NWT Water Strategy
Research Priorities

Summary of Survey Results and 2017 NWT Water Strategy Implementation Workshop Discussion

Government of
Northwest Territories

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Introduction

Collaborative efforts by water partners, representing Indigenous leadership, communities, governments, regulatory boards, environmental non-government organizations and industry, resulted in the *Northern Voices, Northern Waters: The NWT Water Stewardship Strategy* (Water Strategy), released in 2010. The *NWT Water Stewardship Strategy: A Plan for Action 2016-2020* (the Action Plan) is the current plan for how to implement the vision and goals of the Water Strategy.

During development of the Action Plan, water partners identified the need to communicate specific Water Strategy research questions to researchers. The intent was to better align water-related research taking place in the NWT with water partners' research needs. See Key to Success 2.1 H: *Identify research priorities to strengthen and inform the goals of the Water Strategy.*

Through a survey and workshop discussions, water partners identified factors that make it difficult to select and prioritize specific Water Strategy research topics.

Instead, they identified broad research topics and recommended supporting collaborative research approaches and existing NWT research protocols. Using this approach, researchers could start with the identified broad research topics and then determine specific priorities in collaboration with communities and water partners.

How did water partners provide input on Water Strategy research topics?

Survey

In September 2017, Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT), with guidance from the Water Strategy Aboriginal Steering Committee (ASC), circulated an online research priorities survey to water partners. The survey asked water partners about research topics, gaps and types of knowledge that are priorities for their work related to the Water Strategy and communities.

In total, 24 water partners completed the online Water Strategy research priorities survey. Indigenous regional governments and community governments represented the largest proportion of respondents (37%), followed by academic representatives (17%), GNWT staff (12%), non-government organizations (8%), and regulatory boards (8%).

Workshop

The survey results were shared and discussed at the annual NWT Water Stewardship Strategy Implementation Workshop on November 22-23, 2017. Water partners worked in three break-out groups, each with one facilitator and approximately 12 participants.

Key objectives of the break-out group activity were to identify broad research topics and work towards some consensus on refining specific Water Strategy research topics. Discussion questions included:

- Are there any water-related research topics important to the Water Strategy that are not captured in the survey results?
- Are there any water-related research topics that emerged from the survey that are out of place?
- Are there specific research topics or questions that should be prioritized for the priority topics?
- What types of knowledge or information would need to be gathered to address these questions?
- Can the group prioritize the specific research topics or questions?

At the workshop, water partners came to consensus on the importance of broad Water Strategy research topics, but not on specific research topics.

What challenges were identified?

Water partners identified a number of factors that make it challenging to select specific Water Strategy research topics, including:

- Proposed research priorities are interconnected.
- The concept of prioritizing is too simplistic to reflect the reality of water research needs in the NWT, including cumulative effects.
- Separating research topics is not reflective of holistic Indigenous worldviews.
- Priorities need to be identified locally to be meaningful and relevant to communities.
- Research priorities will likely change over time as new information becomes available and as perceived risks and concerns change.

What was recommended?

Rather than identifying specific Water Strategy research topics, water partners recommended supporting collaborative research processes and existing NWT research protocols. This approach would enable researchers to start with the identified broad research topics and subsequently determine specific priorities in collaboration with communities and water partners. Water partners identified examples of key principles and approaches that should be followed when applying this approach. Examples include:

- Specific research priorities should be derived from a bottom-up, locally driven approach.
- Use of local languages makes research more meaningful to local people.
- Traditional knowledge holders are an important first step in helping to identify meaningful research topics. Research questions should first be informed by regional or community traditional knowledge and then by western science. The seed of the project needs to stem from the knowledge of the people.
- Improved communication pathways are needed between communities and researchers.
- Multiple knowledge systems and ways of knowing need to be brought together to better understand local research priorities.
- Greater collaboration and coordination and improved communication are needed among research projects and with communities to better understand specific research gaps.
- Researchers should be engaging with local communities before, during and after research is undertaken.

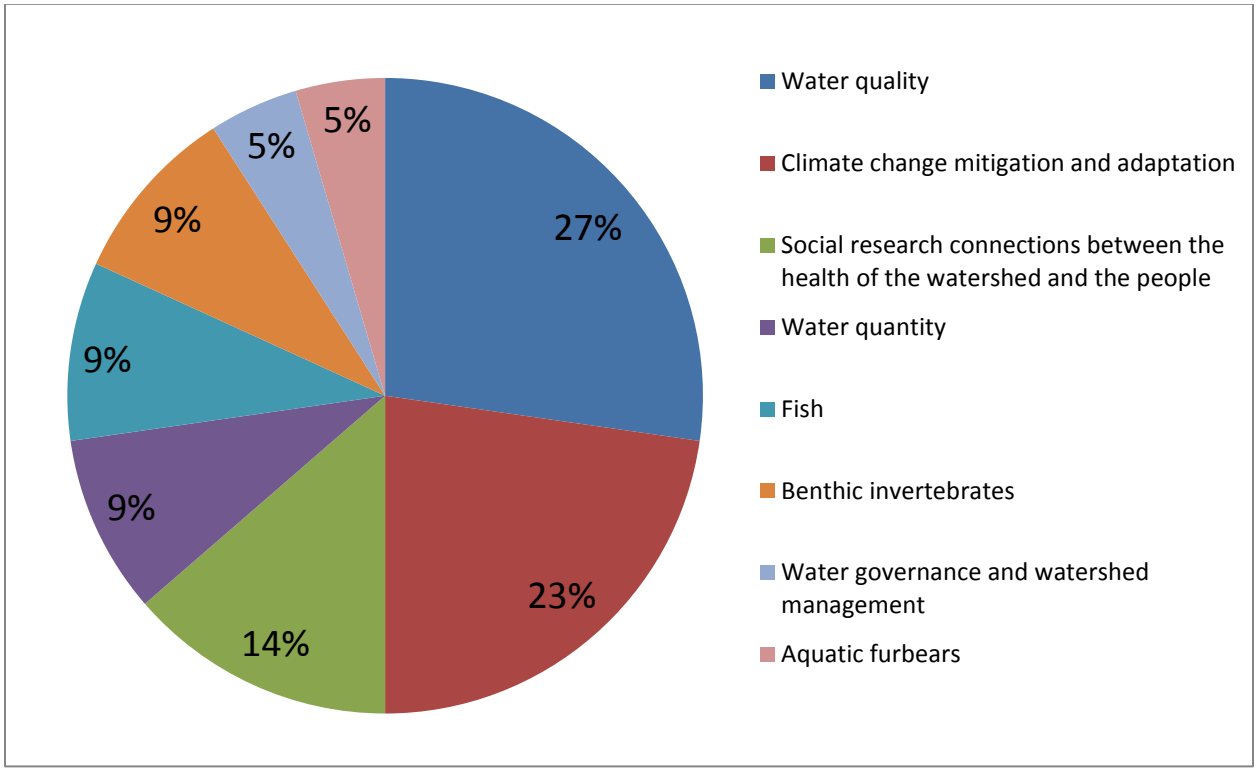
How did water partners determine broad research topics?

The survey asked water partners to identify and rank **broad water-related research topics** according to the importance of the topic for their work with the Water Strategy and community. Some research topics were suggested based on prior discussions with water partners during the development of the Action Plan and previous Water Strategy implementation workshops. Workshop summary reports are available on the Resources Page of the water stewardship website (http://www.nwtwaterstewardship.ca/publications).

What are the broad research topics?

Figure 1 presents the research topics that water partners identified as the most important for their Water Strategy work and communities. The greatest proportion of respondents indicated that water quality (27%) and climate change (23%) were the most important, followed by social research connections between the health of the water and the people (14%). Aquatic birds, vegetation and plants, and ice and snow were not ranked among the most important research topics.

Figure 1: Top Ranked Research Topics



During further discussions at the workshop, water partners indicated that all of the broad research topics are important and interrelated, and thus cannot be treated as separate. One group compared the linkages to a lattice or a dream catcher where all of the research topics are interlinked and thus require a holistic perspective to see the bigger picture. For example, water quality and climate change may appear to be the most important research topics, but they cannot be separated as they are inherently linked to one another and other research topics.

What are the specific research areas and questions for each topic?

The survey also asked water partners to identify **specific research areas and questions** under each of the identified broad research topics. *Figure 2* provides examples of specific research questions and topics that water partners provided.

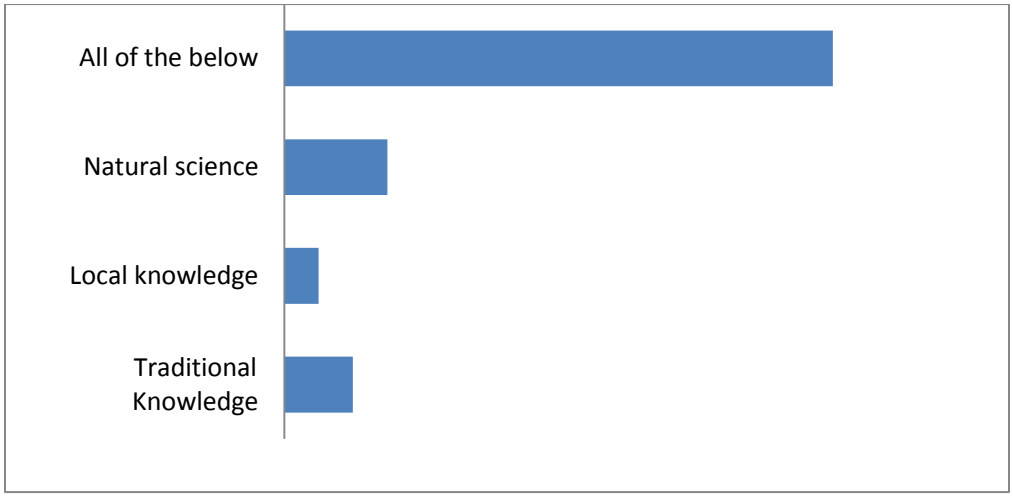
Figure 2: Specific Research Areas and Questions

Water Quality	Climate Change and Water	Social Research Connections
• What does the water quality tell us about threats to fish and other aquatic species? • How are current and legacy industrial activities impacting water quality? • What are the water quality impacts and implications of methyl-mercury contamination? • What are the water quality impacts of municipal waste facilities on receiving water bodies? • Summary of “normal” NWT ranges for specific water quality parameters.	• How will climate change affect certain ecosystems/regions' hydrological cycles? • What are the impacts of increased forest fires on water and, subsequently, fish populations? • How will climate change affect ice quality and permafrost and what are the implications? • Increased traditional knowledge observations of environmental change.	• What are the implications of water quality and quantity research for people and communities? • What are the barriers in the NWT to drinking tap water? • Research that considers social perceptions of drinking water and approaches to Indigenous-led water governance.

What types of information are needed to address the research topics?

The survey asked water partners to consider the **types of information** required to address the research questions and topics they identified. While in a limited number of cases water partners selected only one of natural science, local knowledge or traditional knowledge, in most cases, all three types of knowledge were deemed required (see *Figure 3*). Water partners emphasized the need for researchers to consider how information is communicated to community members after it is collected and interpreted.

Figure 3: Types of Knowledge and Information



How involved are water partners in water-related research?

The survey then proposed a question to gauge **how involved** water partners are in water-related research in the NWT. Most water partners indicated they have some degree of involvement in water-related research projects. Overall, most respondents indicated they are leading a project (8), are a partner on a project (6), or support a project (8). The remaining respondents indicated that they are consulted on research projects (1), or they rely on research projects to inform decision making (1).

Are water partners interested in being more involved?

The survey asked water partners if they are interested in being **more involved** in water-related research in the NWT. In total, 75% of respondents indicated that they would be willing to collaborate with or support a researcher undertaking water-related research.

Water partners encouraged researchers to consult existing guidance research documents prepared by NWT Indigenous organizations and governments. The guidance documents identify key principles and processes for undertaking research in their respective regions. Examples include:

- Gwich'in Renewable Resources Board – Priorities for 2013-2018 and Research Interests[1]
- Gwich'in Social and Cultural Institute – Conducting Traditional Knowledge Research in the Gwich'in Settlement Area, A Guide for Researchers[2]
- Inuvialuit Regional Corporation – Guidelines for Research in the Inuvialuit Settlement Region[3]
- Northwest Territory Métis Nation – Research in the South Slave of the NWT[4]
- Sambaa K'e Dene Band – Policy Regarding the Gathering, Use and Distribution of Traditional Knowledge[5]
- Cumulative Impact Monitoring Program (NWT CIMP) Monitoring and Research Priorities [6]
- Knowledge Agenda: Northern Research for Northern Priorities[7]

[1] http://nwtresearch.com/sites/default/files/grrb_rps2013-2018_approved.pdf
[2] http://nwtresearch.com/sites/default/files/gwich-in-social-and-cultural-institute_0.pdf
[3] http://nwtresearch.com/sites/default/files/inuvialuit-regional-corporation.pdf
[4] http://nwtresearch.com/sites/default/files/inuvialuit-regional-corporation.pdf
[5] http://nwtresearch.com/sites/default/files/sambaa-k-e-dene-band.pdf
[6] http://www.enr.gov.nt.ca/en/services/cumulative-impact-monitoring-program-nwt-cimp/priorities
[7] http://www.assembly.gov.nt.ca/sites/default/files/td_406-182.pdf

For more information about the NWT Water Stewardship Strategy, please visit www.nwtwaterstewardship.ca.

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