NWT Cumulative Impact Monitoring Program

2023/24 ANNUAL REPORT

Programme de surveillance des effets cumulatifs des TNO

RAPPORT ANNUEL 2023-2024

Government of | Gouvernement des
Northwest Territories
Territoires du Nord-Ouest

Le présent document contient la traduction française du sommaire.

To watch and understand the land so that it can be used respectfully forever.

NWT CIMP vision
(developed by NWT CIMP Steering Committee)

Cumulative impacts are the combined effects that human activities and natural processes have on our environment.

Cumulative impact monitoring is a legislative requirement in the NWT. It is a key feature of the Gwich'in, Sahtú and Tłı̨chǫ̀ land claim agreements, as well as Part 6 of the *Mackenzie Valley Resource Management Act* (MVRMA). Monitoring cumulative impacts is important because, over time, the results of many individual resource management decisions can lead to changes to environmental conditions.

Cover Credit: Water sampling in June 2024 along the Redstone River of the Sahtú region (CIMP233) (Credit: D. Froese)

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EXECUTIVE SUMMARY

The Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) promotes and supports cumulative impact monitoring and research with an emphasis on community capacity-building in the NWT.

While many organizations monitor the NWT environment, NWT CIMP is mandated to understand cumulative impacts and environmental trends. We achieve this by conducting, coordinating, and funding the collection, analysis and reporting of environmental monitoring and research information. Funding is available through an annual call for project proposals.

NWT CIMP is focused on cumulative impacts related to three valued components that key decision-makers agree are of critical importance to the people of the NWT: **caribou, water,** and **fish**.

The goal of the program is to support resource management decision-making and sustainable development by improving our understanding of cumulative impacts. NWT CIMP considers all sources of knowledge, including Traditional Knowledge[1] and scientific information.

Monitoring results and information are available on the NWT Discovery Portal.

[1] NWT CIMP defines Traditional Knowledge as: facts, information, skills, values, and beliefs which have been acquired through experience, observations or by oral means from the land or from spiritual teachings and handed down through generations. Where possible, knowledge will be referred to using the preferred terminology of the knowledge holder or community.' Our Steering Committee prefers to use this term instead of Indigenous Knowledge.

PROGRESS ON OUR ACTION PLAN

NWT CIMP is guided by a five-year (2021-2025) Action Plan that includes four key activity areas:

1. Working with partners to understand key monitoring priorities
2. Conducting, coordinating and funding cumulative impact monitoring, research and analysis
3. Communicating results to decision-makers and the public
4. Assessing the program and the regulatory regime by facilitating the NWT Environmental Audit

The Action Plan and additional information is available on our website, provided at the end of this report.

PROJECT HIGHLIGHTS

31 projects were supported across the NWT

- 11 projects focused on **caribou**, 7 focused on **water**, 4 focused on **fish**
- 9 projects focused on multiple valued components
- 8 projects included Traditional Knowledge collection/analysis

$2.2M in funding distributed by NWT CIMP, leveraged $3.7M in partner funding.

New this year, NWT CIMP is collaborating with Polar Knowledge Canada (POLAR) through a special one-time funding opportunity for barren-ground caribou monitoring and research through the *Collaborative Barren-ground Caribou Initiative: understanding drivers of population trends*. This is in addition to our regular funding for projects focusing on caribou, water or fish. This special funding was made available to seven projects through NWT CIMP's standard application process. Projects and funding distributed are included in the Project Highlights above.

SOMMAIRE

Le Programme de surveillance des effets cumulatifs des Territoires du Nord-Ouest (PSECTNO) promeut et appuie la surveillance et la recherche sur les effets cumulatifs, en mettant l'accent sur le renforcement des capacités des collectivités ténoises.

Plusieurs organismes surveillent l'environnement ténois, mais le PSECTNO se distingue par le mandat qui l'oriente : comprendre les effets cumulatifs et les tendances environnementales. Pour y parvenir, l'équipe effectue, coordonne et finance la collecte, l'analyse et la communication d'informations environnementales et de données de recherche. Le financement est accessible à partir d'un appel de propositions annuel.

Le PSECTNO porte sur les effets cumulatifs liés à trois composantes valorisées (CV) qui, de l'avis des décideurs, sont d'une importance cruciale pour les Ténois : **le caribou**, **l'eau** et **le poisson**.

Le Programme vise à faciliter la prise de décisions relatives à la gestion des ressources et au développement durable grâce à une meilleure compréhension des effets cumulatifs. Les responsables du PSECTNO considèrent toutes les sources de connaissances, y compris les connaissances traditionnelles[1] et les données scientifiques.

Nous publions les résultats et les renseignements sur le Portail Découverte des TNO.

[1] Le PSECTNO définit les connaissances traditionnelles de la façon suivante : les faits, les informations, les compétences, les valeurs et les croyances qui ont été acquis par l'expérience, les observations ou par voie orale à partir de la nature ou des enseignements spirituels et qui ont été transmis de génération en génération. Dans la mesure du possible, les connaissances seront désignées en utilisant la terminologie privilégiée du détenteur des connaissances ou de la collectivité. Notre comité directeur préfère utiliser ce terme plutôt que celui de connaissances autochtones.

AVANCÉES DU PLAN D'ACTION

Le PSECTNO est défini par un plan d'action quinquennal (2021 à 2025) qui comprend quatre grands domaines d'activité :

1. Collaboration avec les partenaires pour définir les priorités clés en matière de surveillance
2. Coordination, exécution et financement de la surveillance, de la recherche et de l'analyse environnementale
3. Communication des résultats aux décideurs et à la population.
4. Évaluation du programme et du cadre de réglementation en facilitant la vérification environnementale aux TNO

Le plan d'action et des informations complémentaires sont disponibles sur notre site Web, dont l'adresse est indiquée à la fin du présent rapport.

FAITS SAILLANTS SUR LES PROJETS

31 projets ont été appuyés aux TNO :

- 11 projets axés sur le **caribou**, 7 sur **l'eau** et 4 sur le **poisson**
- 9 projets axés sur de multiples composantes valorisées
- 8 projets comprenant la collecte et l'analyse des connaissances traditionnelles

2,2 millions de dollars de financement distribué au titre du PSECTNO et 3,7 millions de dollars de financement provenant de partenaires

Nouveauté cette année, le PSECTNO collabore avec Savoir polaire Canada (POLAIRE) par l'intermédiaire d'un financement ponctuel pour la surveillance et la recherche sur le caribou de la toundra, dans le cadre de *l'initiative conjointe sur le caribou de la toundra : comprendre les facteurs à l'origine des tendances de population*. Ce projet s'ajoute au financement que nous accordons habituellement aux projets axés sur le caribou, l'eau ou les poissons. Ce financement spécial a été alloué à sept projets dans le cadre du processus de demande habituel du PSECTNO. Les projets et les fonds distribués sont inclus dans les faits saillants sur les projets ci-dessus.

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

MONITORING PRIORITIES

Our monitoring and research priorities (**Blueprints**) for caribou, water and fish and guidance on **Traditional Knowledge Monitoring Ideas** align with the 2021-2025 NWT CIMP Action Plan. These help to ensure that northern regulatory decision-makers' needs are met.

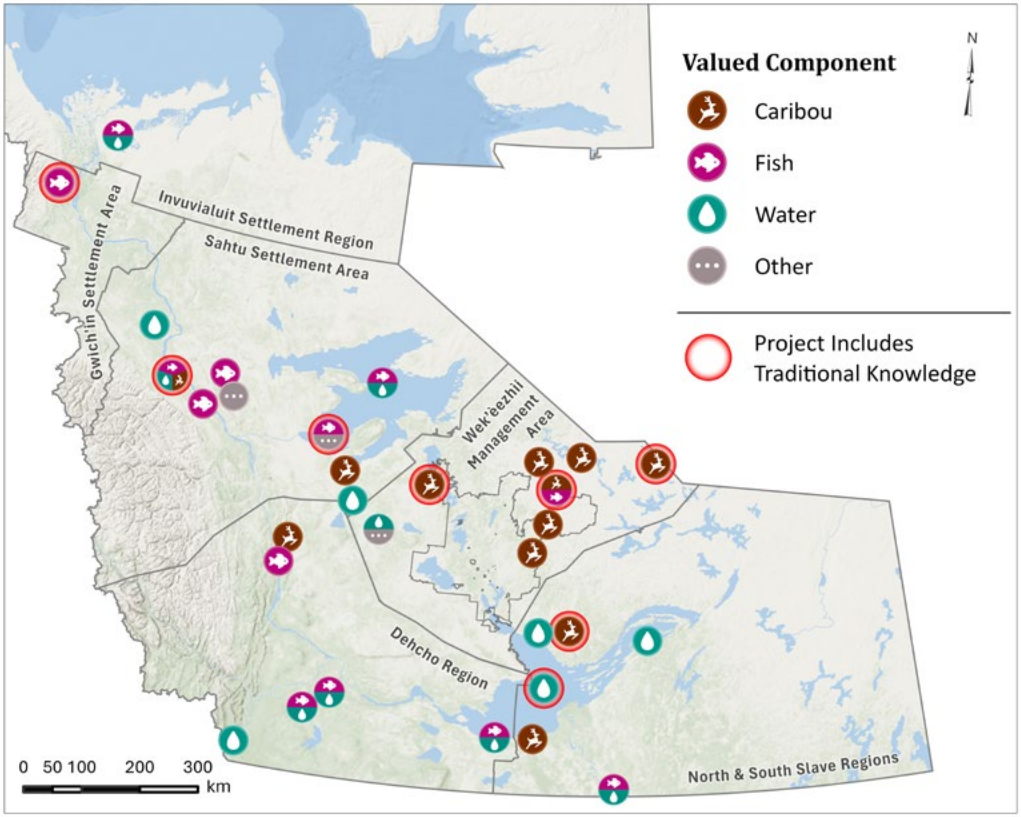
NWT CIMP-funded projects identified as being able to contribute to a future decision-making process or addressed a community concern: 100%.

NWT CIMP STEERING COMMITTEE

NWT CIMP continued to engage and support its Steering Committee, made up of representatives from Indigenous, territorial and federal governments, and co-management boards. The Steering Committee met three times to provide guidance on the overall program and review project funding proposals.

NWT CIMP Steering Committee Meeting, February 2024.

MAP OF 2023/24 NWT CIMP PROJECTS



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

NWT CIMP conducts, coordinates and funds the collection, analysis and reporting of information related to environmental conditions. In addition to completing our funding process:

- We continued the pilot study to monitor cumulative impacts of water quality in lakes in the Yamba Basin. Preliminary results show that the water quality is very good in the entire study area, located north of Lac de Gras.
- We completed our annual update to the Inventory of Landscape Change, a webviewer where human disturbance data can be viewed and downloaded.

31 Projects were supported across the NWT

11 projects focused on **CARIBOU**

7 projects focused on **WATER**

4 projects focused on **FISH**

9 projects focused on multiple valued components

8 projects included Traditional Knowledge collection and analysis

$2.2M in funding distributed by NWT CIMP, leveraged $3.7M in partner funding.

See Section 5 for some highlighted projects that finished in 2023/24.

SUPPORTING INDIGENOUS COMMUNITIES

Twenty-seven (27) funded projects were developed directly in response to community concerns, with ten of these projects being completed this year. Below are some of the projects, on-going and completed, that helped address community concerns (CIMP187, CIMP191, CIMP221 and CIMP224 are highlighted in Section 5).

CIMP #	Main Topic	Community Concern
CIMP154	Water, Fish	How changes on the land could affect mercury in fish.
CIMP187	Caribou	Impacts from climate change to vegetation impacting caribou habitat.
CIMP191	Caribou, Fish	Long-term changes and trends within Kátł'odeeche First Nation's traditional territory.
CIMP221	Fish	Potential interaction among range expanding salmon and common Arctic fishes.
CIMP224	Caribou, Water, Fish	Historic and current cumulative impacts of petroleum extraction over the past century to water and food security.
CIMP229	Fish	Cumulative impacts from sport fishing lodges' activities to fish, sustainable fishing, and the relationship to fish.
CIMP232	Water, Fish	Water quality in the Slave River at Fort Smith due to oilsands and municipal activities.
CIMP234	Caribou	Successful return of wildlife habitat in Pine Point mine area.
CIMP240-BG	Caribou	Impacts of contaminants on caribou genetics near communities of Wekweèti, Dél̨ı̨nę and Kugluktuk.
CIMP243-BG	Caribou	Impacts from the ice road on caribou in North Slave Métis Alliance's traditional territory.

"BG" at the end of the CIMP number indicates a *Collaborative Barren-ground Caribou Initiative* project jointly funded with Polar Knowledge Canada.

3. COMMUNICATING RESULTS

NWT CIMP provides environmental monitoring information, including NWT CIMP-funded project results, to key decision-makers and the public in easily accessible formats. All project leads are required to engage with local communities or Indigenous governments and Indigenous organizations prior to and during their project, and to report their results directly to them.

SUPPORTING DECISIONS ABOUT THE ENVIRONMENT

Several examples of projects, on-going and completed, that contribute to northern environmental decision-making are highlighted below.

CIMP #	Main Topic	Informing Environmental Decisions
CIMP187	Caribou	Detailed satellite results pinpoint geographic areas of key habitat that have changed the most since 2000 due to factors other than fire or human disturbance and land development. This informs the Bathurst Caribou Management Plan.
CIMP191	Caribou, Water, Fish	A comprehensive baseline of Traditional Knowledge indicators and monitoring trends supports evidence-based regulatory and resource management decision-making for the Kátł'odeeche First Nation.
CIMP205	Caribou	Computer simulation models predicting human-caused disturbances and impacts to Boreal caribou population growth help inform caribou range planning.
CIMP223	Water	Results identify how permafrost thaw, climate change, and beaver activity may affect the production and downstream delivery of mercury providing current conditions to regulatory and environmental assessment processes.
CIMP224	Caribou, Water, Fish	Results inform environmental assessment processes for the Imperial Oil Waste Management Facility application, Canada Energy Regulatory Hearing and reclamation planning for the Norman Wells Proven Area.
CIMP235	Fish	Building community-valued reference points and objectives to better manage fisheries and harvest levels in future years.
CIMP242-BG	Caribou	Impacts of insect harassment and sound disturbances on caribou to inform environmental assessment processes in the Slave Geological Province.

"BG" at the end of the CIMP number indicates a *Collaborative Barren-ground Caribou Initiative* project jointly funded with Polar Knowledge Canada.

Participants at the Environmental Monitoring Results and Wildlife Workshop in Thebacha (Fort Smith), January 2024. A workshop summary report including links to presentations is available under the Resources tab of our website.

NWT CIMP hosts an annual, regional workshop to share project results and ideas. This workshop brings together community members, regulators, government and researchers to discuss results, provide feedback, and to develop partnerships.

ONLINE INFORMATION SOURCES

Information and knowledge generated by NWT CIMP is publicly available on our website and on the NWT Discovery Portal. The NWT Discovery Portal has a wide range of information to meet the needs of various audiences, including scientific journal articles, plain language presentations, raw data and maps related to environmental monitoring and research in the NWT. We encourage other NWT monitoring and research information that is available outside of NWT CIMP, to be posted to the Portal. Please contact us if you are interested.

4. FACILITATING THE NWT ENVIRONMENTAL AUDIT

Required by the Mackenzie Valley Resource Management Act every 5 years, the NWT Environmental Audit (the Audit) is an independent review of the effectiveness of the regulatory regime and monitoring of cumulative impacts. It checks how well our regulatory system is working to protect the environment and makes recommendations to improve it. The latest Audit was released in the fall of 2020.

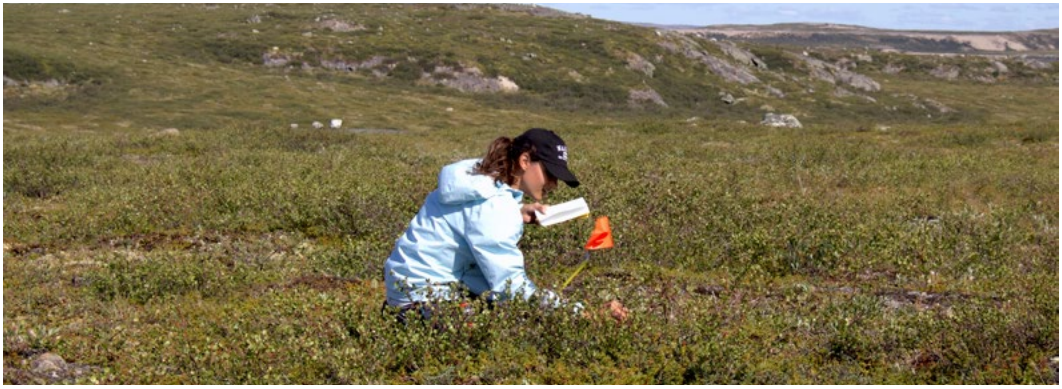
Preparations are underway for the next Audit, to be released in 2025.

For more information about the Audit, please visit our website.

5. HIGHLIGHTED PROJECT SUMMARIES

Nine (9) projects were completed in 2023/24; the results of five of these projects are highlighted below. Detailed project results can be found by searching for the NWT CIMP project number (e.g. CIMP187) on the NWT Discovery Portal.

Max Kotokak Sr. and Mat Mervyn collecting data (CIMP231) (Credit: J. Musetta-Lambert)



Graduate student Lauren Cross inspects tundra shrub vegetation near Daring Lake on the summer range of the Bathurst caribou herd. (Credit: R. Danby)

CARIBOU-FOCUSED PROJECTS

Changes in vegetation productivity and phenology across the Bathurst caribou range (CIMP187)

Ryan Danby, Queen's University (ryan.danby@queensu.ca)

Vegetation change in response to climate change could be a key factor for the low population of the Bathurst caribou herd. Working with Tłı̨chǫ Government and communities, this project mapped and analyzed changes in ecosystem productivity and phenology across the entire range of the Bathurst caribou herd from 2000 to 2021. It also identified linkages between these changes and shifts in herd distribution and habitat use during the same period.

- Satellite image analysis reveals significant changes in the seasonality and peak annual production of vegetation.
- Changes on the herd's winter range are likely driven by forest fire history. Changes in portions of the range beyond treeline are moderate and weakly linked to variation in timing of snowmelt and the type of vegetation present at a site.
- The moderate "greening" signal is a result of higher survival, increased growth, and greater leaf production on preexisting shrub stems, rather than widespread establishment of new shrubs.
- The specific influence of this change as a contributing factor in the herd's decline is unclear.

View a project video at https://www.youtube.com/watch?v=GdLtTLeOhc4

WATER-FOCUSED PROJECTS

Murky waters: Impacts of disturbances on the mobilization and downstream delivery of mercury and methylmercury (CIMP223)

David Olefeldt, University of Alberta (olefeldt@ualberta.ca)

Climate change and land disturbances may affect the mobilization of mercury (Hg) and methylmercury (MeHg) from soils into streams and downstream lakes. This project studied the production of MeHg in recently thawed peatlands and the role of beaver ponds in the transport of methylmercury. Streams and creeks were sampled several times along a large climate gradient to understand potential impacts of continued permafrost thaw.

Project results found that:

- Permafrost thaw in peatlands can significantly increase the potential for production of MeHg, especially in fens (shrubby wetlands).
- Beaver ponds were found to act as sinks for MeHg (concentrations were lower at the outflow compared to inflow).
- Concentrations of MeHg and dissolved organic carbon (colour) in streams south of the permafrost boundary were significantly higher than for similar streams and rivers in the Dehcho region.

These results suggest it is likely that continued permafrost thaw in peatlands can lead to increased concentrations of MeHg in the Dehcho region. It is important to note the observed concentrations, even south of the permafrost boundary, were well below concentration guidelines for the protection of aquatic life. Yet, increasing concentrations of MeHg have the potential to further increase the accumulation of mercury in fish, warranting continued monitoring.

View a project video at https://www.youtube.com/watch?v=uBWFNQnyv2Q

Drone photo of a beaver pond near Sambaa Deh Falls Territorial Park. (Credit: D. Olefeldt)

FISH-FOCUSED PROJECTS

Arctic Salmon - Building capacity and assessing interactions among salmon and Arctic fishes in the Mackenzie River (CIMP221)

Karen Dunmall, Fisheries and Oceans Canada (karen.dunman@dfo-mpo.gc.ca)

Rapid climate change is occurring in the Arctic, which is impacting northern fish species that hold great cultural value to northern communities. Opportunistic species are expanding their ranges northward impacting local fishes also experiencing warming habitats. In response to concerns from northern harvesters about the potential interaction among chum salmon and Arctic fishes, this project studied the trophic ecology of key endemic Arctic fishes, the diets of range expanding chum salmon, and the potential for diet overlap among these fishes.

To assess interactions with salmon, information was compiled on the diets and stomach contents and stable isotope analyses were conducted on eight fish species due to their ecological and cultural importance: Arctic char, Dolly Varden, lake trout, bull trout, inconnu, broad whitefish, lake whitefish, and burbot.

- A literature review identified that these species are generalist feeders, have wide dietary niches and that there are knowledge gaps in winter foraging behaviour in river systems.
- Approximately 30% of chum salmon were found with unidentifiable prey items at various stages of digestion, and 5% of chum salmon were found with identifiable prey items.
- Forage fishes, insects, crustaceans and a small bird made up the identifiable prey items in chum salmon.
- Stable isotope analysis indicated that adult chum salmon rarely feed in fresh water and overlapped in feeding habitat with only Dolly Varden, likely when they co-occurred in the marine environment.
- Diet overlap among chum salmon and endemic Arctic fishes was low.
- Most Arctic fishes studied (Lake Trout, Inconnu) fed in fresh water, whereas Dolly Varden did not.

This project improves our understanding of cumulative impacts to endemic Arctic fishes from the impacts of climate change and range expanding species in Arctic rivers, and helped fill identified knowledge gaps regarding the diets of Arctic fishes.

Frankie Dillon holding a chum salmon in the Big Fish River, near Aklavik. (Credit: C. Gallagher)

MULTI-FOCUSED PROJECTS

Watching the Land: Knowing the Impacts of Climate Change (CIMP191)

Victoria St. Jean, Kátł'odeeche First Nation (kfnlands@katlodeeche.com)

Since 2016, the Kátł'odeeche First Nation (KFN) has conducted a community-based, Traditional Knowledge focused monitoring program, empowering membership to identify important species, and how they can be studied and tracked to detect changes through time.

The goal of the project was to track the health and changes of the environment over time, based on a set of pre-determined Traditional Knowledge indicators, through field-based monitoring.

Project results advanced an understanding of cumulative impacts from human activities, climate change, and natural activities on the environment in KFN Traditional Territory. Through ongoing Traditional Knowledge data collection, KFN was able to identify trends and changes in the environment and how these are affecting traditional livelihoods. Some results include:

- Poor berry harvests due to extreme drought conditions.
- Moose populations and overall health are good.
- Fish harvest results were consistent with past baseline data and showed that dredging had not negatively impacted whitefish spawning.
- Sampling data from partners is expected to help determine if the Traditional Knowledge and scientific data align.

Fish harvest monitoring (Credit: KFN)

Continued monitoring will be useful to inform land and resource management decisions in KFN Traditional Territory.

View a project video at https://www.youtube.com/watch?v=UhZF67ABmkY

A Century of Petroleum Extraction at Tłegǫ́hłı (Norman Wells): Indigenous Knowledge for Indigenous Guardianship (CIMP224)

Caterina Owen, Sahtú Renewable Resources Board (director@srrb.nt.ca)

This project helped address Sahtú community questions about the historic, ongoing, and cumulative impacts of petroleum extraction in Tłegǫ́hłı (Norman Wells) over the past century. It involved community members in monitoring, stewardship, and decision-making to achieve certainty about water and food security, including access to clean drinking water, fisheries, and tǫdzı (boreal caribou).

Project activities included collecting oral histories, archival research, study circles, summer and winter ground-truthing (fieldwork), and audiovisual storytelling. It increased the understanding of the history of oil extraction at Norman Wells and its impacts on land, water, animals, and Sahtú Dene and Métis ts'ı̨lı̨ (way of life).

Two databases were developed using oral histories, archival materials, and public registries:

- One database documents spills and other impacts connected to the Norman Wells oil field and the Sahtú portions of the Norman Wells to Zama pipeline.
- A second database contains information about fatalities related to the history of oil at Norman Wells.

The movement and distribution of wildlife along the Sahtú portions of Norman Wells to Zama and adjacent to the Norman Wells Proven Area was also documented.

View a project video at https://vimeo.com/945813188?share=copy

Site of Imperial Oil Limited in Norman Wells, 1979 (Credit: NWT Archives)

6. LIST OF 2023/24 NWT CIMP FUNDED PROJECTS

CIMP #	Project Type	VC	Project Title
CIMP94-BG	TK	Caribou	Tłı̨chǫ Ekwǫ̀ Nàxoèhdee K'e: "Boots on the Ground" Bathurst Caribou monitoring program.
CIMP127	Science	Water and Fish	Monitoring for impacts of harvest and climate change on Great Bear Lake aquatic system.
CIMP132	Science	Water and Fish	Integrated Eco-monitoring and assessment of cumulative impacts of Great Slave Lake fisheries.
CIMP154	Science	Water and Fish	Understanding fish mercury concentrations in Dehcho lakes.
CIMP187	Science	Caribou	Vegetation productivity and phenology across the Bathurst caribou range.
CIMP191	TK	Caribou and Fish	Watching the land: Knowing the cumulative impacts of change.
CIMP207-BG	Science	Caribou	Cumulative Effects Assessment of Four Barren-ground Caribou Herds in the NWT.
CIMP215	Science	Water	Aquatic ecosystems in the Fort Good Hope area as indicators of environmental change.
CIMP220	Science	Caribou	Can caribou coexist with human development in Northern Canada? Forecasting land use changes using resource development potential mapping to improve caribou future forecasts.
CIMP221	Science	Fish	Arctic Salmon – Building Capacity and Assessing Interactions Among Salmon and Arctic Fishes in the Mackenzie River, NT.
CIMP222	Science	Fish	Contaminants (PAHs, mercury) in the Mackenzie River and fish health assessments: implementation of classic and new molecular screening tools for environmental monitoring and stressor assessment.
CIMP223	Science	Water and Fish	Murky Waters: Impacts of Disturbances on the Mobilization and Downstream Delivery of Mercury and Methylmercury.
CIMP224	TK	Caribou, Water and Fish	A Century of Petroleum Extraction at Tłegǫ́hłı̨ (Norman Wells): Indigenous Knowledge for Indigenous Guardianship.
CIMP226	Science	Water	NWT Streams and Rivers of the future: How permafrost thaw and groundwater activation are changing water resources.
CIMP227	Science	Water	Recovery of the mine-impacted landscape in the Yellowknife region.

"BG" at the end of the CIMP number indicates a *Collaborative Barren-ground Caribou Initiative* project jointly funded with Polar Knowledge Canada.

CIMP #	Project Type	VC	Project Title
CIMP228	Science	Fish	Updated assessments and investigations of mercury in Sahtú lakes food webs with a changing environment.
CIMP229	TK	Fish	Social-ecological change in the Sahtú (Great Bear Lake) watershed: Cumulative impacts on Dene ts'ı̨lı̨ (knowledge and cultural identity) and relationships to fish.
CIMP230	Science and TK	Water	Monitoring good water for First Nation water governance in Akaitcho.
CIMP231	Science	Water	Understanding the cumulative impacts of beaver activity on stream health in the Inuvialuit Settlement Region.
CIMP232	Science	Water and Fish	Fort Smith Métis Council Ecotoxicology and Monitoring of Cumulative Effects on the Slave River.
CIMP233	Science	Other	Mapping and Monitoring Permafrost with Sahtú Communities.
CIMP234	Science	Caribou	Boreal caribou habitat enhancement – lichen habitat restoration on disturbed sites.
CIMP235	TK	Fish	Documenting Gwich'in and Inuvialuit Dolly Varden management history and contemporary fisheries objectives.
CIMP236	Science	Water	Cumulative effects assessment in the Liard and Petitot River Basins.
CIMP237	Science	Water	Assessing the impact of aerator installation on the chemical and biological recovery of Frame Lake.
CIMP238	Science	Water	Lake ice processes – fundamental for assessing ice road climate risks and vulnerability under current and future warming.
CIMP239-BG	TK and Science	Caribou	Community-defined and monitored indicators of recovery in barren-ground caribou.
CIMP240-BG	Science	Caribou	Contaminants, caribou epigenetics and genomic health.
CIMP241-BG	Science	Caribou	Comparative analysis of factors affecting caribou survival patterns.
CIMP242-BG	Science	Caribou	Using animal-borne sensors and acoustic recording units to monitor caribou behaviour, insect harassment and sound disturbance.
CIMP243-BG	TK	Caribou	North Slave Métis Alliance Winter Road Monitoring Program.

"BG" at the end of the CIMP number indicates a *Collaborative Barren-ground Caribou Initiative* project jointly funded with Polar Knowledge Canada.

Contact information

For program information:
www.nwtcimp.ca

For monitoring results:
www.nwtdiscoveryportal.enr.gov.nt.ca

For Environmental Audit information:
www.gov.nt.ca/ecc/en/services/nwt-environmental-audit

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