TABLED DOCUMENT 14-18(2) TABLED ON FEBRUARY 25, 2016

Northwest Territories Cumulative Impact Monitoring Program

2014/15 ANNUAL REPORT

CONTENTS

WHAT IS NWT CIMP?

The Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) conducts and supports the collection, analysis and reporting of environmental information within the NWT, in particular about caribou, water and fish. Its main purpose is to support better resource management decisions by furthering understanding of the cumulative impacts of human and natural disturbance and environmental trends.

NWT CIMP
key activity areas

WHAT WE DO

NWT CIMP is guided by a five-year (2016-2020) Action Plan (http://www.enr.gov.nt.ca/file/3730). The program's main activities related to environmental monitoring include:

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.

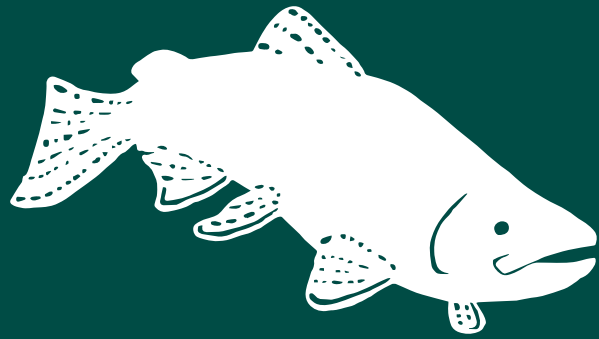
NWT CIMP promotes the inclusion of communities and capacity building in all aspects of the program. The use of traditional knowledge (TK) in the monitoring of cumulative impacts and environmental trends is a program priority. Every five years an independent audit of environmental management in the Mackenzie Valley is conducted, which includes NWT CIMP. Audit findings influence program priorities moving forward.

Illustration Credit: Trey Madsen

3 priority valued components

caribou

water



fish

1. WORKING WITH PARTNERS TO UNDERSTAND KEY PRIORITIES

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

Each year since 2012, NWT CIMP and its partners have worked to refine a blueprint of caribou monitoring priorities (http://www.enr.gov.nt.ca/file/3758).

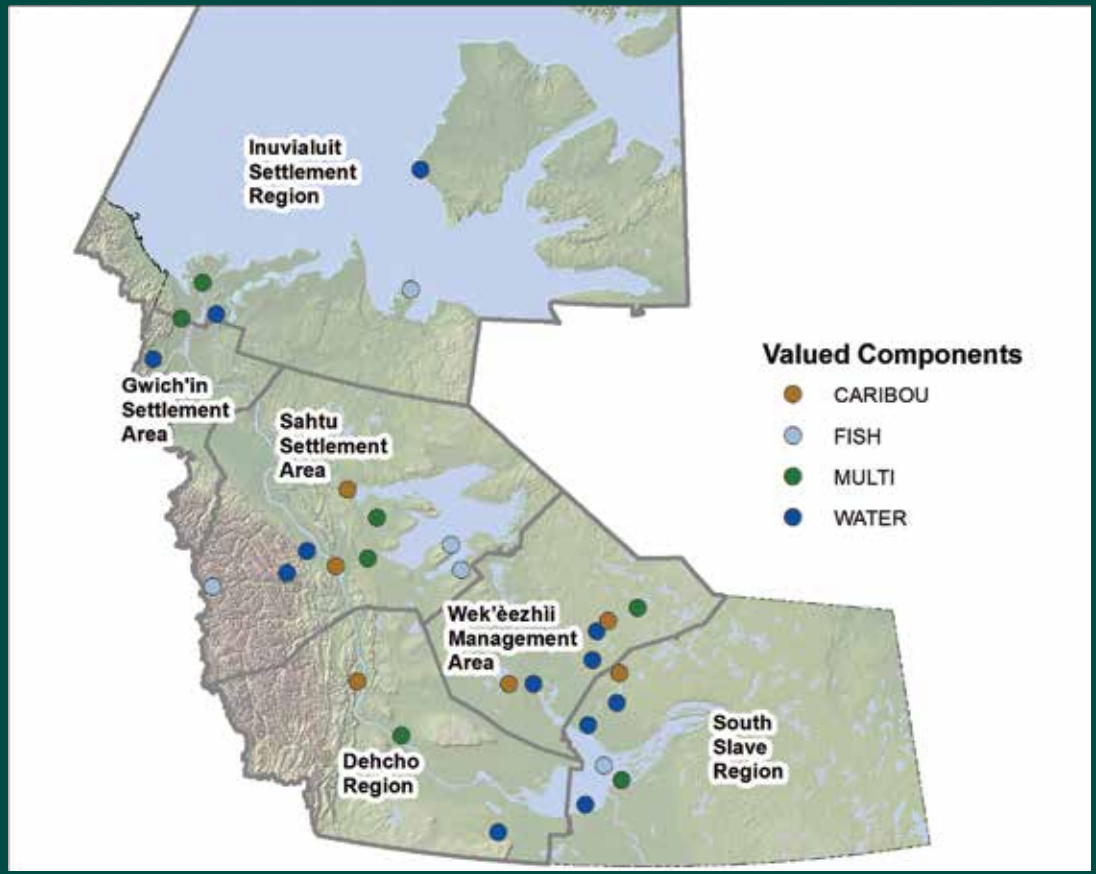
In 2014/15, NWT CIMP completed significant work with its Steering Committee, key regulators, scientists and resource managers in a priority-setting process. Work will continue next year to refine water, fish and traditional knowledge monitoring priorities with our partners.

Wildland fire in the North Slave region.

In 2014/15, concern about caribou and the increasing incidence of wildland fires in the NWT led to a new collaboration between NWT CIMP, Wilfrid Laurier University and the Wek'èezhìı Renewable Resources Board. The approach uses both science and TK to understand how caribou use regenerating forests.

Illustration Credit: Trey Madsen

2014/15 NWT CIMP projects



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

In 2014/15, NWT CIMP provided $1.8M of funding to support 30 projects focused on caribou, water and fish. These projects leveraged partner funding at a ratio of 3:1. Over 90% of projects were long-term, with a planned duration of three or more years.

For a complete list of NWT CIMP projects from 1999-2016, please visit (http://www.enr.gov.nt.ca/file/3729).

SUPPORTING REGULATORY DECISIONS

NWT CIMP aims to meet the needs of land and water regulators. These needs often coincide with community concerns. In 2014/15, 19 projects were led or partnered with environmental decision-makers, while over 80% of projects responded directly to a community concern. This year, nine projects directly contributed to current decision-making processes.

Projects responded directly to a community concern:

over 80 percent

19 projects were led or partnered with environmental decision-makers.

Projects directly contributed to a current environmental decision-making process: **9**

For example, four projects that supported regulatory decisions in 2014/15 were:

Project Title	Investigating the cumulative impacts of environmental change and human activity in the Tathlina watershed (NWTCIMP149)	Establishing a water quality dataset for cumulative effects assessment in the North Slave (NWTCIMP151)	A watershed-scale sampling protocol for accurate distribution and trend assessment of stream salmonids in the NWT (NWTCIMP155)	158 – Dene mapping project repatriation and analysis: Understanding valued places at the intersection of caribou ecology and harvesting (NWTCIMP158)
Target Decision-maker	Mackenzie Valley Land and Water Board (MVLWB)	Giant Mine Remediation Team	Mackenzie Valley Land and Water Board (MVLWB)	Sahtu Renewable Resources Board (SRRB)
NWT CIMP Contribution	Regional water chemistry analysis generated through this project was submitted to the MVLWB as part of a review of the Site-wide Monitoring Program at the Strategic Oil and Gas Cameron Hills project.	Water and sediment chemistry data from this project was provided to the Giant Mine Remediation Team and used to determine natural background conditions. This information was used to inform proposed discharge criteria to the MVLWB.	Operators of the Prairie Creek mine are using the data collection protocol developed by this project to collect standardized information for the MVLWB on the occupancy of Bull Trout in the Prairie Creek watershed. Widespread use of this protocol in future would allow for the detection of cumulative effects and trends.	The traditional trails dataset collated and analyzed in this project has been used by the SRRB this year to assess socio-ecological trends for wildlife management.

TRADITIONAL KNOWLEDGE (TK)

The increased representation of TK in monitoring was a priority for NWT CIMP and highlighted in the 2014/15 proposal guide. The Steering Committee worked to include the use of TK in the monitoring of cumulative impacts and environmental trends as a priority in the 2016-2020 Action Plan. In response to a call for TK proposals, the number of TK-based projects supported by NWT CIMP increased from nine in 2013/14 to 12 in 2014/15.

COMMUNITY CAPACITY BUILDING

Support for the creation or enhancement of community capacity is an important aspect of NWT CIMP. In 2014/15, over 66% of projects created new or enhanced community capacity.

For example, as part of a collaboration with the Ka'a'gee Tu First Nation to examine the cumulative impacts of human and natural disturbance on Tathlina Lake, Kakisa resident Melaine Simba received extensive environmental monitoring training and has become proficient in project management and coordinating field logistics. She is a huge asset to the project and her community.

Melaine and George Simba (Ka'a'gee Tu First Nation) conducting fieldwork.

Monitoring results for 2014/15

154 individual project deliverables.

22 projects resulted in new or enhanced knowedge of cumulative impacts in the NWT.

32 reports published,

16 in peer-reviewed literature.

48 results presentations given by researchers directly to communities.

13 geographic information system data layers made available for cumulative effects analysis.

KEY CUMULATIVE IMPACT MONITORING PROJECTS

NWT CIMP science staff support and coordinate key cumulative impact monitoring projects. For example:

CUMULATIVE EFFECTS OF DIAMOND MINES ON WATER QUALITY IN LAC DE GRAS

In collaboration with industry and co-management boards, NWT CIMP initiated a project using industry monitoring data to determine if the cumulative effects of multiple sources of diamond mine effluent can be detected in Lac de Gras. Results will help to inform mine water license renewals and the evaluation of new applications for development in the region.

INVENTORY OF LANDSCAPE CHANGE

The key objective of the Inventory of Landscape Change is to track both human and natural disturbance in the NWT to inform cumulative impact assessment and management. In 2014/15, NWT CIMP completed comprehensive mapping of human disturbance in the range of the Bathurst caribou herd. This information is already being used to assess cumulative effects by the Bathurst Range Management Planning Team.

ENVIRONMENTAL MONITORING IN THE SAHTU

Increased interest in oil and gas exploration in the central Mackenzie Valley, Sahtu region, led to the development of a suite of five NWT CIMP projects to help define environmental baseline conditions in the region. The projects focus on wildlife distribution and health, and aquatic health, using both science and traditional knowledge. Results will be available for use by regulators to assess future development applications.

NWT environmental monitoring records resulting from NWT CIMP funding are available on the NWT Discovery Portal.

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

environmental trend reports are available on **nwtcimp.ca**.

Inuvik Regional Results Workshop, November 2014

29 community members participated in a regional results workshop in Inuvik for the Inuvialuit Settlement Region and the Gwich'in Settlement Area.

3. COMMUNICATING RESULTS TO DECISION-MAKERS AND THE PUBLIC

NWT DISCOVERY PORTAL

All NWT CIMP-funded project results are available on the NWT Discovery Portal (http://nwtdiscoveryportal.enr.gov.nt.ca). The Portal contains over 2,600 individual entries, 891 of which are NWT CIMP project results. There is a wide range of information to meet the needs of various audiences, including scientific journal articles, community presentations, raw data and maps. The Portal is well used by northerners, particularly in Yellowknife and Inuvik. In 2014/15, over 1,500 individuals accessed the Portal, an increase of about 1,000 users since the previous year.

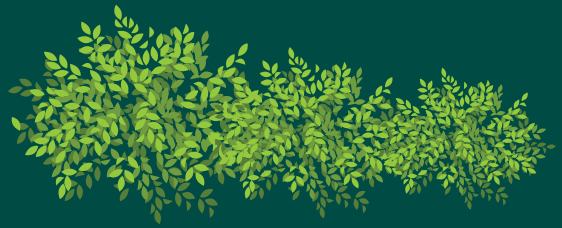
The easiest way to find NWT CIMP project results is to consult the list of funded projects from 1999 to 2016 (http://www.enr.gov.nt.ca/file/3729) to discover projects of interest and then conduct a search using the NWT CIMP project number in the NWT Discovery Portal.

COMMUNICATING WITH COMMUNITIES

NWT CIMP researchers and partners must report their results annually in a community, preferably one closest to the location of their research, and are encouraged to present their results in plain language.

NWT CIMP annually hosts a regional results workshop to report results and gather community feedback. In 2014/15, NWT CIMP hosted a regional results workshop in Inuvik for the Inuvialuit Settlement Region and the Gwich'in Settlement Area. NWT CIMP provided funding for community members to attend. Almost all surveyed participants found the presentation highly relevant and appreciated the balance achieved between presentations and discussion.

Environmental trends



A multi-scale study of vegetation changes above the treeline in northwestern NWT found the vast majority of areas show a significant increase in shrub cover since 1985.

Monitoring of mercury concentrations in fish of the Dehcho region shows wide variation among northern lakes and species. Further work is needed to better understand these results.

Regulatory processes

NWT CIMP directly provided information to six ongoing regulatory processes.

REPORTING ENVIRONMENTAL TRENDS

A key goal of NWT CIMP is to report on environmental trends. Assessing environmental trends can help northerners understand the current state of their environment and provide context for sound management decisions. In 2014/15, NWT CIMP contributed new information to the online GNWT State of Environment Report (http://www.enr.gov.nt.ca/state-environment) about six environmental trends, including mercury concentrations in fish from the Dehcho region, water quality of three rivers in the North Slave region and the expansion of shrub vegetation on the tundra. More information on environmental trends is reported on the NWT CIMP website (http://nwtcimp.ca).

PROVIDING RESULTS DIRECTLY TO REGULATORS

NWT CIMP staff monitor regulatory processes and present relevant information directly to decision-makers. In 2014/15, NWT CIMP staff provided information to six regulatory processes, including environmental assessments of the Prairie Creek Road, Beaufort Sea Exploration Program and Mackenzie Valley Highway.

NWT CIMP engaged in 29 formal monitoring partnerships in 2014/15.

11	7	5	5	1
Universities	Aboriginal governments and organizations	Co-management boards	Government	Non-government organizations

WHO WE ARE

NWT CIMP is guided by a committee of First Nations, Métis and Inuvialuit governments and organizations, co-management boards, and federal and territorial government representatives. The role of each committee member is to consult with their stakeholders on key decisions and share monitoring results. Staff in the Department of Environment and Natural Resources (ENR) of the Government of the Northwest Territories administers NWT CIMP and conducts monitoring, analysis and reporting.

PARTNERSHIP APPROACH

In a territory of over one million square kilometers, a partnership approach is necessary to complete monitoring. NWT CIMP engages a wide range of partners to establish priorities, conduct monitoring and research, and communicate results. Partners include Aboriginal organizations and governments, universities, industry, and federal and territorial government departments. NWT CIMP partners benefit from having the opportunity to guide monitoring, receive funding and use monitoring results.

80%

of NWT CIMP projects in 2014/15 were led by or partnered with a regional Aboriginal, community or co-management organization.

NWT CIMP Steering Committee, September 2014

ABORIGINAL PARTICIPATION

Aboriginal participation in NWT CIMP is a key part of the program's mandate. In addition to the participation of regional Aboriginal governments and organizations in the Steering Committee, most NWT CIMP projects (80%) in 2014/15 were led by or partnered with a regional Aboriginal, community or co-management organization.

NWT CIMP staff and the Steering Committee met four times in 2014/15, with a focus on developing a new five-year Action Plan that builds on the successes of the previous five years. The 2016-2020 NWT CIMP Action Plan is designed to ensure the GNWT meets its cumulative impact monitoring and environmental audit mandates, while addressing the monitoring needs of regional Aboriginal organizations and co-management boards.

Cumulative impact monitoring is a statutory requirement in the NWT, and a prominent feature in the Gwich'in, Sahtu and Tłı̨chǫ land claim agreements as well as in Part 6 of the Mackenzie Valley Resource Management Act (MVRMA).

NWT CIMP wishes to thank its Steering Committee members and observers for their continued work in guiding the program.

Members:
Gwich'in Tribal Council – Tsatsiye Catholique
Sahtú Secretariat Incorporated – Cindy Gilday
Tłı̨chǫ Government – Jessica Hum
GNWT – Julian Kanigan
Inuvialuit Game Council – Charles Pokiak
North Slave Métis Alliance – Shin Shiga
Northwest Territory Métis Nation – Tim Heron
Parks Canada – Jonathan Tsetso

Observers:
Note that regional Aboriginal organizations listed as observers have a standing offer to become an active member at any time.

Akaitcho Territory Government – Stephanie Poole
Dehcho First Nations – Dahti Tsetso
Department of Fisheries and Oceans – Ellen Lea
Environment Canada – Vicky Johnston
MVEIRB – Alan Ehrlich
Aurora Research Institute – Catarina Owen
Canadian Association of Petroleum Producers – Aaron Miller

Northwest Territories

NWT CIMP also thanks past members and observers:
Matt Hoover, Sjoerd van der Wielen, Ashley Mercer, Hans Lennie

For more information, please email us at nwtcimp@gov.nt.ca
For monitoring results, please visit nwtdiscoveryportal.enr.gov.nt.ca

22 projects resulted in new or enhanced knowedge of cumulative impacts in the NWT.

32 reports published, 16 in peer-reviewed literature.

48 results presentations given by researchers directly to communities.

13 geographic information system data layers made available for cumulative effects analysis.