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CFREF WHITE PAPER - KNOWLEDGE MOBILIZATION (KM)

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Background

The Global Waters Future (GWF) Project promises an active, state-of-the-art program of knowledge mobilization (KM) in conjunction with its scientific objectives of predicting change in Cold Regions, developing Big Water data and support systems, and designing user solutions to focus on real world problems. Implicit in these objectives is robust engagement with end users. It is critical therefore to understand the pitfalls associated with past efforts at KM as well as commonly understood best practices in the field. These practices involve the way research questions are asked, when and how users are engaged, and the social processes that promote knowledge transfer and social learning.

What is knowledge mobilization?

KM refers to moving knowledge from formal research projects into active use. It involves the sharing of knowledge between research producers and users (policy professionals, decision makers, participants and communities), often through the help of third parties. Neither the scientific nor practitioner/user community owns the problem of making science usable for decision makers. Scientists sometimes lack incentives and interest. Resistance in the user community can stem from a lack of trust and perceived relevance. The presence of intermediaries or knowledge brokers helps to ensure that the right kind of scientific information is matched with the right user. SSHRC explicitly created a division of Knowledge Products and Mobilization to enhance and accelerate the movement of research findings into policy and program development. GWF has a three-person, cross-university KM team.

The Problem

Increasing attention has been focused on the knowledge transfer process, especially with respect to climate forecasting and modeling. The USA National Academy of Sciences in a report on the status of climate change science declared in 2007 that “inadequate progress has been made in synthesizing research results assessing impacts on human systems, or providing knowledge to support decision making and risk analysis” (National Research Council 2007, p. 34). Reasons include inflexible decision rules, informal arrangements that prefer established and tested practices over innovative prediction tools, organizational culture and reward structures, risk averse and vulnerable cultural contexts, lack of meaningful interaction between scientists and decision makers, hard to interpret presentation of scientific information, and user difficulty in

translating probability information into action. Potential remedies stress the importance of having users at the table when the research problem is framed and questions are asked and two-way, iterative engagement between producers and users to build trust and better understand the needs of policy making (Lemos and Dilling 2011). Pahl-Wostl and Borowski (2007) noted similar problems in implementing the requirement for participatory water management as required by the European Water Framework Directive. Despite claims of usability and problem solving by scientists and the European Commission, many of the tools designed for decision support did not meet user needs.

Salience, Credibility, and Legitimacy

In an early paper dealing with knowledge systems for sustainable development, Cash et al., (2003) proposed a framework for assessing the usefulness of scientific information for user communities. They argue that knowledge systems are most effective when they manage the boundary between knowledge and action in ways that enhance *credibility* (the scientific adequacy of technical arguments and evidence), *legitimacy* (perception that the evidence has been collected in a way that is respectful of stakeholders' divergent perspectives and beliefs), and *salience* (relevance to the needs of decision makers). This framework has been widely cited and used as a means of structuring the social processes that link science to decision making. The science and technology policy communities now talk about managing the boundary between science and policy through boundary science, boundary organizations, and boundary objects. The KM team will spearhead this boundary work in the GWF Project.

Best Practices

Your "team" is researchers and practitioners working together to co-produce knowledge. End users are known potential adopters or users of the information the team creates. End users have specific knowledge needs. To meet these needs, research projects must be designed by the team *for* and *with* the intended end user audience. To this end, determine how the end user community normally collects, evaluates and uses knowledge.

Plan for KM at the outset of your project by building it into the research design, paying particular attention to the kinds of research outputs that end users need and can use (e.g., format, language), and when the knowledge will be useful (e.g., during certain points in a planning cycle). As part of this process, build agreement in advance among your team on what constitutes useful evidence.

Determine how members of the end user communicate with each other, and then create opportunities for active, inclusive and iterative communication between your team members and end users using their preferred communication channels. Forums for sharing information during and after the research must be compatible with end user needs and characteristics.

Strengthen mutual understanding within your team through limiting the use of jargon, translating technical terms, and building a shared vocabulary. “Boundary objects” such as jointly-created conceptual frameworks and models can be an effective tool.

Where necessary, use intermediaries to help overcome differences in understanding and perspectives among your team members, and to mediate the boundary between research and practice. In an interdisciplinary team, these differences may not simply be between researchers and practitioners; they may also exist within the researchers and practitioners.

Ensure dual accountability for KM within your team. Ideas and information must flow in all directions within your team. Lines of accountability must be clear – between researchers and practitioners within your team, and between your team and any intermediaries who are supporting KM. Finally, take advantage of, and foster, communities of practice beyond your specific project team.

References and Resources

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