IOOS Regional Association Involvement in Regional Ocean Initiatives

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Overview

The Regional Ocean Partnerships (ROPs) have formed in all regions of the nation to advance effective coastal and ocean management through regional ocean governance. IOOS is involved in the ROPs 11 Regional Associations (RAs) for coastal and ocean observing. The RAs help organize, plan for, or build data tools to integrate and analyze ocean data for science-based decision-making by a range of users.

Two of the IOOS RAs (AOOS and SECOORA) have received funding through Regional Ocean Partnership Program (ROPP) grants administered by NOAA. Several other RAs are working on efforts in conjunction with their Regional Ocean Planning Bodies or other regional planning initiatives. The approaches vary due to the political context and stakeholder needs unique to each region. The following is a snapshot of the type of activities underway associated with the Regional Ocean Partnership.

AOOS: Alaska Ocean Observing System

Alaska does not have a regional ocean planning body, as the state government continues to be concerned about coastal and marine spatial planning and whether a new ocean governance or partnership structure is consistent with Alaska needs and current planning efforts. However, with State of Alaska support, AOOS has focused on developing new data tools to integrate and visualize spatial data that could be useful to a broad audience.

AOOS received $760K in 2011 ROPP funding in January 2012, and launched a project called STAMP – Spatial Tools for Arctic Mapping & Planning. The focus of this project is to create a set of web-based interactive mapping tools with multiple data types that could be used to help plan for future decision-making relating to potential commercial fisheries in the Arctic. Even though those decisions are likely to be years away, the tools will still have broader and more immediate applications and will set up a framework of data and information for future decision making.

STAMP's deliverables include: (1) An assessment of data and information products and tools needed for planning for future Arctic commercial fisheries; (2) Identification of synergies with existing planning efforts for data and tools; (3) Documentation of existing data products and tools used in Alaska, and an assessment of new products and tools and their potential applicability to Alaska; (4) incorporation of existing data layers into the AOOS Arctic Ocean Portal; and (5) a final assessment.

AOOS is the overall lead for STAMP working in partnership with The Nature Conservancy, the University of Alaska, and Axiom Consulting & Design (AOOS's subcontracted data management team who will be building the actual tools). The first meeting of the project advisory group was held in April 2012, and the project is currently conducting scoping activities including key informant interviews and a survey of user needs.

CaRA: Caribbean Regional Association for Coastal Ocean Observing

CaRA is driving a major effort towards enhancing the capacity to observe and understand coastal climate and hydrodynamics in the US Caribbean thus providing fundamental support for spatial planning in a region, which includes 2159 sq km of marine protected areas and has experienced intense coastal resource exploitation. Specific examples of formal participation include the recruitment of CaRA's expertise by the PR-DRNA Coastal Management Program for the construction of coastal inundation maps for the region with the

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NFRA is a non-profit organization that works on behalf of the IOOS and the 11 Regional Associations
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goal of revising coastal zoning regulations. CaRA provides decisional support to the Caribbean Fisheries Management Council. Also, CaRA is now at the table as part of NOAA's Southeast & Caribbean Regional Team (SEACART), an appropriate venue for addressing MSP needs.

West Coast RAs (CeNCOOS, SCCOOS, and NANOOS)

The two California RAs (CeNCOOS and SCCOOS) and their neighbor RA to the north, NANOOS, work collaboratively with the ROP for the West Coast, the West Coast Governors Alliance on Ocean Health (WCGA)The three RAs signed an MOU in fall of 2011 to formalize their commitment to work together on West Coast issues and in their interactions with the WCGA.

In 2011, the WCGA received $250,000 from NOPP which is being used largely to prioritize data and data product needs for the region. The RAs participated in a December 2011 WCGA workshop to refine their goals. Recently it was agreed to allocate most or nearly all the funding to a contractor who will carry out the work specified in a recently developed Work Plan. The work plan includes a strong emphasis on data catalogs, data products and building relationships.

The WCGA has established Action Coordination Teams (ACTs) that are focusing on themes such as ocean acidification, marine debris, pollution, and others. The NANOOS Executive Director and data team lead are part of the newly created Regional Data Framework ACT. The NANOOS data team lead is also the coordinator of the IT working group, while SCCOOS staff have been engaged in outreach and general coordination efforts.

The WCGA effort addresses the data needs of a wide range of partners, but with initial prioritization based on needs already highlighted in WCGA ACT reports, where state agencies have played a prominent role. One of the main challenges is to connect the various CMSP data efforts occurring on the west coast. Due to their large number of partners and their expertise in data coordination and interoperability, the RAs are playing a key role in this effort.

The West Coast RAs are in the process of finalizing an MOU with the WCGA focused on increased coordination in areas of mutual interest and the identification of new joint projects. Potential focus areas include harmful algal blooms and ocean acidification.

GCOOS: Gulf of Mexico Coastal Ocean Observing System

GCOOS is actively partnering with the Gulf of Mexico Alliance (GOMA). GCOOS members and staff work directly with the following five Priority Issue Teams of GOMA: Water Quality, Nutrient Reduction, Ecosystem Integration and Assessment, Environmental Education, and Coastal Community Resilience. Activities include (1) lead/co-lead/worker on specific tasks related to harmful algal blooms, (2) lead/co-lead/worker on specific tasks related to nutrient reduction, (3) lead/co-lead/worker on environmental education tasks (e.g., public information), (4) IT representation of the Water Quality PIT on the GOMA Data Management Advisory Committee, (5) co-sponsorship of workshops on harmful algal blooms and ecosystem modeling, (6) assistance on data management and visualization tools, (7) assistance in report preparation (including the Action Plan II), and (8) participation in monthly PIT planning teleconferences.

Contributions to Coastal and Marine Spatial Planning are two-fold. First, GCOOS is working with a number of key entities to build data systems that can be used in CMSP. In addition to GCOOS collaborations with GOMA, GCOOS is building collaborations with the Mexico-US Gulf of Mexico Large Marine Ecosystem (LME) Project and has participated in two LME workshops. GCOOS also is actively working with the NOAA Gulf of Mexico Regional Collaboration Team (GoMRCT) to support their efforts in ecosystem-based management, including planning for a Gulf of Mexico Integrated Ecosystem Assessment.

The second contribution to CMSP is the GCOOS work to integrate publicly-available ocean observations from all sources: private industry, local/state/federal governments, academia, and NGOs. These data are being made interoperable. They cover the U.S. Gulf of Mexico from the head of the tidal influence estuaries, bays,

and rivers to the boundaries of the Exclusive Economic Zone. The needs of GOMA and GoMRCT are taken into consideration in this effort, and the possible expansion of the area covered to the entire Gulf of Mexico is being discussed under the LME Project.

GLOS: Great Lakes Observing System

The Great Lakes has a tradition of regional management since the ratification of the Great Lakes Charter in 1985. Most recently, the Federal government awarded $475 million for Great Lakes Restoration, a portion of which will go to GLOS to provide observations and data management services. Several offshore wind projects are being proposed in the Great Lakes. The USACOE is the lead federal agency for permitting these projects since there are no federal waters in the Great Lakes.

MARACOOS: Mid-Atlantic Regional Association for Coastal Ocean Observing Systems

MACOORA is working with the Mid-Atlantic Regional Council on the Ocean (MARCO) and is building stronger relations with state agencies. Recently, MARACOOS and the National Water Quality Monitoring Network hosted a workshop on water quality that involved state and IOOS representatives along the east coast.

NERACOOS: Northeastern Regional Association of Coastal Ocean Observing Systems

NERACOOS has been working closely with a consortium of entities working on CMSP-related projects, and the development of a regional data product. NERACOOS signed a Memorandum of Understanding with the Northeast Regional Ocean Council (NROC) to formalize the relationship between the two organizations.

Most recently, a working group comprised of NERACOOS, the Northeast Regional Ocean Council, NOAA, ASA, and the Gulf of Maine Research Institute, and others have worked to created the 'Northeast Ocean Data Portal' which includes maps, tools, and a data catalog. The catalog queries both internal and external data, and can tap into the Marine Cadastre through web services. The northeast data portal is separate from NERACOOS because partners desired a neutral location, and it is currently being supported independently in the cloud. NERACOOS will host the portal as part of the future funded effort.

NERACOOS has been active at regional ocean planning meetings, focusing on providing specific products for ocean planning to users without reinventing or duplicating. The consortium has conducted in-person interviews with data specialists and managers to better understand their needs. NERACOOS will continue to work with the consortium, and upcoming goals include working with modelers to develop temporal information in addition to geospatial data.

NANOOS: Northwest Association of Networked Ocean Observing Systems

NANOOS is working with the West Coast Governor's Alliance. See "West Coast RAs" above.

PacIOOS: Pacific Islands Ocean Observing System

PacIOOS is working with the Hawaii Sub-regional Ocean Partnership (ORMP), the Pacific Islands Regional Ocean Partnership (PROP) and the Pacific Islands Regional Planning Body to advance the integration and display of marine and coastal data throughout the region. PacIOOS is actively engaged in the aggregation of data and development of a map viewer to display marine spatial data throughout the whole of the US insular Pacific. At present, over 10,000 distinct data layers related to ocean processes, fisheries, ocean mapping, political and physical boundaries, cable routes, harbors, obstructions, land use, and other key topics are integrated into a web-based decision-support tool in real-time.

Both the Pacific Islands Regional Ocean Partnership and the Regional Planning Body have identified PacIOOS as a primary regional source for integrated information to inform all regional spatial planning.

SCCOOS: Southern California Coastal Ocean Observing System

SCCOOS is working with the West Coast Governor's Alliance. See "West Coast RAs" above.

SECOORA: South East Coastal Ocean Observing Regional Association

SECOORA has been collaborating with the Governors' South Atlantic Alliance (GSAA), and was granted $352,000 in 2011 to build a regional Information Management System (IMS) to support coastal and ocean planning. The SECOORA team includes representatives from all four state natural resource and/or environmental agencies, TNC, Duke, University of SC, and GA Tech. This work is being extended with another $120,000 that will be awarded later in 2012. SECOORA worked with its four states to identify a common theme area of sediment management to demonstrate the functionality of a prototype IMS. The topical area of "sediment management" addresses management issues of beach replenishment and engineering, ports and navigation, and wind energy. Regional sediment data layers, biological data layers created from MARMAP and SEAMAP program data, as well as other habitat conservation related data layers are being developed.

A user needs assessment of state regulators and planners has been completed that defines their data needs, types of geospatial technologies they use now to support decision making, and what issues/problems they have with the data and technologies they are using. The assessment contained two elements: an online survey conducted in April 2012, and four state-specific webinars that (1) brought together state managers to explain their approaches to decision making, constraints, and how they would like to analyze data; and (2) allowed the technical team to demonstrate existing tools and portals available now. Survey results and recordings of the webinars are available upon request, and will soon be posted online.

As part of the initiative, the SECOORA team will also develop a white paper that reviews existing data portal and decision support tools, and possible uses and adaption of those portals/tools for the South Atlantic region, as well as recommends new decision support tools that could be built specifically for regional ocean planning in the SE.

Year 2 efforts will focus on transitioning the IMS from a prototype to operational portal, and implementation of an outreach strategy. The purpose of this outreach element is to assure intended users are aware of the portal's existence and capabilities, the data and tools that are available, and receive or have access to technical training to optimize use of project products.