

GULF OF MAINE MAPPING INITIATIVE
NEWSLETTER

July 2006

Dear Friends and Colleagues,

Here it is, folks: the first newsletter produced by the Gulf of Maine Mapping Initiative (GOMMI). Our goal is to keep you up to date on GOMMI's progress and to provide a forum for news on seafloor mapping in the Gulf of Maine region.

GOMMI: BRIEF BACKGROUND

The Gulf of Maine Mapping Initiative is a partnership of governmental and non-governmental organizations in the US and Canada whose goal is to map the entire Gulf of Maine basin. GOMMI's goals are to facilitate communication and collaboration within the mapping community, coordinate ongoing mapping efforts, build support for mapping projects in priority areas, and make maps and data widely available to users and stakeholders. GOMMI is a subcommittee of the [Gulf of Maine Council on the Marine Environment](#) (GOMC).

GOMMI NEWS

In December 2005, GOMMI hired its first contract employee, Sara Ellis, Ph.D., to help support the volunteer-based Steering Committee. Sara has degrees in marine biology from Dalhousie University in Halifax, Nova Scotia and Boston University Marine Program in Woods Hole, Massachusetts. She also has organizational experience, having served for 6 years as Executive Director of [The Lobster Conservancy](#). Sara has familiarity and good working relationships with many of the groups working on marine and coastal issues around the Gulf of Maine.

Planning Workshop and Two-Year Work Plan

In February 2006, GOMMI held a one-day planning workshop in Boston's North End. We brought together a small team of advisors to help identify and prioritize regional mapping needs and build the partnerships required to meet these needs. The workshop began with a presentation entitled "Ecosystem approaches to management: NOAA's new way of doing business" by Jack Dunnigan, NOAA's recently appointed Assistant Administrator for Oceans and Coastal Services. After a brief round-table about ongoing projects, the majority of the workshop focused on reviewing and refining GOMMI's draft 2006-2008 Work Plan. Many fresh ideas and partnerships surfaced at this synergetic meeting.

The five objectives in the Work Plan are to:

- 1) Coordinate mapping efforts in GoM
- 2) Broaden base of support for GOMMI
- 3) Complete pilot mapping projects on Cashes Ledge and Platts Bank
- 4) Map priority areas (Casco Bay, Northern Georges Bank), and
- 5) Encourage use of metadata and mapping standards

A complete summary of the Planning Workshop, including participants' ongoing projects and the revised Two-Year Work Plan, are posted on [GOMMI's website](#). In the time since the workshop we've made good progress towards achieving our objectives, as summarized briefly below.

Mapping coordination

To coordinate regional mapping efforts, GOMMI proposed to write and distribute an e-newsletter (you're looking at it!); explore the need for a clearinghouse for mapping data and/or grants (stay tuned); and maintain a map of multibeam surveys of the Gulf of Maine on GOMMI's web site. An interactive map showing known [multibeam coverage in the Gulf of Maine](#) was posted in February, thanks to Seth Ackerman (Mass CZM and USGS) and Peter Taylor (GOMC's web designer), as well as the groups who conducted the surveys. This coverage map is linked to websites of the survey groups, and indicates where more details on most of the surveys can be found. Seth will be updating the map periodically, so please [contact him](#) as new data become available, or if we have overlooked any projects.

Broadening our base of support

Our first step to broaden the base of support for GOMMI was to expand our Steering Committee. Andrew Beaver, Navigation Manager for NOAA's Office of Coast Survey and Jim Case, Digital Asset Manager for the [Center for Coastal and Ocean Mapping \(CCOM\) & the NOAA/UNH Joint Hydrographic Center \(JHC\)](#), joined the committee in February and have already provided invaluable help. Other plans to broaden our support involve public and legislative outreach. The [GOMMI website](#) continues to be a useful tool for outreach and education; it's being updated periodically, so be sure to "visit" us once in a while. GOMMI has been represented at several meetings this year including the [Maine Fishermen's Forum](#) (Rockland, ME, March 2-5), [Maine Coastal Waters Conference](#) (Rockport, ME, April 10), and the [GIS & Ocean Mapping in Support of Fisheries Research & Management](#). (Cambridge, MA; April 11).

Mapping Priorities

Cashes Ledge

GOMMI's top mapping priority is to complete the pilot mapping project that began in 2005 when CCOM-JHC and SAIC collected acoustic imagery on Cashes Ledge, Platts Bank, and elsewhere. CCOM-JHC has finished processing the data, and is producing maps of contoured topography and backscatter, good to 5-m resolution. In 2006 & 2007, GOMMI aims to collect the geological data required for groundtruthing, as well as biological data to produce maps of sediment types, benthic habitat, and other interpretive maps. Jonathan Grabowski, Ph.D. a benthic ecologist at [Gulf of Maine Research Institute](#), will be helping to gather groundtruthing data from Cashes Ledge in summer 2006. To study cod habitat, Jonathan will be exploring habitat on Cashes Ledge via video and fish trapping.

Casco Bay, ME

Through discussions at the Planning Workshop and GOMMI's 2004 User Needs Workshop, participants identified Casco Bay, Maine as coastal mapping priority and Northern Georges Bank as an offshore priority. With support from the [Casco Bay Estuary Project](#), [Maine Coastal Program](#), [Maine DMR](#) and the [Wells National Estuarine Research Reserve](#), GOMMI has submitted several grant proposals for groundtruthing in Casco Bay in summer 2007. Our plan is to work with fishermen to collect and analyze geological and biological data in a 39-mi² area that was surveyed with multibeam sonar in 2000 by SAIC for NOAA at a cost of \$600,000. To date we have been awarded \$15,000 by the [Davis Conservation Foundation](#), and our full proposal with the Northeast Consortium is currently pending.

Northern Georges Bank

Groundtruthing work on Northern Georges Bank will require a large, stable, well-equipped vessel, and NOAA's new 208-ft state-of-the-art fisheries survey vessel [Henry B. Bigelow](#) would be ideal. Tom Noji and Vincent Guida of the Northeast Fisheries Science Center in Sandy Hook, NJ are trying to line up the *Bigelow* for 1-2 months of dedicated habitat research cruises to Northern Georges Bank in FY 2008.

Metadata Standards

As for metadata and mapping standards, the general consensus at the Planning Workshop was that GOMMI's role should be to advocate their use for all Gulf of Maine mapping and share information about metadata standards, metadata creation techniques and tools, data sharing tools, and mapping standards. We will share information through the GOMMI web site, e-newsletters, and workshops. For starters, to get an overview of US federal standards for metadata, as well info on metadata tools, training, and publications, check out the website of the [Federal Geographic Data Committee](#).

REGIONAL MAPPING NEWS

Mapping in Massachusetts' coastal waters

Since 2003, the [U.S. Geological Survey](#) and [Massachusetts Office of Coastal Zone Management](#) (Mass CZM) have been working cooperatively to comprehensively map the seafloor in Massachusetts. In March 2006, these partners proudly debuted geologic maps for two areas off [Gloucester](#) and [Boston Harbor](#). The highly detailed and informative 2006 report "[High-resolution geological mapping of the inner continental shelf; Salem to Gloucester, Massachusetts](#)" including associated maps, figures, photos, and data can be viewed online. Their newest joint report "[Geological Interpretation of Bathymetric and Backscatter Imagery of the Sea Floor Off Eastern Cape Cod, Massachusetts](#)" can also be viewed online. DVDs of these reports are available through the [USGS Woods Hole Field Center](#).

Mapping in the Bay of Fundy

On June 15, [Natural Resources Canada](#) launched a three-year survey to map the Bay of Fundy seafloor, in partnership with the [Canadian Hydrographic Service](#) and several Canadian universities. The twin-hulled [Frederick G. Creed](#) will survey from the bay's approaches in the

southwest to the inner bay in the northeast. The resulting 1:50,000 scale maps will be released as part of the new NRCAN national marine map series and will include sheets of seafloor topography, backscatter strength, and surficial geology. In selected coastal regions around the bay, airborne topographic data and bathymetric survey data will be combined to provide a seamless digital elevation model across the intertidal zone. This new mapping is a national priority under the [Oceans Action Plan](#) announced in the 2005 Canadian federal budget.

Ph.D. student for Gulf of Maine mapping

A collaborative Ph.D. project between the University of Ulster, NOAA, and the Geological Survey of Canada, and GOMMI is due to start in October 2006. Chris McGonigle has recently been appointed to the Ph.D. studentship, entitled “Predictive mapping of benthic habitats using acoustic remote sensing techniques.” Chris graduated from the University of Ulster’s Marine Science degree program in June 2006 with a First Class Honours degree. His Ph.D. project will be based at the [Centre for Coastal and Marine Research](#) at the University of Ulster in Coleraine, Northern Ireland, with periods of research taking place in the USA and Canada. The project will utilize new and existing acoustic and groundtruth data sets from UK coastal waters and from the Gulf of Maine, and will focus on developing methods for mapping seabed habitats. The project will be jointly supervised by Dr. Craig Brown and Dr. Rory Quinn (University of Ulster), Dr. Tom Noji (NMFS), and Dr. Vladimir Kostylev (Geological Survey of Canada).

OUTREACH AND EDUCATION

Mass CZM’s benthic habitat mapping poster

Massachusetts CZM has recently published a poster intended to educate coastal managers, teachers, and others on seafloor mapping techniques and the variety of seafloor habitats within Massachusetts. The poster summarizes acoustic technologies and groundtruthing techniques that are employed to create high-resolution maps of seafloor topography and backscatter intensity. The poster also identifies a number of seafloor habitats distributed in the northern waters of Massachusetts. Colorful photographs of seafloor habitats and newly released maps of the seafloor along the North Shore of Massachusetts are described and demonstrate the heterogeneity of the underwater landscape in Massachusetts Bay. To obtain a copy of the poster contact [Tony Wilbur](#) at Mass CZM.

Seafloor mapping kiosk

NOAA is getting ready to celebrate! In 1807, President Thomas Jefferson commissioned the first survey of marine waters along America’s seaboard. This survey led to the formation of America’s oldest science agency, the Survey of the Coast. Over time this agency and others evolved into NOAA. Using the 200th anniversary of the Survey of the Coast as a cornerstone, NOAA plans to celebrate its rich history of science, service, and stewardship, and highlight the research, programs, and diversity of NOAA programs. Thanks to an internal NOAA 200th Celebration grant to the Northeast Fisheries Science Center, NEFSC will be working with GOMMI on a “Gulf of Maine Mapping Initiative Information Kiosk.” We will design, build, and install interpretive kiosks in an area of high public access near the coast highlighting the history, technology, and applications of seafloor mapping.

UPCOMING MEETINGS AND EVENTS

Benthic habitat mapping theme session at the Geological Society of America

Bartholomew Wilson from the Delaware Coastal Program and John Madsen of the University of Delaware will be co-hosting a session dedicated to the benthic mapping efforts at the [Geological Society of America \(GSA\) Annual 2006 Conference](#). Their hopes are that the session, entitled "Utilization of Benthic Mapping Data in Estuarine and Coastal Environments: An Integration of Pure and Applied Research," will help to expose the geologic community to the benefits of benthic mapping and allow scientists to share their experiences with benthic mapping. The conference runs from October 22-25 in Philadelphia, PA. Abstracts for oral or poster presentations are due by July 11 and can be submitted [online](#).

Benthic habitat mapping session at Bay of Fundy Science Workshop

The [Bay of Fundy Ecosystem Partnership](#) (BoFEP) and [The Huntsman Marine Science Centre](#) will be hosting the [7th Bay of Fundy Science Workshop](#) October 25-27 at the [Fairmont Algonquin Resort](#) in St. Andrews-by-the-Sea, New Brunswick. The workshop's theme "Challenges in Environmental Management in the Bay of Fundy-Gulf of Maine" encourages participants to reflect on changes to the environment, causes for the changes, and how to raise awareness in order to maintain sustainability. The inclusion of the Gulf of Maine is deliberate as the Bay of Fundy is a complex and interlinked component of this larger ecosystem, with both bodies of water facing similar environmental challenges. GOMMI will be hosting a session at the meeting, with emphasis on the biological aspects of benthic habitat mapping. The deadline for submitting abstracts has already passed, however it will still be possible to [register for this meeting and reserve accommodations](#) until Aug 4.

Ocean Technology Conference in Boston

Another meeting of potential interest to the mapping community is the [Oceans 2006 MTS/IEEE Conference](#) scheduled for 18-21 September 2006 in Boston. The technical program will emphasize what's new and innovative in the field of marine science and technology. Scientists from around the globe will present the results of their work on topics such as underwater acoustics, sonar signal processing, current measurements, seafloor mapping, deep ocean exploration and engineering, undersea vehicles, submarine cables and more. In addition, some 200 companies and organizations are expected to showcase their equipment and their services.

Website for Western Atlantic Ocean events

To see a frequently updated, comprehensive listing of regional, national and international conferences, seminars, courses and other events of relevance to coastal management, visit the website of the [Atlantic Coastal Zone Information Steering Committee](#).

GRANTS OF INTEREST

As part of GOMMI efforts to advance mapping in the region, we plan to post links on our website to grants that may be of interest to the Gulf of Maine seafloor mapping community. Examples of upcoming grant announcements are listed below.

Scallop habitat characterization RFP

NOAA Fisheries is accepting research proposals for the Scallop Research Set Aside Program, for the fishing year 2007 (March 1, 2007 – February 28, 2008). The program provides a mechanism to fund scallop research and compensate scalloper through the sale of scallops harvested under a special research quota. Portions of the total allowable catch (TAC) and days-at-sea (DAS) allowance are set aside annually by the New England Fishery Management Council in accordance with the provisions of the Atlantic Sea Scallop Fishery Management Plan. Scallopers can catch these “set-aside” scallops--and be compensated for their catch—as long as they are helping to support an approved research program. Proceeds from set-aside scallops are shared between harvesters and researchers at a pre-approved rate (e.g., 50-50 split, 75-25, etc.). For fishing year 2007, the estimated value of the set-aside scallops is nearly \$9.9 million, to be split between researchers and the scallopers who harvest the set-aside scallops. NOAA Fisheries and NEFMC will give priority to funding research proposals that address various topics, including (1) resource surveys of scallop access areas; (2) other surveys, including areas not surveyed by the annual NOAA Fisheries survey; (3) scallop biology research; (4) groundfish bycatch reduction; (5) habitat impact reduction; (6) habitat characterization research; (7) sea turtle interaction research; (8) distribution, size composition and density of sea scallops; (9) scallop area management research. Applications are due on August 11, 2006. Complete details are available [online](#). For further information contact [Deirdre Boelke](#) at NEFMC (978.465.0492), or [Ryan Silva](#) at NMFS (978.281.9326).

GeoConnections funding opportunities

Over the next few weeks, [GeoConnections](#) will be issuing four new Announcements of Opportunity (AO) - each one with a different objective and target audience in mind:

1. The first AO will solicit proposals from end-users (people who utilize location-based data and information to influence or effect decision making) and enablers (i.e., government agencies/programs, non-government organizations, academia or private-sector interests that play a coordinating or supporting role in a policy/business area) to develop Online Regional Atlases intended to increase the availability and use of distributed data content online.
2. The second AO will solicit proposals from data suppliers (i.e., those who provide location-based data and web services) interested in publishing information and services to the Canadian Geospatial Data Infrastructure (CGDI). The goal here is to increase the amount of location-based data available through a distributed network relating to GeoConnections' four priority areas: public health, public safety, environment and sustainable development, and matters of importance to Aboriginal peoples.
3. The third AO will solicit proposals from governments, academia, non-government organizations, and the private sector to develop Strategic and Business Plans for using the CGDI within organizations, and to define user requirements for online or standalone applications that leverage the CGDI.
4. The fourth AO will solicit proposals from end-users to develop online or standalone applications that leverage the CGDI and will enable decision-makers in the priority areas to access information in real time.

Full details regarding these opportunities will be posted to the GeoConnections [Opportunities page](#) as each one is launched. To receive notices of postings, [subscribe](#) to the GeoConnections stakeholder mailing list.

SO WHAT DID YOU THINK?

Now that you've had a chance to look this over this inaugural issue of the GOMMI newsletter, please feel free to [send us](#) feedback, or tell us about projects we could highlight next time around. If you can think of others who might like to receive this semi-annual newsletter, please [send us](#) their address. Equally importantly, if you decide you don't want to be included in this semi-annual mailing, just [let us know](#). We will be archiving newsletters on the [GOMMI website](#), so you'll always have a chance to stay informed.

Keep those maps and letters coming!

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