Meeting Notes -- 13 December 2005
Gulf of Maine Ocean Data Partnership Annual meeting
New Hampshire Dept of Environmental Services Office, Pease Tradeport, Portsmouth, NH

- Meeting began at 9AM with 38 people in attendance representing partners and interested parties.

- David Mountain, NOAA NMFS opened the meeting with introductions and the agenda for the day.

- Lou Van Guelpen, Huntsman Marine Science Centre presented the **data registration pilot project** completed earlier this year. Lou's presentation is available on our website. Summary:
    - GeoConnections metadata can be confusing, portal has issues but is a reasonable option
    - Peer and supervisory review of metadata needed
    - Each partner should register their own metadata, for best results. Partners will likely require guidance during metadata registration
    - Lou will continue to be a support person for the partnership, our discovery portal on the GCMD will be the primary location
    - Discussion ensued on the idea that partners connect personally with Lou to discuss relative level of completeness of metadata registration. Request that the website have some reports periodically updating the status of this item.
    - We have a list on the website of datasets from partners, we can use this as a check list for registration efforts. Melanie Meaux reports that more than half of these datasets are currently discoverable on the GCMD portal.
    - Sign-up sheet sent around (Stephen Hale, Shelly Bond, Nick Wolff, Marc Carullo, Tom Shyka, Bob Groman, David Mountain, Annette Schloss, Anne Ball, Ivar Babb, Just Moller request contact)
- Tom Shyka, GoMOOS presented a review of the **Metadata Workshop**, held in October with support from FGDC and NOAA CSC. Tom's presentation is available on our website. Summary:
    - Objectives were to develop a community among partners, create a common understanding, develop and register discovery metadata records.
    - Representatives nearly all partners, packed a lot of material into two day workshop
    - On Oct. 19th, there were 5 records from 5 organizations, Dec. 12th 114 records from at least 13 organizations. Some of this was due to the work of Melanie Meaux in updating existing records, however we find that partners are finding it significantly easier to register with GCMD.
    - Need to consider an editorial board to create a GoMODP stamp of approval.
- Deb Soule, NH DES presented the **technical guidance document** and the background work involved in forming it. Deb's presentation is available on our website. Summary:
    - Partnership survey developed and disseminated and then evaluated.
    - Goal was to recommend/provide criteria and guidance in key areas.
    - Working within the constraints of varying technical abilities, time availability.
    - We want stable datasets on information related to the Gulf of Maine
    - Information presented on how to determine data authority.
    - Issues around standard names, constructing/registering metadata, data transport and access, inter-operability.
    - Next steps include full metadata construction and registration, a list of partner data expertise and a pilot project.
- Evan Richert, Census of Marine Life presented the results of **outreach efforts**
    - Began the year as an organization of 18 organizations, now have 22 members
    - USFWS, GMRI, NURP, WHOI joined in 2005

    - Pace of growth will slow to ensure that we can keep pace with partner needs. Ask that partners contact Evan with names of organizations that should be contacted.
- Evan Richert presented the status of the **Northeast Regional Association** Effort.
    - National Ocean Observing System comprised of 11 regions covering the entire coastal US
    - Northeastern region includes Gulf of Maine, from international border to Rhode Island Sound, overlapping with the Mid-Atlantic Region.
    - Grant Funding now exists for three years of staff support for the GoMODP. Tom Shyka, Ellen Winchester and Sylvia Most will continue to support the partnership through GoMOOS, acting as host.
    - The steering committee for the RA should include two members of the data partnership. The committee will meet for 30 months and will provide recommendations on governance, operations and allocation of funds.
        - These representatives will represent the GoMODP, before they represent the interests of their individual organization
        - Need to have an interest in the operational end of the organization's development
- Melanie Meaux, Ocean Sciences Coordinator at NASA GCMD and Keynote speaker for today's meeting presented on the following topics. Melanie's detailed presentation is available on our website. Key headings:
    - GCMD GoMODP portal
    - Standards and Challenges
    - Lessons learned at the Marine Metadata Initiative technical workshop
- Philip Bogden, GoMOOS followed up Melanie's presentation with a discussion on the technical issues around interoperability. Philip's presentation is available on our website.
- Deb Soule presented the details of the EPA Exchange Network as a demonstration of interoperability on an inter-disciplinary level. Deb's presentation is available on our website.
- David Mountain began discussion of the 2006 work plan. This was continued after lunch as we worked on developing an interoperability agenda.
    - David Keeley mentioned two groups working gulf wide to serve data that could be enabled through this partnership
        - Nutrient data, collected as a cooperative effort
        - Indicators of eco-system health, indicators of ecosystem health partnership
- Charlie Spies, GoMOOS presented an overview of ACT, Alliance for Coastal Technologies and the sponsor of today's lunch. Charlie's presentation is available on our website.
- Breakout groups: Opportunities for Interoperability Demonstration projects (1 hr)
- David Mountain led a discussion on the 2006 workplan using the draft provided prior to the meeting.
    - Pilot project should demonstrate the benefit of standardizing metadata, keywords, etc.
    - Data use policy – to encourage the proper use and attribution of data
    - Stephen Hale to write a paragraph on IOOS DMAC project for incorporation in work-plan
    - Workplan was approved in its draft form, pending some amendments based on today's discussion.

- Report out from breakout groups
    - Group #1 (Deb Soule and Philip Bogden:

Group #1 split their time discussing two subject areas for possible pilot projects: fisheries management and water quality. We broke down the discussion into three areas: (1) issues that could be addressed by a "useful" product, (2) the individuals or groups who would be the ones that would define "useful" and (3) the data sets and associated providers that could contribute the ingredients to such a product. Since many of those users weren't actually in the room, we decided not to try to define the product in any detail. The suggestion was that a follow-on activity would involve the following steps:

1. Talk to some of the users to flesh out the concept of "usefulness" in more detail,
2. Look to the existing inventory of data sets and start investigating availability of new sources
3. Based on this information, design a product that is achievable in a short period of time.

Topic 1 – Fisheries Management

Issues that could be addressed:

- Fisheries abundance and distribution
- Understanding biodiversity
- Forage species
- Ecosystem-based management

Potential users/applications:

- NE Fisheries Management Council & NMFS
- Cross-boundary stock assessment group
- Corridor project (possible focus for the demo)
- Whale-watch operators and seabird watchers

Data sets and data providers:

- NAO Index
- Zooplankton distribution
- Forage Species
    - Sand lance (southern Gulf of Maine)
    - Herring distribution and variability (GMRI data)
- Nutrients
- In-shore trawl surveys (DMR)
- Nursery stock for coastal marshes
    - Mass Audubon…???
    - Tom Trott, Cobscook Bay

Topic 2 – Water Quality

Issues:

- TMDL
- Coastal Eutrophication
- Non-point source pollution

Users/applications

- Estuarine Research Reseves
- Water discharge licensers
- Water quality licensers
- National Pollution Discharge elimination S_ NPOES
- Gulf of Maine Council

Data sets/providers

- All state DEPs & CZMs
- TMDL (MA DEP)
- DO, Nutrients, Chl (GoMOOS)
- Zooplankton
- Tides & Currents
- Streamflow (USGS)

- Submerged Aquatic Vegitation (MA DEP, State CZMs)
- Metals & bacteria
- Toxic algal blooms
- SST
- Septic systems
- Habitat monitoring (GoM Council)

- Group #2 (Bob Branton and Linda Mercer):

Project 1:
Aggregate the various federal (NMFS, DFO) and state trawl survey databases (MA, ME/NH) with bottom mapping databases (USGS, ME Geol. Surv., etc.), depth, bottom temperature, etc. An application that provides interoperability with these data sets will be valuable for resource managers in the jurisdictions for use in managing closed areas, identifying Essential Fish Habitat, designating marine protected areas, etc. Other users include researchers, data managers, programmers, educators, fishing industry aquaculture, tourism, and conservation. This was identified as a "low hanging fruit" type of project as some of the initial work has already been started in the GoMOOS shrimp project and the Gulf of Maine Census of Marine Life Program.

Project 2:
Aggregate data on red tides, rainfall, wind, circulation, shellfish toxicity, volunteer phytoplankton monitoring, sea bird mortality. An interoperability project with these data would be useful to resource managers and researchers who are developing models to provide an early warning system. An additional project around pollution closures (shellfish water quality program monitoring, beach monitoring, bacteria, nutrients, rainfall, water temperature) might also be part of this project.

Other suggested projects included nutrients and Gulf of Maine Council indicators. The group thought that an outreach/educator component should be part of any pilot interoperability project that is selected for development. It would also be very useful to develop an "atlas" of large oceanographic and meteorological phenomena and human uses of the Gulf of Maine.

- Group #3 (David Mountain and Sylvia Most):

The third group identified a number of capabilities and data sets that could be used in interoperability projects. The two leading projects were

1) the ability to plot a set of locations on top of a satellite image. This was identified as useful to protected species (turtles, marine mammals) researchers and managers for determining oceanographic features (e.g., fronts) associated with by-catch incidents. It also would be useful to large pelagic researchers (e.g., the large pelagic program at UNH) and seabird researchers for similar reasons (associating bird and forage fish observations with oceanographic features). A difficulty in implementing this capability might be that the set of points (locations) to be plotted likely would not be 'accessible', but available only to the manager/researcher. Some mechanism of easily entering a set of points would need to be developed.

2) an educational outreach project done in collaboration with a group or organization focusing on marine education. A new COSEE has been funded in the Gulf of Maine region and that group could be approached about possible projects.

Another topic discussed was related to a project identified by one of the other groups. A modeling effort at UNH is generating estimates of freshwater flow and nutrient flux into the coastal and estuarine regions of the Gulf of Maine. This could be useful in any project involving nutrients and coastal production.

- Discussion ensued on the aggregation of these ideas.
  - Survey data overlay seemed to be a common theme and a possible capability
  - Focus to be on discovery vs. assessment capability

- Exec committee and tech committee will need to review this discussion/ideas and select
- Janet Campbell pointed out that the membership of this organization is primarily the data collectors, missing the perspective of the users – this is the role of the regional association.
- SEAGrant managers are responding to a RFP to identify marine research priorities. There is a role for the data partnership in this proposal effort. Jan 20th deadline, $250K grant. We are competing as a region against other regions.

- General discussion/wrap up at 3:10

Meeting Attendees

Name	Organization
Deb Soule	New Hampshire Dept of Environmental Services
Bob Groman	Woods Hole Oceanographic Institute
Philip Bogden	GoMOOS
Charlie Spies	GoMOOS
Marc Carullo	MA Coastal Zone Mgt
Jerry Black	Centre for Marine Biodiversity
Daniel Ricard	Future of Marine Animal Populations (FMAP) Dalhousie Unive.
Nicholas Wolff	USM Gulf of Maine Census of Marine Life
Bob Branton	Bedford Institute of Oceanography
Joan Palmer	NOAA Northeast Fisheries Science Center
Fran Lightsom	USGS Wood Hole Science Center
Marcia McNiff	USGS – National Biological Information Infrastructure
Stephen Hale	USEPA Atlantic Ecology Division
David Keeley	The Keeley Group
Gail Lampinen	UC Davis working with the Gulf of Maine Cencus
Lew Incze	Census of Marine Life
Evan Richert	Census of Marine Life
Melanie Meaux	NASA GCMD
Tom Shyka	GoMOOS
Ellen Winchester	GoMOOS
Anne Ball	NOAA Coastal Services Center
Janet Campbell	UNH Coastal Ocean Observation and Analysis
Ray Konisky	Wells National Estuarine Research Reserve
Linda Mercer	Maine Dept of Marine Resources
Bob Houston	USFWS Gulf of Maine Program
Ivar Babb	UCONN National Underwater Research Program
Aaron Lewis	USM
Chance Yohman	USM
Paul Currier	Gulf of Maine Council on the Marine Environment
Becky Harris	Tufts University School of Veterinary Medicine SEANET
Betsy Nicholson	NOAA Coastal Services Center
Ben Cowie-Haskell	NOAA Stellwagen Bank NMS
Just Moller	NOAA Stellwagen Bank NMS
John Annala	GMRI
Lou Van Guelpen	Huntsman Marine Science Center
Sylva Most	GoMOOS
David Mountain	NOAA Northeast Fisheries Science Center