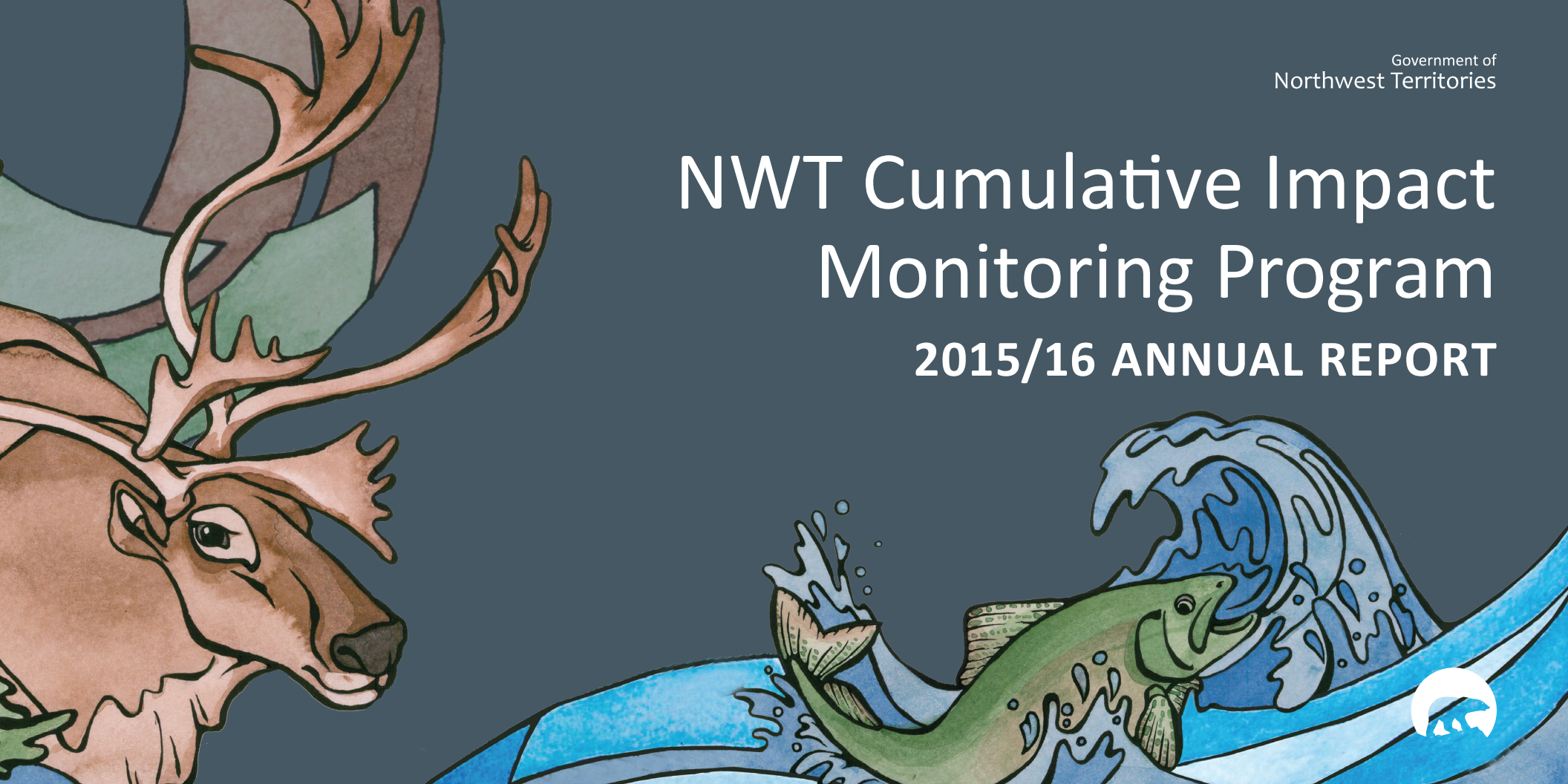
Government of
Northwest Territories

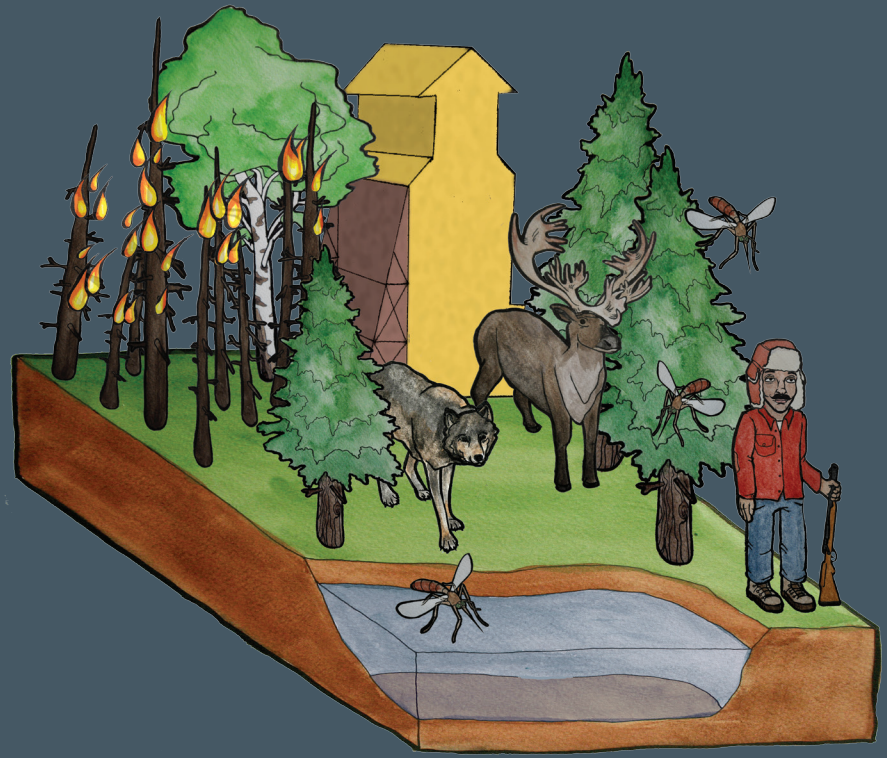
NWT Cumulative Impact Monitoring Program

2015/16 ANNUAL REPORT



Cumulative impacts

Cumulative impacts are changes in the environment caused by multiple interactions among human activities and natural processes that accumulate across space and time.



PROGRAM AT A GLANCE

The Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) is a Government of the Northwest Territories environmental monitoring program. Many organizations monitor the NWT environment; NWT CIMP is specifically focused on understanding cumulative impacts and environmental trends.

Since 2011, the program has focused on three valued components that decision-makers agree are of critical importance to the people of the NWT: caribou, water and fish.

The goal of the program is to provide information to NWT regulators and the public that contributes to wise resource management decisions.

2015/16 HIGHLIGHTS

In 2015/16, NWT CIMP worked with its partners to review cumulative impact monitoring priorities. The program created new knowledge about caribou, water and fish by supporting 29 projects with $1.8M of funding. As well, an online Inventory of Landscape Change Webviewer was launched to share human and natural disturbance information with NWT regulators and the public.

Project results can be found by searching for the CIMP number on the NWT Discovery Portal (http://nwtdiscoveryportal.enr.gov.nt.ca).

AQUATIC MONITORING HIGHLIGHTS

Four NWT CIMP-funded aquatic monitoring projects were completed in 2015/16. Project results can be found by searching for the CIMP number on the NWT Discovery Portal (http://nwtdiscoveryportal.enr.gov.nt.ca).

1. Marian watershed community-based aquatic effects monitoring program, Sjoerd VanDerWielen, Tłı̨chǫ Government (CIMP159).

2. Monitoring Pacific salmon to understand cumulative impacts of climate change in the Arctic, Karen Dunmall, Fisheries and Oceans Canada (CIMP142).

MONITORING PROTOCOL DEVELOPED FOR FISH

3. Neil Mochnacz, Fisheries and Oceans Canada (CIMP155), developed a stream sampling protocol to detect the distribution and essential habitat for salmonids in northern mountain streams. The protocol will be recommended by NWT CIMP to monitor cumulative impacts on fish.

AQUATIC HEALTH ASSESSED IN YELLOWKNIFE BAY

4. John Chetelat, Environment and Climate Change Canada (CIMP161), led a three-year study on the ecosystem health of Yellowknife Bay, a water body that has received historical mining releases of arsenic and metals. Results will inform the management, assessment and use of the bay.

CARIBOU MONITORING HIGHLIGHTS

Six NWT CIMP-funded caribou monitoring projects were completed in 2015/16, five involving Traditional Knowledge (TK).

1. Community-based monitoring of wildlife health: Stress and pathogens in a changing landscape, Susan Kutz, University of Calgary (CIMP160).
2. Evaluating diversity and spatial organization of caribou in the Sahtù Region for management and environmental impact assessment, Deborah Simmons, Sahtù Renewable Resources Board (CIMP165).
3. Succession and regeneration response on seismic lines with respect to ecology, disturbance and time, Lisa Smith, GNWT-ENR (CIMP146).
4. Using Tłı̨chǫ Knowledge to monitor barren-ground caribou, Petter Jacobsen, Tłı̨chǫ Government (CIMP94).

BATHURST CARIBOU WINTER RANGE MODELED

5. Damian Panayi, Golder Associates (CIMP172), modeled how Bathurst caribou select their winter home range. Model results were similar to documented TK. The model can be used to guide habitat protection and cumulative effects assessment.

TRADITIONAL KNOWLEDGE RECOVERED

6. Deborah Simmons of the Sahtù Renewable Resources Board (CIMP158) led a three-year project to recover previously recorded socio-ecological and wildlife baseline information. The data can now be used by Sahtù communities and decision-makers to help make wildlife management decisions.

NWT CIMP
key activity areas

PROGRESS ON THE ACTION PLAN

NWT CIMP both conducts and provides funding for the collection, analysis and reporting of cumulative impacts, environmental trends and baseline information in the NWT. Funding is available in an annual call for proposals in October.

NWT CIMP is guided by a five-year (2016-2020) Action Plan available at nwtcimp.ca. In 2015/16 the program made progress on all main activities in the Action Plan, including:

1. Working with partners to understand key monitoring and research priorities.
2. Coordinating, conducting and funding environmental monitoring, research and analysis.
3. Communicating results to decision-makers and the public.

1. WORKING WITH PARTNERS TO UNDERSTAND KEY MONITORING AND RESEARCH PRIORITIES

MONITORING BLUEPRINTS

NWT CIMP works with its Steering Committee, regulators and subject-matter experts to develop and annually check-in on its priorities. In 2015/16, NWT CIMP and its partners developed monitoring and research priorities for water and fish, and updated existing caribou priorities. These "Blueprints" help to focus the program and provide direction to funding applicants. They are available at nwtcimp.ca.

REGULATORY PRIORITIES

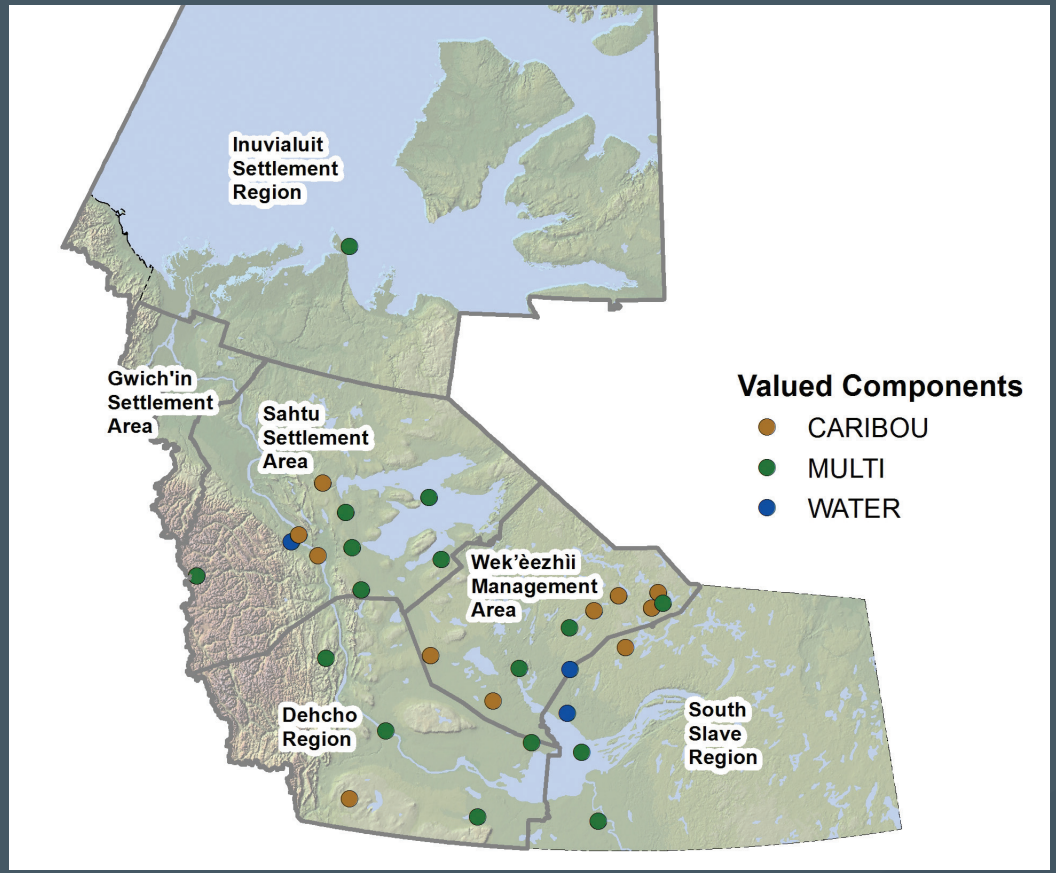
NWT CIMP started work with the University of Saskatchewan, Royal Roads University and the North Slave Métis Alliance to examine the specific scientific, traditional and local knowledge needed by Land and Water Boards and the Mackenzie Valley Review Board to assess cumulative impacts. Results are expected in early 2018 and will help NWT CIMP to focus on the Board's data needs.

Dehcho Regional Results Workshop

TRADITIONAL KNOWLEDGE (TK) PRIORITIES

This year, NWT CIMP introduced a TK Project Proposal Guide communities can use to define their own TK monitoring priorities related to the biophysical environment. The program also developed a TK Data Sharing Agreement so that NWT CIMP, researchers and communities clearly understand how TK collected in a NWT CIMP-funded project will be shared. This year, ten projects with a Traditional Knowledge element were supported

Map of 2015/16 NWT CIMP projects



2. COORDINATING, CONDUCTING AND FUNDING MONITORING, RESEARCH AND ANALYSIS

NWT CIMP generated new information on cumulative impacts, environmental trends and baseline conditions through its support of 29 projects in all regions of the NWT. Approximately $1.8M of NWT CIMP funding was used to leverage $4.3M in partner funding. A complete list of NWT CIMP projects from 1999-2016 is available at nwtcimp.ca.

SUPPORTING COMMUNITIES

Over 80% of projects were led by or partnered with a regional Aboriginal community or co-management organization, and over 60% of all NWT CIMP projects created new or enhanced community capacity.

SUPPORTING REGULATORY DECISIONS

NWT CIMP is focused on meeting the needs of NWT environmental regulators. In 2015/16, three projects were led by regulators, and over 70% of all projects received written regulator support. Information from eight projects was used in decision-making processes this year.

Monitoring results for 2015/16

986 NWT CIMP records posted on the NWT Discovery Portal.

http://nwtdiscoveryportal.enr.gov.nt.ca

17 results presentations given by researchers in NWT communities where they are working.

76 reports published,

16 in peer-reviewed literature.

68 participants in January 2016 Dehcho Region environmental monitoring and research results workshop co-hosted in Fort Simpson with Dehcho First Nations and Wilfrid Laurier University.

3. COMMUNICATING RESULTS TO DECISION-MAKERS AND THE PUBLIC

NWT CIMP project results must be of high quality and accessible to decision-makers and the communities where the work takes place. That is why the program encourages the publication of project results in plain language and well-respected, peer-reviewed journals.

The program developed several tools to engage communities and regulators in the last year. For instance, NWT CIMP published a five-year synthesis of fish research and monitoring project results available at nwtcimp.ca. Caribou and water results summaries are underway.

INVENTORY OF LANDSCAPE CHANGE WEBVIEWER

NWT CIMP developed an online tool, available on the NWT Discovery Portal http://nwtdiscoveryportal.enr.gov.nt.ca, to view human and natural disturbance datasets such as roads and forest fires. It is a powerful application that can be used to explore cumulative impacts by adding disturbance layers.

REPORTING RESULTS TO REGULATORS

This year, NWT CIMP provided comments on the use of standardized monitoring methods for detecting cumulative impacts for two active environmental assessments underway with the Mackenzie Valley Review Board.

PROGRAM BASICS

REGULATORY FOCUS

NWT CIMP is a unique part of the resource management system in the NWT, and was born from community concerns about the cumulative impacts of human development and natural changes on the environment. It is a statutory requirement of legislation and NWT land claims.
The purpose of the program is to provide NWT regulators with good information from which to make sustainable resource management decisions.

COMMUNITY FOCUS

Aboriginal governments and organizations have always played a key role in guiding the program through a Steering Committee. That guidance has led the program to use all sources of information, including science, traditional and local knowledge, and to promote the inclusion of communities and capacity building in all aspects of the program.

*Illustrations throughout this report provided by Trey Madsen

For more information:
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For monitoring results:
nwtdiscoveryportal.enr.gov.nt.ca