



In-person Meeting

Notes

Attendees:

In-person: Chris Winslow, Carl Platz, Dale Hoff, Eric Boisvert, Jason Borwick, Michael Twiss, Ram Yerubandi, Sandra Eberts, Sergio Paulo, Val Klump

Virtual: Rebecca Rooney

Staff: Lizhu Wang, Victor Serveiss, Oliver Dumville, Mark Burrows (virtual), Rajendra Poudel (virtual)

Guest: Jesse Feyen

1. Welcome – Round table introductions, approval of agenda, and approval of last RCC meeting summary.
 - RCC members introduced themselves and welcome the guest from GLERL.
 - Draft agenda was approved with addition of a discussion on the process of follow-up on board reports.
 - Provided an update on RCC membership vacancies opened by the retirements of Kathy McKague and Gavin Christie.
 - February 2023 RCC Meeting Summary was approved.

2. Great Lakes Science Strategy
 - The Great Lakes Science Strategy report has been approved by the Commission and transmitted to the Parties.
 - The workgroup and IJC staff have developed a 2-pager and a list of frequent asked questions and answers.
 - RCC members commented that they like the graphic design and contents, which is a great effort. The 2-pager is designed to be used to socialize the effort about who, how, and why of the Science Strategy. The list of frequent asked questions and answers is a living document for internal use only and it will be updated periodically.
 - It was commented that the current government and academia programs have been focused on addressing the problems that have already occurred. Curing such problems is more costly in social and ecosystem aspects than preventing the happening of such problems. To prevent or avoid future problems, we now have the technology available. We are more capable technologically than ever, such as super calculating power, remote sensing technology, unmanned surveillance technology, genomic technology, and artificial intelligence. We need new investment to train people, update equipment, and apply technology and tools to understand the ecosystem to prevent and avoid future problems. This is what the Science Strategy is all about.

- It was suggested that in order to ask for new investment, it needs to recognize and confirm what the governments have already spent and to be clear this is the new fund needed for addressing emerging science priorities.
- Governments tend to shift funds around at different times to address new priorities. It has to be clear this is supplement but not replacement.
- It was also commented why we propose to establish Center of Excellent rather than Center of Expertise since it is a coordination body to make many to work together to bring expertise and governments to focus on efforts of common purpose.
- There will be a Town Hall session at the 2023 IAGLR on Tuesday May 9th; we also submitted a poster at this conference.
- Commissioners have approved the Phase-2 of the project to develop a Science Plan.
- Carl Platz and Jason Borwick are interested in serving on the workgroup.

3. Great Lakes Early Warning System

- This is the second phase of the project. The contractor and workgroup have completed a draft contractor report. The workgroup has decided not to develop a workgroup report, instead the workgroup will produce a cover memo with recommendations.
- It is expected that the contractor report with cover memo will be submitted to the Commissioners for approval in midsummer.
- The workgroup is also planning to develop a journal manuscript for the project and is currently working on an outline.
- There are many other early warning systems, such as weather, flood, HABs, water level change, etc. This project is to develop a framework on how to technically identify, analyze, and prioritize threats for taking action.
- It is a very complex and challenging process considering changing climate, applying western science and Traditional Ecological Knowledge, and effects of spatial and temporal components on known and unknown threats.
- The workgroup plans to carry out a phase-3 project to do a pilot test of the framework, which may involve community science, build it into science plan, and use machine learning to detect unknown threats.
- The Early Warning System identifies signs of threats, analyzes threats' turning point/threshold, and provides warning. Whether the responsible parties will take action will depend on how much risk they are willing to take, which may depend on the level of risk, benefit, and cost.

4. Governance of Nutrient Adaptive Management

- The workgroup and contractor have completed a final draft report that will be sent to the Great Lakes boards for a red flag review.
- The RCC members are asked to provide feedback and approve the report. RCC can send comments on the report within three-four weeks.
- It was commented that the report does not include nutrient and food web in the ecosystem context and may want to add a sentence or two to mention the unintended consequence of nutrient reduction on fisheries.

5. Great Lakes Community Science

- The workgroup and contractor have completed a final draft report for RCC to review and approval.
- The report makes the following recommendations:
 - In partnership with other organizations in the region, develop a high-level outline or scope for an accessible guidebook or handbook of community science best practices that is specific to the nearshore and open water areas of the Great Lakes, including best practices for establishing and operating individual community science programs and networks of such programs. Expanding the scope beyond water quality should be considered in the development of the handbook.
 - Outline a plan for IJC to serve as a facilitator of active transboundary community science information exchange and as a liaison among distributed programs and formal entities including LAMP committees and GLWQA Annex subcommittees. Develop a metric or indicator for the state of community science in the basin as part of the plan.
 - Identify a lead agency or agencies in Canada and the U.S. to play a more formal and larger role in the coordination of community science information, resource curation, training, and data management.
- It was commented that IJC reports have made too many recommendations to Annex 10, but Annex 10 has not got any additional funding. Without additional funds, many of the recommendations cannot be implemented.

6. Ongoing project - progress update

- Winter Science
 - The objectives of the project are to assess the status of winter science, existing research needs, infrastructure and personnel training required for winter science. These objectives and associated tasks will be achieved through two virtual and one in-person workshops, as well as literature review and synthesis.
 - The workgroup has completed literature review and information synthesis.
 - The workgroup will hold the first virtual workshop next week to identify winter science gaps, needs, and science priorities in order to meet the GLWQA.
 - The second virtual workshop will target agency people to identify, describe, and assess research coordination needs related to infrastructure, training, coordination amongst agencies to meet science priorities. The workgroup members are identified by workgroup Co-leads and they represent different expertise and diversities.
 - Carl Platz requested to be added to the workgroup.
- Microplastic Study
 - Project objectives are to (1) synthesize recent advances and knowledge in plastics science relevant to the Great Lakes through events that bring together researchers to share the latest information on plastics; (2) develop a framework

for monitoring plastic pollution in the Great Lakes that would support its use as a sub-indicator for the State of the Lakes reporting of the GLWQA; and (3) develop a risk assessment framework for plastic pollution in the Great Lakes focused on ecological effects.

- Workgroup and contractor have completed literature review and extracted data from many publications to be incorporated into an online database.
- There will be a microplastic special session at the 2023 IAGLR conference, which will be 1.5-day long plus a dozen of posters.
- Project has been collaborating with a group from California. Both projects contribute to the same database and develop a standardized monitoring protocol.
- Workgroup has also connected to an EPA funded Chesapeake Bay Program – Plastic Pollution Action Team through a contract with TetraTech to develop a microplastics monitoring framework. Kelly Somers is the EPA project contract lead. A Team Meeting has been scheduled for the two project leads to brief on each of the projects.
- It was asked if the project will get into the toxicological concern, such as plastic absorption and toxicant transferring. This project will not look at microplastic as a vehicle for transporting toxicants. However, the database will include such information, which will help interpret monitoring results on how plastic affect organisms.
- It was suggested that the workgroup may want to convince concerned parties regarding why we do this and explain its importance. Great Lakes ice coverage change, HABs, and microplastics are the three top topics that have been mentioned in many government programs.
- Questions on non-RCC Boards' projects
 - Eric Boisvert is working with an IJC's effort on Red River and Lake of the Wood; it may be relevant to Great Lakes projects.
 - It was suggested that RCC may want to ask the TEK project workgroup to provide a briefing on progress at the next RCC meeting.

7. New work plans for 2023 funding cycle

- Great Lakes Atlas (SAB and WQB project)
 - This is a scoping project for identifying many aspects of the project to be carried out, such as who the users are, what information should be included, delivering method, and how and who should maintain and update it, etc. Project has been approved by Commissioners on April 17.
 - GLRO Director has been in contact with GLEC Co-chairs to collaborate on this effort.
 - Jason Borwick (if ECCC does not drive the process) and Eric Boisvert are interested in joining project workgroup.
 - It was broadly discussed that the Atlas can be a database, which can be linked to Community Science data, Science Plan, and Early Warning System, and may require data standardization and metadata.

- Development a Great Lakes Science Plan
 - The work plan propose to organize six workshops to (1) develop a detailed and persuasive rationale for the need for additional investments, (2) validate priority science gaps/needs and design the operational architecture, (3) develop a detailed estimate of costs to advance identified science priorities, (4) identify approaches and mechanisms to interweave western science and Indigenous Knowledge perspectives, (5) evaluate and recommend preferred enabling mechanisms and governance arrangements, and (6) synthesize insights from each thematic discussion to prepare a final Science Plan report.
 - Project has been approved by Commissioners on April 24. Commissioners recommended emphasizing how science can be used to drive management and policy.
 - Jason Borwick is interested in serving on the workgroup.
- Community Science Phase-2
 - The work plan was approved by Commissioners on April 17th.
 - The project will develop a high-level outline or scope for an accessible Community Science Handbook that is specific to the tributaries, nearshore, and open water areas of the Great Lakes and outline a plan for IJC (and/or sister commission) to serve as a facilitator of active transboundary community science information exchange and service as a liaison between distributed programs and formal entities including LAMP committees and GLWQA Annex subcommittees.
 - Sergio Paulo is interested in serving on the workgroup; the USGS may also have people who are interested in serving on the workgroup.
 - For the current Community Science project, water quality is still the focus, but future work may include topics beyond water quality.

8. Input on TAP report

- Great progress has been made. The draft TAP report will be distributed to Great Lakes boards for review on May 1 with a deadline of May 18.
- Board secretaries will provide instruction on the reviews. Secretaries will assemble comments of each board into one document to be submitted to the TAP team for incorporation.

9. Prepare SAB meeting

- Went over the draft SAB meeting agenda. There were no specific comments on the agenda.

10. Prepare RCC board appearance

- Draft RCC board appearance slides were distributed in RCC meeting package.
- Val will make further modification on the slides of Science Plan.
- Since Rebecca will participate virtually, Sandy will present Microplastic Study project.
- Michael will present Winter Science and Great Lakes Early Warning System.

- Chris will present Community Science and the other slides.

11. Other business

- What is the proper approach for following up on board project reports.
 - At the time when a board project report gets approved by the Commissioners, the report either identified as a board report or a IJC report. Then, the report is submitted to the Parties (GLEC Co-chairs, corresponding Annex Co-chairs if related, U.S. Department of State, and Canadian Foreign Affairs) and makes it available to public on IJC website.
 - The GLRO office has initiated an effort to summarize what recommendations of IJC/board reports have been implemented. This does not include non-governments' implementations.
 - Since the IJC's effort does not include the recommendations implemented by non-government efforts, SAB members may report on recommendations implemented by others.
- Next RCC call in June – a Doodle Poll to follow.

12. Adjourn

- The meeting was adjourned at 12:00 pm
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