAA, other Fed, and non-Fed) that supports RA activities;

- Outcomes of the first set of RA coordination agreements;
- RA future objectives/plans (FY08-12);
- Active and potential coordination across RAs; and
- Best practices and lessons learned.

It was our expectation that a better understanding of these elements would help NOAA IOOS to:

- Justify and program long-term funding for the IOOS regional investment;
- Enhance internal advocacy for the entire regional investment, including RA support; and
- Enhance NOAA's facilitation and support of the RAs by the other Federal agencies within the Interagency Working Group on Ocean Observations.

Summary of Key Elements

RAs provided significant detail in the meetings and in their presentations; as mentioned previously, those are available on the NOAA IOOS website. This report is not a summary of such details; rather, it attempts to capture several important elements that spanned the discussions:

- The top three "common thread" issues across the regions;
- The top three "gaps" in NOAA IOOS or RA management;
- What is working, and
- What is not working?

Common Threads and Gaps

The top three common threads that emerged from the status assessments and the top three gaps in program management are the same. These are issues of critical concern to all regions (common threads), and they demonstrate a need (gap) for which the regions are looking to NOAA IOOS for resolution. They are:

1. Insufficient funding,
2. Need for better guidance from and coordination with NOAA IOOS and the other Federal agencies of the IWGOO, and
3. Need to better understand how RAs (and the associated Regional Coastal Ocean Observing Systems, or RCOOS) are evaluated for funding.

1. Insufficient funding.

In 2007, IOOS transitioned from a series of Congressionally-directed awards to a competitive funding process to maximize taxpayer investment, forging the evolution of a variety of distinct, sub-regional observing elements into 11 cohesive regional systems with common goals. NOAA administers the selection and funding process and provides leadership to ensure regional activities meet national priorities. The transition has been challenging, and has occurred in conjunction with a reduction in available federal funding. RAs are looking to NOAA IOOS to commit a base level of funding that will sustain all 11 RAs, with additional consideration to competitive funding for specific

projects and for growth and innovation. They would also like NOAA IOOS to pursue limiting the scope of funding to 11 IOOS regions, or to somehow otherwise "formally recognize" the 11 already-established regions. A few expressed that it would be helpful to the regions to secure funding from states and other sources if NOAA IOOS would require a funding match.

Operation and maintenance (O&M) was a common issue raised during the status assessments. Regions are looking for guidance on how to transition observing assets, regional models, and other products from research to operations, and they have questions about funding for O&M. Funding for High Frequency Radar (HFR) was raised repeatedly – in particular, regions are asking for sustained funding (a separate request for proposals or specifically-programmed funds) to sustain the network. Funding is also needed to extend the system where gaps currently exist. NOAA did not commit to this specifically, but reiterated the importance of maintaining a national HFR network and committed to looking for ways to achieve that.

2. Need for guidance and coordination.

All of the regions want more frequent communication and coordination with NOAA IOOS, including routine information, guidance on regional planning and related documentation developed collaboratively, and funding and legislation updates. Most RAs welcome measures already in place such as the IOOS website, Z-gram, and annual regional workshop.

The regions look to NOAA IOOS for better information on Federal agency (NOAA and non-NOAA) activities and plans for deploying observation assets and for data collection and management efforts in their regions. They also want NOAA IOOS assistance connecting with other parts of NOAA both locally and at headquarters, as well as with other Federal agencies, and with accessing NOAA and other Federal data to support their systems.

The regions have requested NOAA IOOS guidance on RA 'core functions' or requirements (e.g. How should they be contributing to the establishment of a national HFR network? Are they to support the National Water Quality Monitoring Network?) and clarity around NOAA priorities for IOOS in the regions. They want guidance on what planning documents are needed from the RAs, and their components.

Finally, the regions would like information on the process (and funding) for the transition of regionally-developed products from research to operational.

3. Need to understand how RAs are evaluated for funding.

RAs are looking for a guiding set of goals that everyone can understand and that can help them understand how they are evaluated for funding. NOAA IOOS is working to address this concern and also to meet Federal funding oversight requirements (e.g. NOAA Budget, Office of Management and Budget, Government Performance and Results Act).

Towards that end, NOAA IOOS asked RAs for a summary of overall progress on the existing support agreements, and requested RA views on function and performance metrics, and how best to measure RA outputs and outcomes. Few specifics were offered with regard to metrics, but regions reiterated the need to have a clearer sense of what NOAA wants and expects from them, whether in the form of performance metrics or tighter guidance. There was discussion with all RAs on the importance to NOAA IOOS of developing a set of performance metrics against which to measure the RAs and evaluate them for future funding, and NOAA IOOS' intention to solicit RA input on such metrics – this will be a major thrust at the third annual IOOS Regional Workshop in December 2008.

What is working?

Data Standards and the Data Integration Framework (DIF)
Regions are generally positive about the development of data management and communication (DMAC) standards and increasing regional input to the DIF. They asked that NOAA IOOS do a better job of keeping the RA directors informed on these efforts – even if they are perceived as "technical" – so they can ensure appropriate participation from their regions.

Cross-regional Coordination
Where cross-regional coordination is strong, it was viewed as beneficial and something that NOAA IOOS should encourage and support.

RA Governance and Structure
RAs presented information about governance and structure including RA leadership, organizational type (Table 1), board membership/meeting frequency, and user group representation. While these vary across all 11 entities, there was general agreement that all organizational types (501(c)(3), MOU, or MOA) were functional with regard to the ability to accept and move funds.

NOAA IOOS noted during these meetings that it is critical for the RA Boards to be composed of a mix of representatives from industry, academia, and Federal, State and local governments, and that the Boards represent the geographic distribution of the region. For the most part, RAs are following these guidelines.

Stakeholder Engagement
Stakeholder engagement is viewed as critical to understanding what users really want so that IOOS funding and product development can be focused on a useful end and value to users can be clearly demonstrated; some regions found needs assessment workshops helpful. All RAs identified key stakeholders and described the level of involvement, including types and frequency of engagement. While stakeholder needs vary from region to region, as well as sub-regionally, some commonalities include: education, fisheries (commercial and recreational), marine commerce and transportation, resource management, harmful algal blooms, water quality, search and rescue, and climate change. The general sense was that key points for RAs to consider with regard to regional

stakeholders are: 1) providing stakeholders opportunities for representation (e.g. on the RA board and governing bodies; 2) working with stakeholders to identify and prioritize key regional issues, and existing and needed regional observing assets; and 3) utilizing stakeholder input to guide development of products that meet the needs of Federal and state agencies.

IOOS requested feedback on ways to gather quantifiable, tangible expressions of support from stakeholders, such as specific examples that demonstrate the benefit of the RA to its region. Several RAs suggested NOAA IOOS refer to the letters of support that accompanied their funding proposals.

What is not working?

Funding

The issue of funding is the most glaring answer to the question "what is not working?" A summary of NOAA and other funding to the regions is provided in Table 2. Regions raised repeatedly their need for sustained funding at higher levels with a reasonable expectation of continuity. It is clear that lower than anticipated funding levels are problematic and lack of funding commitments make it difficult for regions to plan activities, meet stakeholder needs and expectations, and leverage partner funding. A few regions suggested that a NOAA IOOS requirement of matching funds would have helped them to secure additional funding.

Coordination and communication

While regions are complimentary of NOAA IOOS efforts to date such as the IOOS website, the Z-Gram, and the annual regional workshop, they are asking for still more coordination and communication from NOAA IOOS.

As mentioned previously, RAs asked that NOAA IOOS inform RA directors on DIF efforts with the regions to ensure appropriate regional participation.

Geographic scope

All regions clearly understand the need to focus broadly across the resources they represent – including the oceans, the coasts, and the Great Lakes, and spanning from the estuaries to the Continental shelf. However, there is some concern about how to coordinate sub-regional activities in support of regional and national efforts.

Several regions also raised the issue of geographic scope (the size of the region) and how that affects their ability to support needs across the region. Among the concerns: in some regions, for proposals to be representative of diverse stakeholder needs across a vast geographic range, funding would have to be spread so thin that meaningful products and services might not be achievable.

NOAA support and improved Federal coordination

Over the course of the status assessments, NFRA provided an analysis of RA interactions with Federal agencies at the local level

(http://doc.aoos.org/nfra/IWGOO%20Material%2027%20Mar%2008.pdf). Regional-to-local level interactions seem to be working well, but this interaction does not necessarily translate to funding and other support from Federal agencies at the headquarters level. In fact, in many cases it seems that headquarters staffs are unaware of the regional activities undertaken by their agencies in support of IOOS. It is widely agreed that stronger high-level interagency support will yield additional funding.

Several regions expressed concern about the perceived lack of integration of ocean observing efforts within NOAA and among other Federal agencies, and emphasized the need for NOAA IOOS support in strengthening high-level interagency relationships. [Note: One specific related question was how NOAA IOOS is working with National Sea Grant Office in the context of their stated objective of developing an outreach network for ocean observations.]

Some RAs questioned NOAA support for IOOS as a priority in their regions and noted that a statement of this support or some formal recognition of the RAs would be advantageous.

There was some discussion about the benefits to breaking down political/legal barriers so that other agencies can use IOOS products – specific examples include Oil Spill Response and Search and Rescue. Prototyping of products was mentioned as a good way to build relationships with other Federal, State and local agencies

Federal Board Participation

Several RAs mentioned that their inability to invite Federal participation in a voting capacity on the RA boards is problematic and that by allowing their participation we could strengthen interagency connections and support for IOOS, among other things. NOAA IOOS agreed to seek clarification on Federal participation on RA boards.

Conclusion

After conducting these regional status assessments, NOAA IOOS concluded that the IOOS regional enterprise is established and can be effective towards meeting the national missions with regard to integrated ocean and coastal observing. It was clear that all of the RAs view this as – and want this to be – a partnership. While it will be critical to continue the dialogue with our regional partners, the IOOS regional structure works and can provide value to the nation. We further conclude that the RAs, to the best of their ability, have met the intent of the IOOS Development Plan in setting up their governance structures.

The regional status assessments were successful in providing the information needed by NOAA IOOS to meet our stated objectives and for continuing the dialogue with the regions about organization of the national effort and how that matches with regional needs. While we do not anticipate conducting these assessments on an annual basis, feedback received from the RAs suggests the exchanges were useful for them as well. It

is therefore our intention to participate actively as RAs mature in annual or board meetings and at other venues in order to continue this dialogue.

We would like to acknowledge all of the RAs for the significant time and effort they dedicated to prepare the detailed briefings we requested. We would also like to thank Josie Quintrell from the National Federation of Regional Associations and the following NOAA Regional Collaboration Team participants: Laura Furgione (Alaska), Roger Zimmerman (Gulf of Mexico), Jeff Payne (Southeast), Eileen Shay (Pacific Islands), and Jonathan Phinney and Becky Smythe (Western).

Table 1: RA Governance and Business Plan (adapted from NFRA)

RA	Governance Structure
AOOS	MOA 2004 (revised in 2008)
CaRA	MOA 2007
CeNCOOS	MOA 2006
GCOOS	MOA 2005
GLOS	501(c)(3) 2006
MACOORA	501(c)(3) 2005
NANOOS	MOA 2004
NERACOOS	501(c)(3) 2008
PacIOOS	MOA
SCCOOS	MOA 2003
SECOORA	501(c)(3) 2007

Table 2: Regional Funding* – NOAA IOOS and Other Sources

*This table represents a snapshot in time and was prepared in an attempt to understand how the IOOS infrastructure is leveraging other resources in the community.. This does not suggest any kind of mandatory "matching funds" requirement.

Region	**NOAA IOOS Funding** **FY08 RA and RCOOS (approx. – does not include FA2&3)**	**Other sources, as reported**
NANOOS	$1.9M	$4M in other Federal funds (Navy, USGS, EPA, USACE), plus dollar for dollar match from Boeing on DMAC funding WA/OR State funded estuaries (dollar amt not given)
CeNCOOS	$1.4M	State of CA Coastal Ocean Current Monitoring Program (COCMP - $21M over 5 yrs.) SAIC matching DMAC funding
SCCOOS	$853K	COCMP ONR
AOOS	$1.4M	MMS, ARC, NSF (COSEE Alaska), Oil Spill Recovery Institute, North Pacific Research Board
PacIOOS	$2.1M	$750K - Annual from State of Hawaii to SOEST for ocean observing faculty $300K - 2008 Contribution from SOEST to the HiOOS program (not annual recurrence) $50K - Pending annual contractual funding from City and County of Honolulu Dept. of Env. Services
GCOOS	$750K	Specific FY08 dollars are not available, but GCOOS elements are funded by state agencies and academic institutions, local authorities, private companies and associations, and various federal agencies (EPA, USGS, USACOE, Navy, USCG, MMS, NSF, NOPP, NASA, as well as various non-NOAA-IOOS units such as NOS (e.g., PORTS, CO-OPS, CSC, NCCOS-CSCOR), NESDIS (e.g., NCDDC), NWS, NDBC, NMFS-SEFSC).
SECOORA	$2.0M	$4.0M: Navy, NSF, EPA, USACE, USMC, EPA, FL, SC

Region	NOAA IOOS Funding FY08 RA and RCOOS (approx. – does not include FA2&3)	Other sources, as reported
CaRA	$900K	UPRM (funds for CaRA-UPRM Alliance for Numerical Coastal Modeling, hosts CaRA offices, funds for office remodeling) UVI hosts CaRA-VI offices PR Seismic Network (sea level gauges & coastal meteo stations) UPRM-NOAA PR Coastal Hazards Center (tsunami inundation modeling) - no numbers given PR State government ($146K for delineation of high water lines under storm and hurricane conditions)
MACOORA	$2.1M	$23M; does not include new DHS Center of Excellence dollars which leverage IOOS ~$2-4M per year for 5 years
NERACOOS	$1.6M	Not specified
GLOS	$750K	Not specified