Great Lakes Testbed Factsheet

Background

The Great Lakes Testbed is an initiative of the Canadian and U.S. partners of the Group on Earth Observations (GEO).

At a US-Canada Group on Earth Observations (GEO) Workshop in 2008, representatives acknowledged that under the GEO goal of promoting interoperability there are many plans but few examples where different countries are collaborating to promote the convergence of observation networks, systems and sensors. While Canada and the US have many similarities in the way they collect and process data, significant differences still occur for some variables. A recommendation was made to establish trans-boundary sites with comprehensive integrated measurements to provide an assessment of the data products on each side of the border and their uses for water resources management. The Great Lakes region was chosen as one of the first testbeds for this initiative.

Progress to Date

The Testbed is in the process of developing a Project Plan document to help assess the current status of existing efforts and identify outstanding needs for data integration.

The Great Lakes Testbed held its first in-person meeting on December 10, 2009. As a first step, the Testbed was required to develop a Project Plan which will outline the scope of effort as well as the objectives and the goals for the project. In order to develop the scope of the Testbed, the group has decided to further investigate the potential for data activities in four focus areas in the Great Lakes Basin: 1) Ice cover, 2) Water levels, 3) Groundwater, and 4) Beaches. Background information is being compiled to assess the needs and feasibility of data integration for each focus area to facilitate data exchange using protocols established by the Global Earth Observation System of Systems (GEOSS).

Involvement and Action

We need continued participation from partners to ensure that GEOSS activities support existing efforts, not duplicate them.

The Great Lakes Testbed is seeking participation from interested parties who would like to help develop goals, objectives, and strategies for establishing bi-national, comprehensive and integrated measurements for the Great Lakes. Led by the U.S. Geological Survey and Environment Canada, this group already includes participation from the Great Lakes Observing System, the Coordinating Committee on Great Lakes Basic Hydraulic & Hydrologic Data, and other groups that are already addressing data integration in the region.

The Great Lakes Testbed is working to support the development of a geospatial portal for the seamless access to observational data. In conjunction with the Great Lakes Observing System (GLOS), a coordinated observing system in the Great Lakes Region, the Testbed will provide institutional mechanisms for ensuring the necessary level of coordination, strengthening and supplementing the numerous existing Great Lakes information integration efforts that will reinforce and support partners' contributions to GEOSS. Where possible, the Great Lakes Testbed will utilize, enhance, and expand existing efforts to coordinate the aggregation, integration, and communication of Great Lakes data to such a point that it can be included in the GLOS data discovery portal.

How is this different from GLOS?

Although the activities of the Testbed may appear to overlap with the mission and objectives of GLOS, these groups are complementary- not duplicative. These groups work together to help identify needs, develop strategies and coordinate resources for meeting those needs.

GLOS helps facilitate the Testbed as a forum for engaging Canadian and US Federal partners who might otherwise not be able to participate in GLOS initiatives as official members of the observing system.

Equally, the Testbed utilizes the operational capacity of GLOS and other relevant partners to help carry out the strategies that are developed by the partnership.

For more information on how you can participate in the Great Lakes Testbed contact:

Gail Faveri, Environment Canada: gail.faveri@ec.gc.ca 905-336-6007
Norm Grannemann, US Geological Survey: nggranne@usgs.gov 517-887-8936

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Partners

There are many partners participating in the meetings and activity planning underway for the Testbed. Below is brief outline of contributors including the individuals and respective institutions that serve as leads and facilitators for the Testbed and its teams or sub-groups. A complete list of active partners can be obtained by contacting Gail Faveri at gail.faveri@ec.gc.ca or 905-336-6007.

Government Agencies

Federal, state, provincial and local government agencies with an interest in data integration and access are all welcome to participate in the Testbed. Most government agencies serve as both contributors of relevant data to the GLOS data portal and consumers of integrated data, related services, and model/product outputs which will be made available to government and other researchers, resource managers and decision-makers. Some of the current Testbed government partners include:

Environment Canada (EC) Gail Faveri (Testbed Co-lead), Nancy Stadler-Salt
U.S. Geological Survey (USGS) Norm Grannemann (Testbed Co-lead), Nate Booth, Sheridan Haack
Fisheries and Oceans Canada (DFO) Dale Nicholson
National Ocean and Atmospheric Administration (NOAA) Dave Schwab
U.S. Army Corps of Engineers (USACE) Scott Theime
U.S. Environmental Protection Agency (EPA) Jami Montgomery

Non-Government Organizations

Non-government organizations (NGOs) will most likely be consumers of the project outputs and will help inform the information and delivery needs of some data user groups. In some cases, NGOs may be able to help implement strategies needed to facilitate information gathering, communications, and promotion. GLOS in particular, will provide the operations and infrastructure to implement the data portal and other identified products and data management services identified by the Testbed.

Great Lakes Observing System (GLOS) Jen Read, Kelli Paige (Testbed Facilitator)
As a Regional Association of IOOS, GLOS has the operational framework and resources in place to help implement the strategies identified by the Testbed. For this reason, the Testbed will support data management activities though GLOS, such as the GLOS Data Discovery Portal, as a means for contributing Great Lakes information to the GEOSS portal.

Great Lakes Commission (GLC) Christine Manninen, Stuart Eddy, Guan Wang
The Great Lakes Commission is contracted by GLOS to implement its data management services.

Other Partnerships and Related Coordinating Groups

Other similar partnerships dedicated to information integration may already be addressing Testbed priorities for a particular data set, management issue, or data management process. The Testbed looks to support and enhance these existing efforts by leveraging them with the combined activities of other partners.

International Joint Commission: The IJC assists the US and Canadian governments in finding solutions for issues related to their joint boundary waters.

Coordinating Committee on Great Lakes Basic Hydraulic & Hydrologic Data (Coordinating Committee): The Coordinating Committee serves in an advisory capacity to the agencies of the United States and Canada who are charged with the responsibility for collecting and compiling the Great Lakes hydraulic and hydrologic data. Several Testbed Partners are active participants in the Coordinating Committee and the Testbed intends to provide assistance to this group with any priority activities they identify as appropriate.

Open Geospatial Consortium (OGC): The OGC is an international consortium of more than 380 companies, government agencies, research organizations, and universities participating in a consensus process to develop publicly available geospatial standards. The efforts of the OGC are complimentary to the standards developed by IOOS and, by utilizing GLOS data management services and portal, the Testbed will ensure its efforts continue incorporate OGC outcomes, standards, and recommendations.

The National Environmental Information Exchange Network (Exchange Network): An initiative of the EPA, the Exchange Network led the development of the Water Quality Exchange (WQX) a new framework that makes it easier for States, Tribes, and others to submit and share water quality monitoring data over the Internet. Some Testbed partners, including staff from USGS, are currently engaged in this group and will look for opportunities to engage and coordinate with them.