

TO: David Ullrich, Chair; Patty Birkholz, Vice Chair; GLAB
FROM: David Allan, Kathryn Buckner, Jennifer Hill, Jim Ridgway, Joan Rose
CC: Cameron Davis, Senior Advisor to the Administrator; Rita Cestaric, Designated Federal Officer, Taylor Fiscus, EPA
RE: Information Systems to aid Adaptive Management by the GLRI
DATE: Oct 15, 2014

At the GLAB meeting of Aug 27, 2014, Chair Ullrich asked that an ad hoc sub-committee (Allan, Buckner, Hill, Ridgway, Rose) consider the need for information systems to aid in Adaptive Management (AM) of the GLRI. Additionally, we are asked to consider the Information Management & Delivery System (IMDS) model (<http://imds.greenlitestaging.com/>) presented at the Aug 27 meeting, as well as alternatives.

The sub-committee reviewed material on the IMDS, held conference calls on 9/15 and 10/08, and further communicated by email. Below we briefly summarize our thoughts and recommendations as to whether the IMDS would be a useful tool for incorporating Adaptive Management into the GLRI program. This memo is intended initially to stimulate further discussion by the full GLAB, and ultimately for the Interagency Task Force (IATF) to consider.

The GLRI has not yet released its detailed AM plan, and so it is impossible at this time to make specific statements about the possible relationship between the IMDS and AM as envisioned by the GLRI.

The IMDS is a promising information management and delivery system that has considerable potential to benefit the Great Lakes community. To the best of our knowledge, no serious alternatives exist, and the sub-committee feels it is important to encourage further development of the IMDS concept. A good deal of effort has gone into developing this system, and it seems to have the right pieces. It appears to have the flexibility needed to serve as a platform for a wide range of Great Lakes issues. Generally, we acknowledge the need something like the IMDS for a wide range of management agencies and activities. Simply serving as a data repository would be extremely valuable.

A series of questions were raised to guide the discussion moving forward. These and other issues will need to be addressed incrementally over time.

Questions and Concerns

1. It is important to determine what alternatives may exist, such as within the Great Lakes Accountability System (GLAS) or that might be initiated under the Great Lakes Water Quality Agreement (GLWQA) or by others. We are unsure of the original intent of the GLAS and whether it was intended solely as a project tracking system. If GLAS in its present form is not considered adequate, our sub-committee would like to better understand GLAS capabilities and perceived shortcomings.

2. Would all of the IATF support a single IMDS or alternative? Funding will be necessary for module development and data acquisition. If the 17 agencies of the IATF support the need for such a system, are they taking competing or supportive steps? If the IMDS is indeed the platform of choice, the IATF has a role in its development.
3. There are a number of issues related to the data required for the IMDS to be an effective AM tool, including what kinds of data are needed, who will provide the data, and how the data will be processed to inform management decisions. For example, will the IMDS capture only the metrics that quantify project outcomes, or will “raw” data and metadata behind project conclusions be captured? Will IMDS data be useful in the context of the various indicators that are being developed by SOLEC, the IJC and under the GLWQA? Will a single platform be adequate to address the wide range of problems in the Great Lakes, or will multiple platforms be needed? How will GLRI data be incorporated into the IMDS?
4. The content developers and content users of such a system are somewhat separate communities. Some process needs to be identified to assure that a collaborative working arrangement exists between developers and users.
5. Governance of the IMDS needs to be clarified early in the process. Staff to maintain the system should be identified. The technical oversight committee must have the expertise and experience to guide the scope and breadth of data input to any one GLRI/adaptive management module as well as the potential ecosystem management and funding decisions that are made based on the outputs of each module.

Action Item Recommendations

1. The developers/managers of the GLAS should be invited to a future GLAB meeting to explain their system, their goals in developing their system, any shortcomings they have noted, and what additional steps they are considering.
2. Further discussion with the IMDS developers should be arranged to inform the GLAB about: 1) how the IMDS identifies, accesses, and incorporates data; and 2) how the IMDS developers envision governing the modules and the system as a whole.
3. The Subcommittee suggests an application be developed that agencies within the IATF can use to evaluate their current activities. A pilot project or test case could demonstrate how the IMDS might be applied to a specific problem or problems that fall within the GLRI focus areas.
4. Before committing to IMDS or any other system, it would be useful to consult with information management specialists to provide advice on technical issues. The Midwest Regional Climate Center might be an example to consider.
5. Additional presentations on AM in large, complex systems (Puget Sound, Everglades) would provide the GLAB with other models to consider (note, however, that the IMDS developers indicated they have done this homework). Specific interest lies in large scale

aquatic restoration efforts that are utilizing a data management tool like IMDS. A system like this could provide insight into governance, data input and output, etc.

6. Governance of the IMDS (or similar) platform will be separate from governance of the AM. Governance of the AM will rely on the leadership of the participating IATF agencies. The IMDS must be able to supply the data/information to those agencies in a timely and credible manner to aid them in their management of their specific AM goals. This could involve reviewing how AM systems are governed in other regions (see #5 above). GLAB could identify key stakeholders needed for adequate governance on the IMDS, how and when stakeholders should become involved with the system, identify who will make decisions on what types/scope of data are entered into the system, how and when they are entered into the system, and how the outputs from the system will support AM decisions .

In closing, the sub-committee believes that some platform like the IMDS is urgently needed, in all likelihood it will be developed by interested parties outside the agencies, and the GLAB needs to start this ball rolling. Ultimately, and before very long, the IATF needs to be part of the discussion. The sub-committee believes that the next step is a robust discussion involving the full GLAB, and welcomes their suggestions and concerns.