

Gulf of Maine Ocean Data Partnership

Hosted by Gulf of Maine Ocean Observing System (GoMOOS)

2008 Work Plan

January 8, 2008

Member Organizations:

Bedford Institute of Oceanography
Centre for Marine Biodiversity
Coastal Ocean Observation and Analysis – UNH
Gulf of Maine Area Census of Marine Life
Gulf of Maine Council on the Marine Environment
Gulf of Maine Ocean Observing System
Gulf of Maine Research Institute
Huntsman Marine Science Centre
Maine Department of Marine Resources
Massachusetts Office of Coastal Zone Management
New Hampshire Department of Environmental Services
Northeast Consortium
NOAA – Coastal Services Center
NOAA – Northeast Fisheries Science Center
NOAA - Satellite & Information Service, National Environmental Satellite, Data, and Information Service
(NESDIS), National Oceanographic Data Center (NODC).
St. Andrews Biological Station
Stellwagen Bank National Marine Sanctuary
Tufts University School of Veterinary Medicine/SEANet
USGS – Woods Hole Science Center
US Fish and Wildlife Gulf of Maine Program
University of Connecticut National Underwater Research Program
University of Massachusetts Boston Center for the Study of Coastal Sensor Networks
Wells National Estuarine Research Reserve
Woods Hole Oceanographic Institution
EPA/ORD/NHEERL/Atlantic Ecology Division (Associate)

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Executive Summary

During 2008 the Gulf of Maine Ocean Data Partnership (GoMODP) will continue to work under the four topic areas identified in the previous three years: Authority, Discovery, Accessibility, and Interoperability. In addition, the Partnership will continue to make recommendations on its relationship to the developing Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS).

- Authority: Partners are asked to continue to ensure their authority for the data sets they will serve through the Partnership.
- Discovery: Partners are encouraged to continue registering their data sets in accordance with the technical guidance provided by the Partnership and to revise existing entries, where applicable, to have GetData links point directly to where the data can be accessed instead of the organization's web page. The Metadata Editorial Committee will review metadata entries and work with Partners to improve those entries where necessary.
- Accessibility: Partners are encouraged to implement the capability to serve their data sets using one of the recommended data sharing protocols.
- Interoperability: Interoperability will be a major focus in 2008 with interoperability efforts being coordinated under a GoMODP Interoperability Experiment (IE). The GoMODP IE will define data integration products that will motivate data interoperability efforts. These efforts will be focused on integrating data through the Ocean Biogeographic Information System (OBIS), the Open Geospatial Consortium (OGC) standards, and the EPA Exchange Network. This effort will be in concert with the EPA Exchange Network Grant approved in October 2007.
- Regional Association: Discussion sessions within the Partnership will continue to be held in 2008 to develop a consensus on the role of the Partnership within or in relationship to the Regional Association.
- Modeling: Chaired by Rich Signell, a new sub committee of the Technical Committee will focus on the discoverability, accessibility, and interoperability of models and model results.

Other Partnership Activities:

- Complete a Partnership guide for new and existing partners. This was a goal in the 2007 work plan but no progress was made due to other priorities. Since this would be an important tool for recruiting new members, it will remain a goal in 2008.
- Recruit new members with data relevant to coastal and ocean observing.
- Publish a Partnership Annual Update for 2008 activities via email and the website.
- Become a technical resource for other partners by completing a technical expertise survey: <http://gomodp.whoi.edu/bin/addname>. To query this resource, please use this link: <http://gomodp.whoi.edu/>.

Goals and Objectives

During 2008 the GoMODP will continue to make progress on the four major components of successful sharing of data identified in 2005 through 2007: Authority, Discovery, Accessibility, and Interoperability. In 2005 the major focus was on assisting the Partners with Authority and Discovery. In 2006 the focus shifted to Discovery and Accessibility. In 2007 the focus was on Accessibility and Interoperability, with an ongoing activity to monitor and improve past efforts under Discovery. In 2008, the focus will continue to center on Accessibility and Interoperability.

Authority

The Partners are responsible for ensuring they have the authority over any data they provide or serve as part of the Partnership, in accordance with the criteria for Authority described in the Technical Guidance Document.

Discovery

With the training provided by the 2005 metadata workshop and the demonstration project for registering data, the Partners are now expected to register their relevant data sets in one of the national data clearing houses, in accordance with the Technical Guidance Document. The Partners are encouraged to ensure their data sets are registered using appropriate metadata such that they can be migrated into the NASA Global Change Master Directory (GCMD). To get more partners on board, the GoMODP will create a quick start guide to help partners create a minimum GCMD record. Additionally, GoMODP will create an automated template process like OBIS Canada. DWS- Where will this be hosted?

The GoMODP Metadata Editorial Committee (MEC) will annually conduct a detailed review of at least 10 percent of the metadata entries on the GCMD/GoMODP portal. The MEC will use the results of these detailed reviews to advise and work with Partners in general on ways and means to improve their metadata entries. The MEC will work with the GCMD to quality control assignment of metadata records to partners/data centers and to assign new records.

Accessibility

The accessibility of data sets is a critical requirement for a successful Ocean Data Partnership and Integrated Ocean Observing System (IOOS). A number of technologies to enable that access are identified in the Technical Guidance Document and some of those are continuing to evolve. In preparation for making their data sets accessible, Partners should continue working towards standard vocabularies within their data sets. This involves utilizing existing lists or developing a crosswalk from an existing list to the Partner's proprietary list.

Partners who have the necessary technical expertise should implement one of the suggested access protocols for their data. As resources allow, the Partnership will assist Partners in setting up these capabilities for their data sets. Partners can also use the new technical expertise resource tool to find assistance from other partners: <http://gomodp.whoi.edu/>. Partners are encouraged to complete the survey for their staff willing to assist other partners in implementing various technologies related to the Partnership's goals. To add a technical resource, use this link: <http://gomodp.whoi.edu/bin/addname>.

The Technical Committee reviewed the accessibility of the datasets currently registered in

GCMD in 2007. It was determined that many of the datasets were not easily accessible or could not be found based on the web link provided in the GCMD entry. Partners are encouraged to revise their entries so a direct link is provided to the dataset (not to the main organization web page) and to correct any errant entries or metadata records.

A workshop on web services may be conducted in spring 2008 by the partnership. The format would be similar to the metadata workshop held in 2005.

Interoperability

The Partnership will incorporate the two demonstration projects initiated in 2006 into two additional projects.

Ongoing Projects:

Monitoring Locations Application: The goal of the Monitoring Locations application is to provide a web-based mapping tool showing the locations where environmental monitoring is being done and provide information on the responsible organizations and the parameters being monitored. This project was put on hold pending an IOOS Data Registry review since the goal was not to burden partners with multiple data streams. The first version of the registry was deemed not robust enough to handle the information partners needed and the project was further put on hold pending the outcome of the EPA Exchange Network Grant. The IOOS registry will be enhanced in 2008 and may be able to support the requirements of the monitoring locations project. The partnership will engage in the IOOS registry development that is occurring in December 2007. Based on the outcome and plans for IOOS registry expansion, the technical team will determine if the registry can be used for the GoMODP monitoring location inventory. This effort will be coordinated with the Exchange Network and GoMODP IE projects (see below).

New Projects:

Exchange Network Project: A proposal was submitted in November 2006 to the Environmental Protection Agency to support implementing the Exchange Network protocol for interoperability of data sets from a number of Partners in the region. The EPA approved the grant in October 2007. Under this grant, a node will be established at GoMOOS and node clients will be installed at participating partners. A data exchange schema will be developed and partners will share data via the node and node clients. The data will become accessible to all via a sophisticated web application. This exchange capability could be used to make the Monitoring Locations application, described above, dynamic.

GoMODP OGC/OBIS/Exchange Network Interoperability Experiment: This project will advance regional interoperability by demonstrating the ability to integrate data from these 3 different standards. The Partnership will adapt and leverage several other projects, some of which are already funded (e.g. Environmental Exchange Network) and many of which include GoMODP members, to demonstrate data interoperability in developing user-defined decision tools.

The Partnership will adapt capabilities that have been advanced and adopted by other relatively large communities of data providers. This work will directly inform the development of regional

protocols and standards for interoperability, as well as improve the ability of GoMODP members to understand and utilize them. The outcomes of the GoMODP IE include end-to-end integrated information products for a well-defined end user, best practices documents and cookbooks, and reference (sample) implementations of standard data sharing services.

Regional Association

The coastal IOOS ultimately will be supported and operated through local Regional Associations that will be members of a National Federation of Regional Associations. For the Gulf of Maine area the Regional Association is NERACOOS. The capabilities being developed by GoMODP are a fundamental component of the regional IOOS and, therefore, are critically important to the Regional Association. The propagation of consensus-based standards for data management and communication within the region is an area in which the Partnership can be particularly valuable to the new regional IOOS organization. The structure and governance of NERACOOS are still being designed, and the relationship of the Data Partnership to NERACOOS has not yet been determined. Based on discussions and vote at the 2007 annual meeting the Data Partnership desires to remain a separate entity under the general umbrella of NERACOOS and have a significant, well-defined role in advising NERACOOS on data management. NERACOOS will be formed as a nonprofit corporation in 2008. The Data Partnership is participating in the deliberations leading up to incorporation. The partnership will seek to develop a well-defined relationship with NERACOOS either through language in the bylaws or through memorandum of agreement.

Outreach to Potential New Partners

2008 will be a year of significant growth for the Partnership, while maintaining its focus on data providers from around the Gulf of Maine. The Partnership Executive Committee will be developed early in 2008 to encourage data providers in the region to become partners. Partners will then be asked to engage peer organizations to become Partners.

Modeling

Models and model results have similar challenges as data with respect to discoverability, accessibility, and interoperability. To that end, the GoMODP will support a new sub committee, chaired by Rich Signell with USGS, to address these issues in the modeling community, likely in much the same manner as the GoMODP has approached data issues over the past couple years, beginning with an inventory of models.

Other Partner Activities

As the Partnership continues to expand and evolve, it becomes increasingly important to have a guide available to provide to potential and new partners. This guide would help new partners come up to speed quickly on what the Partnership has done, its goals and projects, and where it anticipates going.

This guide will also aid in the Partnership's goal to recruit new members who have data relevant to coastal and ocean observing. An effort will be made in 2008 to bring in environmental agencies from all states and provinces in the Gulf of Maine region.

To keep all partners up to date on the latest Partnership happenings and to document what has occurred, a Partnership Annual Update for 2008 activities will be published and distributed via email and the website.

As mentioned previously in the Accessibility section, Partners are encouraged to complete the technical expertise resource tool for their staff willing to assist other partners in implementing various technologies related to the Partnership's goals: <http://gomodp.who.edu/bin/addname>. To find assistance from other partners, this link should be used: <http://gomodp.who.edu/>.