

Influencing water futures: summary of a roadmap for maximizing knowledge uptake in the final years of the Global Water Futures program

Knowledge mobilization -- the process of moving knowledge from formal research into active use -- is a goal and activity in the design of Global Water Futures (GWF). Unlike previous earlier, large formal water research networks in Canada, GWF explicitly aims to build awareness of the its work and its relevance with a broad range of stakeholders and potential users, and for its research to have a direct impact on water policy and practices around the world.


Awareness, access, legitimacy, credibility, trust, and understanding are needed for the successful uptake of new knowledge by people and organisations. One of the best ways to achieve this is for scientists and potential users to work together to co-create and share knowledge. GWF was designed to facilitate this and, as a result, there have been many instances of successful KM over the past five years. The relationships we have built are strong indicators of research uptake and impact that will continue long after the program completes its funded work.

Documenting how such interactions took place should be a major goal in GWF's KM work over the final months of the program: this will both provide evidence of research uptake and guidance for future large research networks. The process of collecting this evidence should also engage program participants in reflection and further action for knowledge exchange.

As we continue to encourage and document research relationships, moving into the GWF's final stages, KM seeks to supply answers to the following questions: What have we done – what relationships have we built, and what new knowledge has resulted? What did we learn? And, how does this strengthen Canada's water future? KM work will focus on *inventory* activities to answer the first, and *synthesis* activities to respond to the second and third of these questions.

Knowledge mobilization should be the driving force for GWF's Operations and Annual Science meetings over the next year, shifting the focus from research findings to meeting user needs through knowledge exchange and research application.

Much of proposed KM achievements discussed in this strategy depend on stimulating existing GWF staff, researchers and partners to do work. A significant challenge is motivating PIs and other project researchers to carry out what they may feel are additional tasks when their research goals have already been met, project funding is finished, and research colleagues are moving on to new assignments. The KM team needs to carefully consider what might be viewed as incentives for these researchers to continue to contribute to user awareness and engagement. Documenting recognition of individual and team KM contributions is important, but perhaps the most effective motivator is playing to scientists' built-in curiosity: enabling learning and creativity.

The following table provides a roadmap for KM activities that address Canada First Research Excellence Fund performance requirements for *Ability to Mobilize Knowledge for the Benefit of Society and the Economy*. The following symbol indicates the likely need for additional human resources beyond short-term outsourced services: 

Project Support	Research Legacy	Indigenous Engagement	Data Assets Preservation and Re-use	Using and Communicating Models	Program Management Learning
<p>Inventory Supporting projects on the last lap by providing services and support to 28 ongoing projects to see if there is opportunity for brokering more engagement; practical hands-on support to completing project-specific KM work</p> <p>Updating websites, reviving social media activity, and ensuring that partners and other stakeholders are contacted with updates such as science features can provide a platform for the further engagement with knowledge users that is the objective of knowledge mobilization </p>	<p>Synthesis Strengthening the science-policy interface through synthesis and broad sharing of program research results and learning in multiple formats</p> <p>A series of regional sectoral workshops that draw on user experience to guide development of a synthesis framework based on potential for uptake and impact, and identify policy windows and relevant actions</p>	<p>Synthesis Amplifying indigenous voices through co-creation of knowledge</p> <p>Drafting of a research protocol for water scientists working with indigenous communities, including program experience stories</p>	<p>Inventory Preserving, promoting, and pivoting on institutional memory: ensuring ongoing access and interoperability for useful network and scientific data and models</p> <p>Consolidating and documenting the members of the GWF network (alumni/relationships database) </p>	<p>Inventory and Synthesis Ensuing return on investment in modelling by supporting knowledge translation and uptake for both scientist and non-scientist model users</p> <p>Update of GWF's inventory of models and their status and intended uses and users</p>	<p>Synthesis Informing and improving future program work through capture of learning from program management and administration</p> <p>Facilitation of capture of management history at program level, including coping with the pandemic</p>
	<p>Training and facilitating students to create plain language summaries, Wikipedia entries, etc. Making relevance visible through capturing and sharing researcher-user interactions at Story Sprints workshops</p> <p>Development of a series of profiles of GWF Observatories for sharing in multiple formats</p> <p>Book of speculative fiction short stories</p> <p>Theatre piece based on researcher stories</p>	<p>Collection and publication of stories about water relationships</p>	<p>Inventory of repository locations of GWF publications and data</p> <p>Setting criteria for describing potential users and uses for data visualization tools</p> <p>Assembling feedback and analysis from user testing of visualization tools</p> <p>Evaluating visualizations to augment their accessibility and usefulness</p>	<p>Development of accessible lay summary descriptions of models and tools</p> <p>Development of strategy to further engage science users</p> <p>Development of strategy to further engage knowledge users: two minute explanatory video series</p>	