NWT CIMP Fish Monitoring and Research Blueprint

NWT CIMP currently focuses on three valued components (VCs): caribou, water and fish. Please see the other Blueprints if your project has the potential to overlap with another VC. For more information on our funding process, visit our website.

Background

What is the Fish Monitoring and Research Blueprint and how is it to be used?

The Fish Blueprint informs NWT CIMP funding applicants of fish-related cumulative impact monitoring and research priorities identified by key northern decision-makers and subject-matter experts. It describes information that is necessary to better understand cumulative impacts to fish and the relationships between people and fish.

The Blueprint guides NWT CIMP funding application decision making. For science projects to be considered for funding, project submissions *must* demonstrate that they meet Blueprint priorities.

Who informs the Blueprint?

Monitoring and research priorities have been updated for the next five-year period (2026-2030) based on engagement with subject-matter experts, Indigenous Governments and Indigenous Organizations, co-management boards, and environmental regulators, survey and workshop feedback, and guidance from the NWT CIMP Steering Committee.

NWT CIMP's Key Principles

NWT CIMP's principles guide us in program delivery. Funding applicants should be aware of these principles and, where possible, align their proposals with them. Important principles for applicants to consider are:

- Monitoring cumulative impacts that are **relevant to northern resource management decisions**.
- Traditional Knowledge and scientific knowledge are equally important sources of monitoring information.
- Community-based monitoring and capacity-building are supported in monitoring cumulative impacts.
- Use of common and standardized data collection and analysis protocols should be used when appropriate to support data sharing and identification and analysis of cumulative impacts across the landscape.

NWT CIMP places a high priority on cumulative impact monitoring and research that uses Traditional Knowledge. The goal is to apply what we learn from Traditional Knowledge to inform northern decision-making. For additional information, refer to *Traditional Knowledge Monitoring Ideas.*

The Fish Monitoring and Research Blueprint

To be considered for funding, the project proposal *must* **clearly** address one or more priority questions:

Human activities impacting fish, fish health and human consumption

a. Which fish species are most affected by changes in tissue softness and taste? What are the drivers of change to fish tissue and taste, and how are these expected to change under current climate change projections? How do changes in tissue softness and taste vary across regions?

b. What are the drivers of parasites becoming more common in some areas? What are the conditions leading to the increase in range of parasites or diseases, and how can their spread be predicted?

c. What are the drivers of contaminant levels in fish? How are the drivers of bioaccumulation changing in response to climate change?

d. What changes to best practices and methods are needed to better address cumulative impacts to fish health?

Drivers of fish population dynamics

a. How do interactions between fishing pressure and other stressors (e.g. climate change, development) impact fish populations?

b. How can multiple stressors be modeled to predict impacts and the risk of collapse for priority fish populations (e.g., walleye, lake trout, inconnu, whitefish, Dolly Varden)?

c. How are interactions between warming waters and changing species ranges impacting priority fish populations?

d. What changes to best practices and methods are needed to better address cumulative impacts to fish populations?

Cumulative impacts to fish habitat, migration and species distributions

a. How does increased debris, ash and nutrients impact fish habitat and migration?

b. How are changes in precipitation (snow fall and rain) influencing fish habitat?

c. How does the duration and timing of freeze-up and break-up affect forage and forage habitat?

d. How does extreme drought and flooding, water temperature and changes to water quality (e.g., nutrients, turbidity) impact fish migration and spawning?

e. How do warming temperatures impact migration and spawning and fish populations in the future (e.g. Inconnu populations in the Buffalo River)?

f. What mitigation measures help best with bank stabilization and associated impacts to fish and fish habitat?

g. What changes to best practices and methods are needed to better address cumulative impacts to fish habitat?