NWT BOARD FORUM

TRAINING FOR CO-MANAGEMENT BOARDS IN THE NWT

RENEWABLE RESOURCES MANAGEMENT

Part 1: Wildlife and Fish

2019

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RELEVANT CHANGES TO GOVERNMENT LEGISLATION AND REGULATIONS

As society's needs continuously evolve, so does our government and the laws that govern our society.

Recent federal legislative changes will affect the resource management system in the NWT. For example, with the approval of Bill C-68, the new federal Impact Assessment Act came into force on June 21, 2019.

Recent and proposed changes to territorial legislation are also underway that will affect the resource management system in NWT. In 2019, the Government of the Northwest Territories enacted a new *Protected Areas Act* and *Wildlife Act regulations*. A new *Forest Act* and amendments to the *Environmental Rights Act*, among others are also proposed for the next legislative assembly.

These changes have not been made throughout this course. As Board members and staff, it is your responsibility to be up to date on the current legislation and regulations and organizational changes.

LEGAL DISCLAIMER

This Guide has been produced for educational and training purposes only and is not intended as a source of legal advice. Its contents have been developed to address the unique interests and needs of co-management boards in the NWT. The Guide is not comprehensive and readers are advised to review the relevant statutes, governance documents, etc., and seek legal counsel for specific matters or issues of concern.

Date of development: July 2019

Introduction

ABOUT THE NWT BOARD FORUM

The purpose of the NWT Board Forum is to give organizations involved in land use planning, environmental assessment, land and water regulation and resources management an opportunity to learn from one another and to coordinate activities. The Forum is intended to improve and maintain effective lines of communication between its members, resolve common issues and share expertise. It also provides industry, government and other organizations with a structured forum to engage and interact with the Northwest Territories' co-management boards (NWT Board Forum, n.d.).

The NWT Board Forum is made up of the Chairs of NWT resource management boards and committees set up by NWT Aboriginal rights agreements to co-manage lands and resources in the geographic areas covered by those agreements. Crown Indigenous Relations and Northern Affairs Canada (CIRNAC), the Government of the NWT (GNWT), the Office of the Regulator of Oil and Gas Operations (OROGO) and the National Energy Board (NEB) also participate in the Forum as they share regulatory responsibilities in the NWT with the boards and committees.

The NWT Board Forum, in cooperation with the CIRNAC Governance and Partnerships Branch, has used its collective interests to enhance the functioning of NWT boards and committees by developing training programs, including this Guide and associated training course, for Board members and staff.

For more information: http://www.nwtboardforum.com/

nwt board forum
Resource Management Information for the NWT

TRAINING FOR BOARD MEMBERS AND STAFF

The responsibilities of Board members, particularly new Board members, are challenging. Many of the skills, tools and demands on Board members are similar between boards, allowing for a number of shared learning opportunities. Many other skills, tools and demands, however, are unique to a Region – or even a specific board itself. This requires additional Board member training pertaining to specific land claims, pieces of legislation, and individual board rules, procedures, and guidelines.

It is important that all board members understand the full NWT regulatory system and have a good understanding of the spirit and intent of all land claim and self-government agreements. It is also important to have board members engaged in and motivated about their responsibilities, as well as their role in an important decision-making system in the NWT.

It's important that all Board members understand the full NWT regulatory system and have a good understanding of the spirit and intent of all land claim and self-government agreements.

The NWT Board Forum is continuously updating and delivering training on a variety of topics to support Board members and staff, through both in-person and online platforms. Recent courses include:

- Board Orientation – updated 2018
- Administrative Law – updated 2018
- Renewable Resources Management – updated 2019 (THIS COURSE)
- Public Hearings – being updated in 2019

Training materials and courses on key topics for Board members and staff can be accessed at: https://training.nwtboardforum.com/

RENEWABLE RESOURCES MANAGEMENT IN THE NWT

Sustainable use of the NWT's land, water, forest, and plant resources is increasingly recognized as a key societal goal in the 21st century. Management of these resources requires a combination of applied science, Traditional Knowledge (TK), management actions, mitigation measures and regulatory processes within an understanding of their broader societal context. **Renewable resources** are provided by nature, including water, air, wildlife and vegetation, and can self-replenish naturally if managed responsibly. They are life-giving and life-sustaining and are managed accordingly in the NWT as part of a broader integrated environment and natural resources management system.

In the NWT, **five main groups** have renewable resources management responsibilities, from the federal to local levels:

1. Federal government departments (e.g. Environment and Climate Change Canada [ECCC], Government of Canada)
2. Territorial government departments (e.g. Environment and Natural Resources [ENR], Government of the Northwest Territories [GNWT])
3. Aboriginal governments (e.g. Culture and Lands Protection, Tłı̨chǫ Government)
4. Land claims-based institutions of public government (e.g. Wildlife Management Advisory Council [WMAC] – NWT or Gwich'in Renewable Resources Board [GRRB])
5. Local councils or committees (e.g. Inuvik Hunters and Trappers Committee) and community members

The emphasis of this course is on **the value of all actors and decision-makers in renewable resources management working towards a greater interest in the social, cultural, environmental, and economic wellbeing of the territory**. A combination of technical and practical information will be presented to further encourage collaborative management in areas where the territory has seen success, such as: project reviews and approvals, management planning, harvesting, monitoring, respectful and effective use of TK, and compliance and enforcement.

The Renewable Resources Management Course (Part 1), and this associated Reference Guide, will focus on the management of the of wildlife and fish. Forests and plant management will be covered more substantially in Renewables Resources Management Part 2.

KEY TERMS:

- **Renewable resources**: Resources, both actual and potential, that are supplied by nature and can self-replenish with the passage of time if managed responsibly.

ABOUT THIS COURSE AND REFERENCE GUIDE

Purpose

This training course has been designed to increase the awareness of NWT Board members and staff with respect to renewable resources management in the territory.

Regional Coverage

This Reference Guide does not account for all regional differences in renewable resources management. However, there are success stories/cases related to leading practices that will call out specific examples of effective management in each region of the territory (Inuvialuit Settlement Region, Wek'èezhìı, Sahtú, Gwich'in, Dehcho, and Akiatcho). Look for the icon of people celebrating to read about leading management practices.

Learning Objectives

By the end of the Renewable Resources Management Course, you will be able to:

- Recognize the actors in renewable resources management in the NWT and describe their roles and responsibilities
- Explain how the management of renewable resources fits within the NWT's integrated and coordinated environment and resource management system
- Identify key plants and animals and the common impacts they experience as a result of development in the NWT
- Describe the major renewable resources management practices throughout the regulatory process
- Employ leading practices to support renewable resources management across the territory

This Guide can be used on its own and as a reference tool for the in-person or online training courses. The Guide does not need to be read sequentially. Each chapter can be read on its own, as needed. Links between chapters are provided.

The course and Guide have been developed by drawing on materials originally prepared by Charles and John Blyth (Blyth and Bathe), as well as in consultation with members of the NWT's renewable resources boards and the Mackenzie Valley Environmental Impact Review Board (MVEIRB), by:

Stratos Inc.
www.stratos-sts.com | (613) 241-1001
mail@stratos-sts.com

Other materials that have been drawn upon include the NWT Board Forum's *Board Orientation Reference Guide*, the Joint Secretariat's *Inuvialuit Final Agreement (IFA): Environment and Natural Resource Management in the Inuvialuit Settlement Region Reference Guide*, as well as other references as cited.

As this Guide provides only an overview, links to supporting materials and resources are provided throughout the document. NWT Board Forum also provides additional information on certain topics on its website (www.nwtboardforum.com) and upon request.

Please note that while the term **"Indigenous"** is now widely used when referring to First Nations, Inuit, and Métis in Canada, this Reference Guide uses the term "Aboriginal" to remain in line with the language used in the *Mackenzie Valley Resource Management Act*. Whenever possible, the name of the specific nation (e.g. Tłı̨chǫ, Inuvialuit) has been used out of respect for intercultural/social/political differences between nations.

CONTENTS OF THE REFERENCE GUIDE

Guide Content

Guide Legend

Symbol	Description
	**Key term** – Where you see a book, you will find a definition of a key term or important terms pertaining to the section you are reading.
	**More information** – Where you see a magnifying glass, you will find links to supporting materials and resources.
	**Important point** – Where you see an exclamation point, you will find information that is vital to your understanding of the subject matter.
	**Successes** – Where you see people celebrating, you will find an example of a success story or leading management practice.

Acronyms

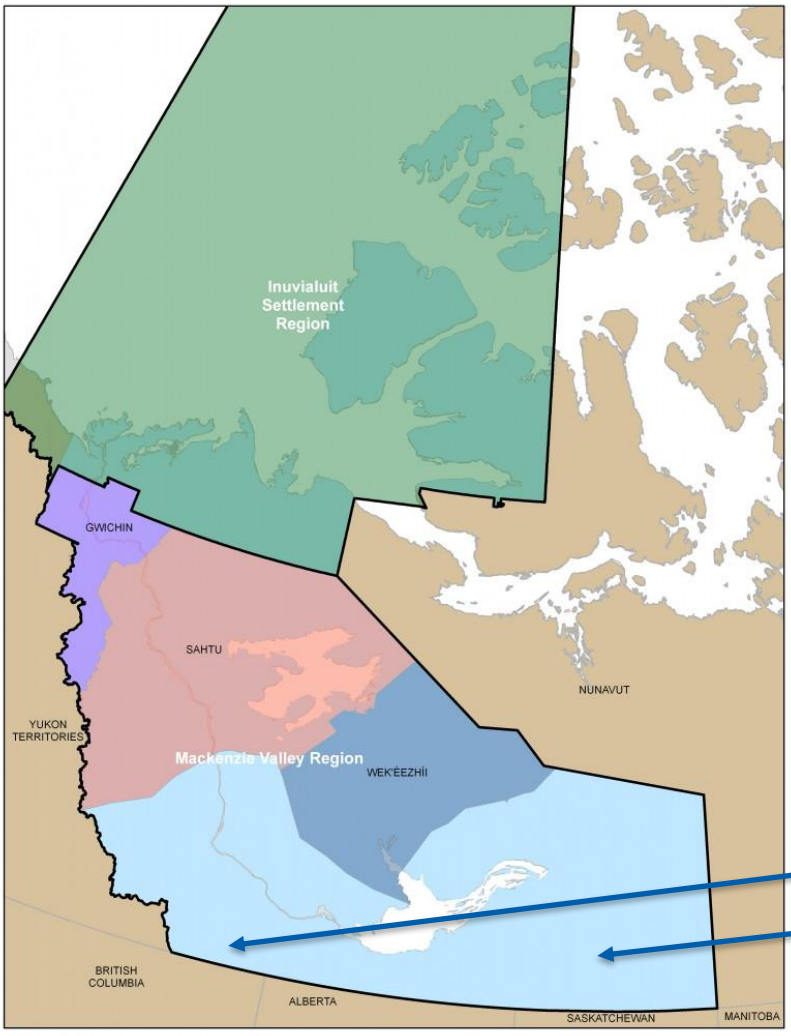
CIRNAC – Crown-Indigenous Relations and Northern Affairs Canada
CITES – Convention on International Trade in Endangered Species
COSEWIC – Committee on the Status of Endangered Wildlife in Canada
CCP – Community Conservation Plans
CWS – Canadian Wildlife Service
DFO – Department of Fisheries and Oceans
EIRB – Environmental Impact Review Board
EIS – Environmental Impact Statement
EISC – Environmental Impact Screening Committee
ENR – Environment and Natural Resources
FJMC – Inuvialuit Fisheries Joint Management Committee
GCLCA – *Gwich'in Comprehensive Land Claim Agreement*
GLUPB – Gwich'in Land Use Planning Board
GLWB – Gwich'in Land and Water Board
GNWT – Government of the Northwest Territories
GRRB – Gwich'in Renewable Resources Board
HTC – Hunters and Trappers Committee
IFA – *Inuvialuit Final Agreement*
IGC – Inuvialuit Game Council
ILA – Inuvialuit Land Administration
ISR – Inuvialuit Settlement Region
LWB – Land and Water Board
MBCA – *Migratory Birds Convention Act*
MVEIRB – Mackenzie Valley Environmental Impact Review Board
MVLWB – Mackenzie Valley Land and Water Board
MVRMA – *Mackenzie Valley Resource Management Act*
NEB – National Energy Board
RRC – Renewable Resource Council
SARA – *Species at Risk Act*
SLWB – Sahtú Land and Water Board
SLUPB – Sahtú Land Use Planning Board
SRRB – ʔehdzo Got'ı̨nę Gots'ę́ Nákedı, Sahtú Renewable Resources Board
TA – *Tłı̨chǫ Land Claims and Self-Government Agreement* or Tłıcho Agreement
TAH – Total allowable harvest
TK – Traditional Knowledge
WLWB – Wek'èezhìı Land and Water Board
WMAC NWT – Wildlife Management Advisory Council NWT
WMAC NS – Wildlife Management Advisory Council North Slope
WMMP – Wildlife Management and Monitoring Plan
WRRB – Wek'èezhìı Renewable Resources Board

Chapter 1: Environment and Resources Management in the Northwest Territories

1.1 BACKGROUND ON THE ENVIRONMENT AND RESOURCE MANAGEMENT SYSTEM IN THE NWT

Canada's NWT is located north of the 60th parallel, above Saskatchewan, Alberta, and eastern British Columbia, between the Yukon and Nunavut. The territory is made up of areas where land claims have been settled and resource and self-government agreements are in place, as well as areas where negotiations are still underway (**Error! Reference source not found.**).

Land claim negotiations over the past 30 years have led to the establishment of three distinct comprehensive land claim agreements and one land claim and self-government agreement (comprehensive agreements) in the NWT, each with its own resources management system and own set of management institutions. Some areas within the NWT do not have settled land claims (Treaty 11 and Treaty 8 lands). The following settled agreements under negotiation exist in the NWT.



Note: NWT Métis Nation territory, which spans the southeast NWT, is not represented on this map.

Figure 1: Map of the NWT – Treaties and Land Claims

Settled

- Inuvialuit Final Agreement (1984)
- Gwich'in Comprehensive Land Claim Agreement (1992)
- Sahtú Dene and Métis Comprehensive Land Claim Agreement (1993)
- Tłı̨chǫ Land Claims and Self-Government Agreement (2005)

In Process

- Dehcho
- Akaitcho
- NWT Métis Nation
  (Note: there is a separate process for the Acho Dene Koe First Nation which was previously part of the Dehcho process)

By guaranteeing consultation and participation in the environment and resource management regulatory system, comprehensive agreements give Aboriginal groups in the NWT a significant say in land, water, and environmental management. The signing of these agreements required the enactment of new laws or revisions to existing legislation. Co-management boards and other management bodies were established or were provided with additional authority over environment and natural resources management.

1.1.1 The Intent of Comprehensive Agreements

The intent of comprehensive agreements is to address Aboriginal claims to rights and title in lands without treaties or for which doubts about the validity of treaties had been raised. Co-management, and more recently self-government, emerged from negotiations between Aboriginal nations and federal/territorial governments.

Aboriginal groups in the NWT a significant say in land, water and environmental management as a result of negotiated, comprehensive land claims.

In areas of the NWT where comprehensive agreements have not yet been reached, there are historic treaties in place. Treaties 8 and 11 in the southern part of the NWT and the rights outlined in them are constitutionally recognized and protected through Section 35 of the *Constitution Act*, as are all Aboriginal rights and treaties in Canada.

Comprehensive agreements are a fundamental underpinning of the integrated resource management system

- Key principles of resources management that board members put into practice are based on these agreements and the laws required by land claims.

The environment and resources management system is outlined in the comprehensive agreements

- This is a fundamental difference from the Canadian provinces. In NWT, as in Nunavut and the Yukon, these land claim agreements dictate what is in the legislation.

1.2 LAND MANAGEMENT REGIONS IN THE NWT

There are two land management regions in the NWT (Figure 2). The Inuvialuit Settlement Region (ISR) and the Mackenzie Valley are governed by different land claim agreements, statutes and

have established management bodies to perform regulatory, advisory, planning, and environmental assessment functions related to resource management.

Inuvialuit Settlement Region	Mackenzie Valley
The Inuvialuit are an Aboriginal people of the western Canadian Arctic. Through the *Inuvialuit Final Agreement (1984)* (IFA), the ISR was created, along with different management bodies, and the Inuvialuit secured ownership of 90,650 km^2 of land. The total area of the ISR spans 435,000 km^2, mostly above the tree line, and includes several sub-regions: the Beaufort Sea, the Mackenzie River delta, the north western portion of Yukon ("Yukon North Slope"), the northern portion of NWT and the western Canadian Arctic Islands. Under the Agreement, the Inuvialuit, along with the governments of Canada, the NWT and Yukon share management responsibilities in the ISR.	The Mackenzie Valley is defined to include all of the NWT, with the exception of the ISR, and Wood Buffalo National Park. *Mackenzie Valley Resource Management Act* (1998) (MVRMA), created an integrated co-management structure for public and private lands and waters throughout the Mackenzie Valley.

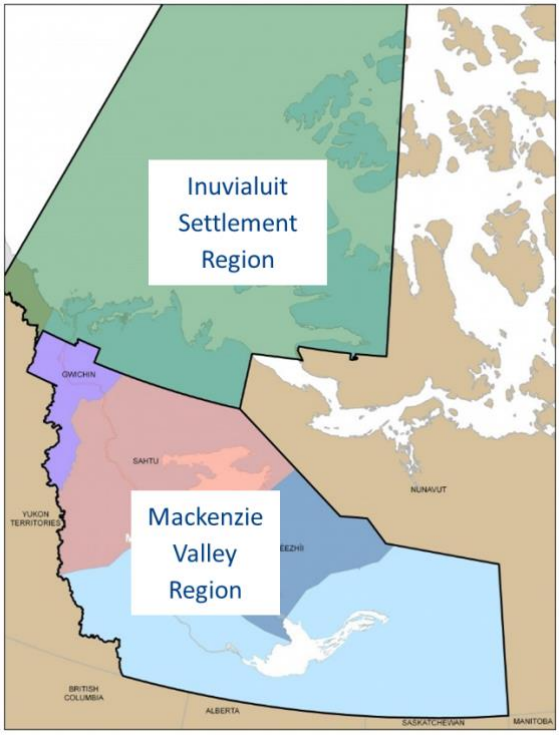


Figure 2: Land management regions in the NWT

1.3 PRINCIPLES OF ENVIRONMENT AND NATURAL RESOURCE MANAGEMENT IN THE NWT

The regulatory regime for environment and resources management in the NWT is very different from most of the regulatory regimes in southern Canada because it is part of a broader integrated resources management system as defined in land claim agreements.

There are two principles fundamental to the northern regulatory system for land use management, as outlined in the *Mackenzie Valley Resource Management Act* (MVRMA) and the *Inuvialuit Final Agreement* (IFA):

1. **Integrated and coordinated system**
   - In the Mackenzie Valley, there is an **integrated** and **coordinated** system for the regulation of land, water and wildlife in the settlement area and in adjacent areas.
   - In the ISR, there is an integrated and coordinated system of water management, wildlife management and project assessment.

2. **Based on the principles of co-management**
   - **Co-management** of resources between Aboriginal governments and organizations, and the territorial and federal governments.

This section provides an overview of these two principles, starting with co-management.

1.4 CO-MANAGEMENT

The concept of co-management between Aboriginal groups and Canadian/territorial government officials was a vision imagined and implemented by land claims negotiators, starting with the IFA in the 1970s and 80s. The resulting environment and natural resources management regimes in the Mackenzie Valley and in the ISR are depicted below, including the various boards with co-management responsibilities.

KEY TERMS:

- **Co-management**: Co-management has come to mean institutional arrangements whereby governments and Aboriginal groups (and sometimes other parties) enter into formal agreements confirming their respective rights, powers and obligations with reference to the management and allocation of resources in a particular area of crown lands and waters (Royal Commission on Aboriginal Peoples, 1997).
- **Co-management boards,** or boards, are comprised of members who are nominated or appointed by the territorial, federal and Aboriginal governments and land claim beneficiaries, which means that decision-making about land, resources and/or the environment is shared.

1.4.1 Co-management in the Mackenzie Valley

In 1998, the MVRMA established a number of independent boards that were designed to run the various stages in the environmental impact assessment, regulatory, and land use planning processes. Although the federal government enacted this legislation, it was a requirement of Mackenzie Valley land claims. The legislation gives Aboriginal people of the Mackenzie Valley, NWT, a greater say in resource development and management. This is, in part, realized through independent co-management boards, where Aboriginal land claim organizations nominate half of the board members, and the federal and territorial governments nominate the other half of the board members (Figure 3).

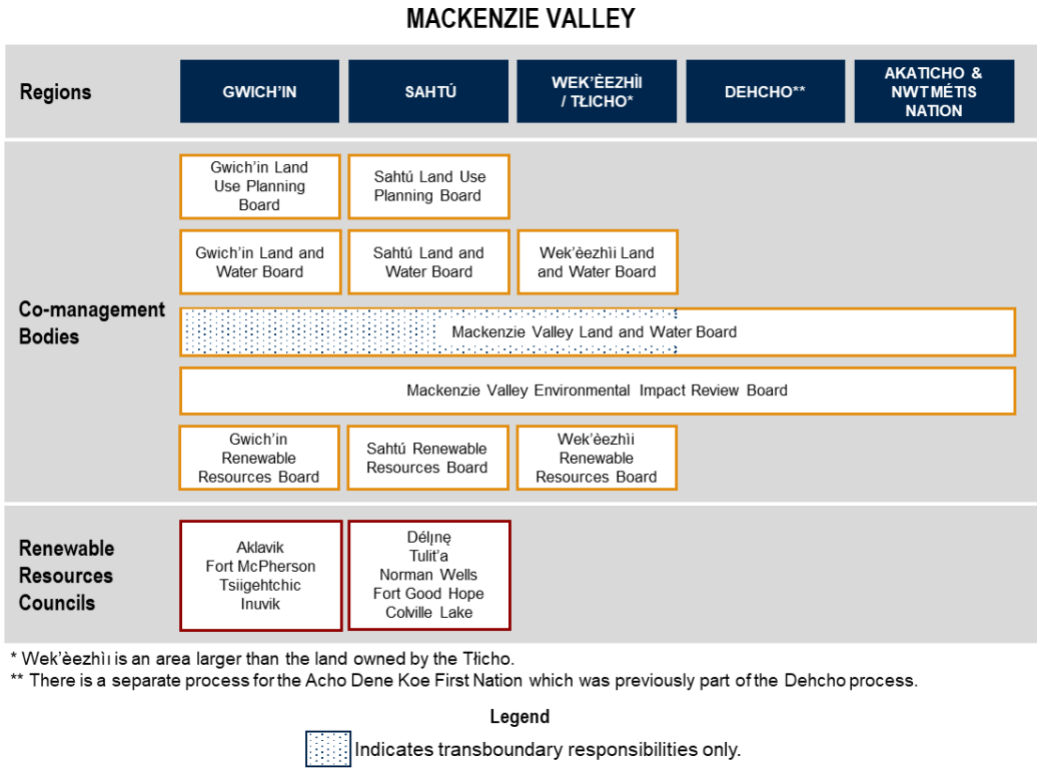


Figure 3: Co-management in the Mackenzie Valley

1.4.2 Co-management in the Inuvialuit Settlement Region

The Inuvialuit, along with the governments of Canada / the NWT / the Yukon share management responsibilities in the ISR through environment and natural resource management bodies (Figure 4). The environment and natural resource management system in the Western Arctic of the NWT and Yukon North Slope is composed of Inuvialuit organizations and co-management boards.

Inuvialuit organizations include:

- The Hunters and Trappers Committee (HTC) in each of the six ISR communities, and
- The Inuvialuit Game Council (IGC), which represents the collective Inuvialuit interest in wildlife.

Each co-management board is comprised, equally, of government and Inuvialuit-nominated membership. Co-management boards in the ISR include: Wildlife Management Advisory Council (WMAC-NWT), Wildlife Management Advisory Council (WMAC-North Slope [NS]), Fisheries Joint Management Committee (FJMC), Environmental Impact Screening Committee (EISC), and Environmental Impact Review Board (EIRB). The IWB and NWT Surface Rights Board were created through territorial legislation, not the IFA.

The Joint Secretariat – The Joint Secretariat (JS) was established after the signing of the IFA, with the purpose of providing technical, administrative, and logistical support to the IGC and five of the co-management bodies – excluding the WMAC dedicated to the Yukon North Slope. WMAC-NS has its own Secretariat office in Whitehorse, Yukon.

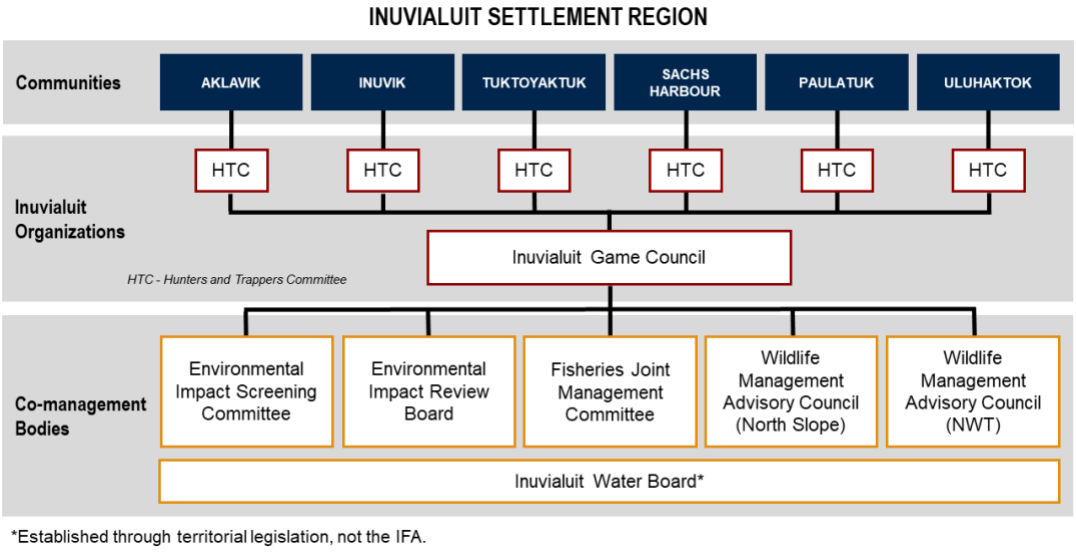


Figure 4: Co-management in the ISR

1.5 INTEGRATED AND COORDINATED PROCESSES

NWT co-management bodies with management responsibilities have a duty to ensure that the recommendations and/or decisions they make protect the environment and its inhabitants from any significant adverse impacts of proposed developments. This includes consideration of the economic, social and cultural well-being of residents and communities of each region and the territory as a whole.

To enable the Bodies to meet their duties, several key processes exist in the management of the environment and natural resources in the NWT (Figure 5).

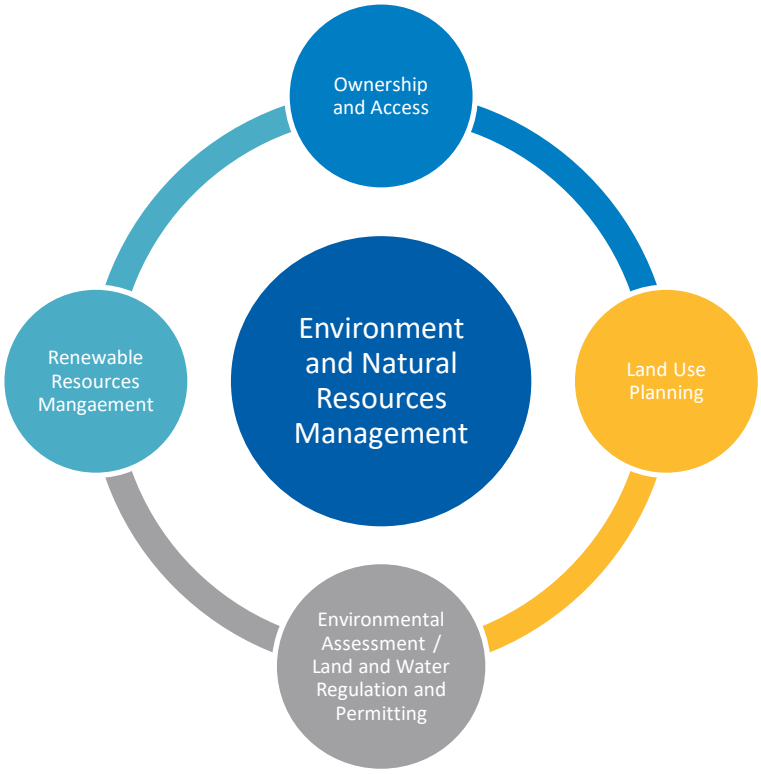


Figure 5: Environment and natural resources management processes in the NWT

The processes identified in Figure 5 are detailed individually, below.

1.5.1 Ownership and Access

In the NWT, lands are owned or managed by one of the following:

- Government of Canada (Crown Land)
- Government of the Northwest Territories, Department of Lands (Territorial Lands)
- Aboriginal (as outlined in Treaties, Land Claims, and Self-government Agreements)
- Private landowners

The federal government owns large areas of land, including surface and subsurface rights. Individuals and companies can apply for permission to access and use resources in or on the ground and must comply with relevant acts and regulations.

Through the finalization of land, resources and self-government agreements, Aboriginal governments have established rights for ownership of land and resources in defined areas. The Inuvialuit, Sahtú, Gwich'in and Tłı̨chǫ now manage significant areas of their own land in the NWT, with a combination of surface and sub-surface rights.

Each of these Aboriginal governments has established their own land administration systems to manage access to their lands and resources, by individuals and companies.

1.5.2 Land Use Planning

In the NWT, land use planning is a critical part of effective management and use of lands and resources. Land use plans help create certainty for if, where, when and how development can take place in a specific region.

While the principles of what land use planning should achieve are generally consistent, the approaches to developing land use plans vary by region within the NWT.

In the Mackenzie Valley, each land use planning board is mandated through the MVRMA to develop a plan to guide the use of Crown, Aboriginal-owned land and other private lands, as well as provide direction with respect to conservation, development and the use of land, water and other resources. The Gwich'in and the Sahtú are the only management areas in the Mackenzie Valley with established land use planning boards because of differences in their land claims.

The ISR, through the IFA, has a provision that a land use planning board could be created –but has not as of yet. In the ISR, conservation planning occurs both regionally and at the level of the community. Community Conservation Plans (CCPs) are community-based planning documents developed for each community in the ISR.

1.5.3 Environmental Assessment / Land and Water Regulation and Permitting

Various boards and other agencies are responsible for environmental assessment and the use of land and water and the deposit of waste on both public and private lands.

The MVRMA replaces the *Canadian Environmental Assessment Act* (*CEAA*) in the NWT, except in certain circumstances. In the ISR, the IFA environmental impact assessment system and *CEAA* apply. The *Impact Assessment Act*, introduced by the Trudeau government in 2018 to replace *CEAA*, is currently undergoing review by Parliament.

Under the MVRMA, environmental effects include impacts to the human environment.

For exact definitions and environmental assessment processes in the Mackenzie Valley, refer to:

- *MVRMA*: http://laws-lois.justice.gc.ca/eng/acts/m-0.2/FullText.html

To see how they are conducted in the ISR, refer to *CEAA*, the Environmental Impact Screening Committee (EISC), and the Environmental Review Board (EIRB).

- *CEAA*: www.ceaa-acee.gc.ca
- EISC: http://www.screeningcommittee.ca/
- EIRB: https://eirb.ca/

1.5.4 Renewable Resources Management

The sustainable management of renewable resources involves meeting the needs and/or improving the quality of life for humans without increasing the use of such resources beyond the capacity of the environment to supply them.

Federal, territorial, and Aboriginal governments, land claims-based institutions of public government, and local groups all have a role to play in managing wildlife and renewable resources in the NWT.

In areas with settled land claim agreements, wildlife management or renewable resources boards act as the regional authority for wildlife, forest and plant management. The co-management system enables the participation and ongoing involvement of Aboriginal organizations in un-settled regions, as well.

In the Mackenzie Valley:

- Several co-management boards act in the public interest to manage renewable resources—that is, wildlife, fish, plants, forests, and protected areas—in their respective regions.
- In settled claim areas in the Mackenzie Valley, renewable resources boards have been established through land claim agreements in the Wek'èezhìı, Gwich'in, and Sahtú regions.
- The Gwich'in and Sahtú agreements also include provisions for renewable resources councils, which represent community interests in renewable resources management.
- In areas with unsettled land claims, structures for the management of renewable resources have yet to be established and will be addressed as part of ongoing land claims negotiations. In the meantime, the GNWT fulfills this function.

In the Inuvialuit Settlement Region:

- In the ISR, the IGC has the responsibility to represent the collective Inuvialuit interest in wildlife.
- HTCs have similar responsibilities in individual communities and make appointments to the membership of the IGC.
- The IGC in turn appoints members to all IFA-based co-management bodies.
- The IGC, the WMACs, and the FJMC make recommendations to ministers such as the Minister of Environment and Climate Change Canada, the Minister of Fisheries and Oceans Canada, and the GNWT on matters pertaining to wildlife and species at risk.
- The IGC, the WMACs, and the FJMC are also all invited to provide evidence to the EISC and the EIRB during the environmental screening and review process of activities or proposed projects in the region.

Chapter 2: Actors in Renewable Resources Management

2.1 OVERVIEW

Renewable resources management in the NWT requires the careful coordination and integration of expertise from federal, territorial, and Aboriginal governments, land claims-based institutions of public government, and local groups. These institutions and management bodies have specific responsibilities – yet the system cannot be viewed as simply as the sum of its parts. This chapter delves into the responsibilities of each level of management.

2.1.1 Key Actors in Renewable Resources Management

Figure 6 shows the key actors in renewable resources management. Note that, although the boards involved in land use planning, land and water permitting and regulation, and environmental review and assessment are not pictured in the figure below, they too have important responsibilities in renewable resources management, as outlined under section 2.4 of this Guide.

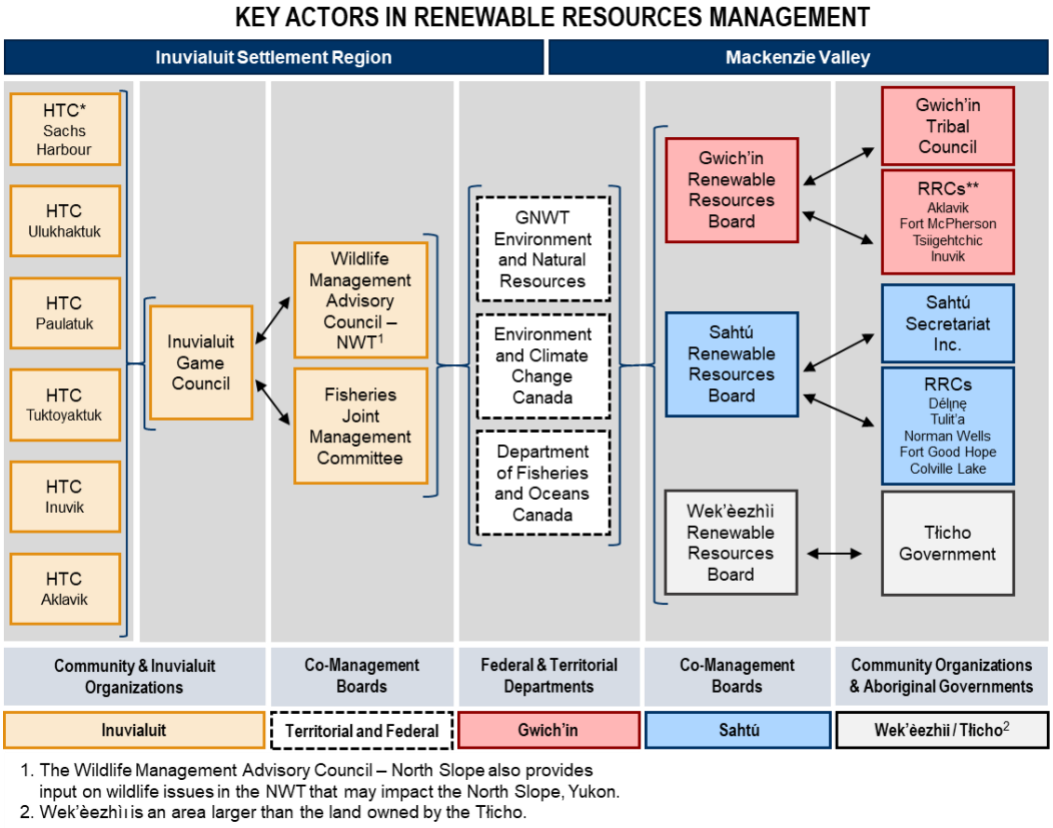


Figure 6: Key actors and decision-makers in renewable resources management in the NWT

The following sections provide further details on the roles and responsibilites at each level of management.

2.2 FEDERAL

In the NWT, the federal and territorial governments share management responsibility for many renewable resources; the specific areas in which the federal government is involved, are:

- Species at risk
- Migratory birds
- Fisheries and fish habitat
- National parks
- Migratory bird sanctuaries
- National wildlife areas

These stewardship responsibilities are shared among several federal departments and agencies:

1. Environment and Climate Change Canada (ECCC) - Canadian Wildlife Service
2. Parks Canada
3. Department of Fisheries and Oceans (DFO)

2.2.1 Department of Environment and Climate Change Canada

Environment and Climate Change Canada (ECCC) accomplishes its mandate with respect to renewable resources management through the Canadian Wildlife Service (CWS). This includes the management and protection of migratory birds, the management of migratory bird sanctuaries, the implementation of the *Species at Risk Act* (SARA), the protection of nationally significant habitat of species at risk, and of national wildlife areas. CWS also conducts research and monitoring on wildlife and migratory birds.

The following section provides a description of the acts applicable to renewable resources management administered by ECCC:

- *Species at Risk Act*
- *Migratory Birds Convention Act*
- *Canada Wildlife Act*

Species at Risk Act

The *Species at Risk Act* is the federal government's legislation to list and manage species at risk and prevent wildlife species from becoming extinct by ensuring the necessary action for their recovery. It provides the framework for all levels of government to create legislation, programs, and policies to ensure the survival of species listed in the Act. It is administered by ECCC and implemented by the CWS, DFO, and Parks Canada. Under SARA, the federal government has responsibility over federal lands (national parks and reserve land), aquatic species (through DFO), and migratory birds.

Migratory Birds Convention Act

The *Migratory Birds Convention Act* gives the responsibility for conservation and management of bird populations to ECCC. The protection of migratory birds is accomplished through the provisions in the: migratory bird regulations, the migratory game bird hunting regulations, and the migratory bird sanctuary regulations (Table 1).

Table 1: Summary of regulations under the Migratory Birds Convention Act

Summary of Regulations under the *Migratory Birds Convention Act*			
Regulation	Migratory Bird Regulation	Migratory Bird Sanctuary Regulations	Migratory Bird Hunting Regulations
Summary	Regulates: • possession • export • hunting • habitat destruction • sale of • transportation • baiting • research permits • raising migratory birds • managing nuisance & overpopulated species • taxidermy permits • ministerial powers	Outlines permissible activities, as well as those activities considered an offence (habitat destruction, hunting, etc.) within a migratory bird sanctuary. Provisions for permits to conduct works otherwise considered an offence.	Outlines the way migratory bird hunting can occur: • locations • time periods • species • harvest and • possession limits • equipment regulations

Canada Wildlife Act

The *Canada Wildlife Act* allows for the creation of national wildlife areas to preserve habitat that is critical to wildlife and migratory bird species. There are currently no national wildlife areas in the NWT; however, new area in Dehcho Edéhzhíe is promised to become one.

2.2.2 Parks Canada

Parks Canada has the mandate to protect and preserve nationally significant examples of the natural and cultural heritage of Canada. This is accomplished through the creation of a system of national parks that have the role to protect the ecological integrity of the environment for future generations. The management of these parks is outlined in the *Canada National Parks Act*.

Canada National Parks Act

The *Canada National Parks Act* defines the primary mandate of Parks Canada, which is to protect natural and cultural heritage for the benefit, education, and enjoyment of all Canadians. Parks Canada's primary goal is to preserve and restore the ecological integrity of one representative area of each natural region through a system of parks. National parks protect land and manage renewable resources through the following actions/regulations:

- Management plans outlining ecological integrity objectives and, for renewable resource protection, with scheduled ministerial review every 10 years
- Prohibition of sale or disposal of the lands
- Prohibition of land occupation, unless under provisions of a land claim agreement
- Ban of activities that will impair the wilderness character of a park
- Extensive protection, through several regulations, of flora, fauna, soil, waters, air quality, and natural features
- Management of fishing and hunting
- Enforcement of the Act via park wardens

As the result of land claim agreements, many Aboriginal people in the NWT have certain rights to harvest renewable resources within national parks. The national parks in the NWT are often co-managed between Parks Canada and a designated Aboriginal organization.

2.2.3 Department of Fisheries and Oceans Canada

DFO has a broad mandate that includes the management of:

- Fisheries, aquatic habitat, and aquaculture
- The Coast Guard and marine charting
- The aquatic aspects of the *SARA*
- Participation in renewable resource co-management boards (e.g., DFO appoints two members to the FJMC in the ISR)
- Marine Protected Areas and oceans management

DFO has certain responsibilities for managing fisheries and fish habitat; these authorities are assigned to it through the *Fisheries Act*. DFO also has responsibilities for the management of aquatic species under the *SARA*, and of Coast Guard services under the *Oceans Act* (Table 2).

Table 2: Summary of regulations related to fish and marine mammals

Summary of Regulations Related to Fish and Marine Mammals			
Regulation	Oceans Act	Fisheries Act	Species at Risk Act
Summary	Regulates the Canadian Coast Guard, defines offshore economic limits, as well as the management of marine ecosystems and waters.	Fisheries protection and pollution prevention, the issuance of licences for undertakings that result in harm to fish, and enforcement authorities.	Protection and management of aquatic species and aquatic habitat listed under the SARA.

Fisheries Act / Authorisations

The *Fisheries Act* gives protection to fish and fish habitat and requires that projects or undertakings happening on or near water avoid causing serious harm to fish. Serious harm is defined in section 35 of the *Fisheries Act* as “the death of fish or any permanent alteration to, or destruction of fish habitat.”

The Act includes all fish and fish habitat (waters) that:

- Are part of a commercial, recreational or Aboriginal fishery
- Fish that support the above fisheries (the smaller prey species that may not be fished but that form part of the ecosystem and allow the larger fished species to survive)
- Developers must avoid harm to fish and fish habitat and are responsible for mitigating these impacts. When a proponent is unable to fully mitigate these impacts, they require what is known as a *Fisheries Act* authorisation. DFO inspectors are responsible for the enforcement of the Act.
- Currently there are several types of waters where a list of common undertakings does not require *Fisheries Act* authorisations; best practices to avoid serious harm, however, are required. These waters include areas that typically do not have fish or fish habitat:
    1. Roadside drainage ditches
    2. Quarries
    3. Private ponds
    4. Agricultural drainage ditches
    5. A water body that does not ever contain fish

It should be noted that not every undertaking may occur in these waters without an authorisation. Both the water body and the undertaking must be on the list of exemptions in order to avoid the requirement for a *Fisheries Act* authorisation. The list outlining the undertakings that do not require a *Fisheries Act* authorization includes common activities, such as:

- Bridge and culvert construction/repair above the high-water mark
- Dock construction
- Small scale dredging

Northwest Territories Fishing Regulations

In addition to the authority granted under the *SARA*, the *Oceans Act*, and the *Fisheries Act*, DFO also regulates specific aspects of the fishery in the NWT. These regulations are contained in the *Northwest Territories Fishing Regulations*. Within the NWT, fishing regulations apply to:

- Type of gear allowed (gill nets, angling, etc.)
- Licensing requirements
- Subsistence fishing
- Domestic fishing regulations
- Commercial fishing regulations
- Sport fishing regulations
- Regulations on the sale of fish
- Size limits
- Closures and restricted fisheries
- Ice bridge construction, transportation of logs in water, and regulation of gravel removal from streams

The enforcement aspects of the sport fishing portions of the federal *Fisheries Act* have been delegated to the GNWT.

2.3 TERRITORIAL

2.3.1 GNWT Environment and Natural Resources (ENR)

The GNWT has the legislative authority for several renewable resources, including forestry resources and wildlife. As of April 1, 2014, the GNWT assumed new roles with respect to land and water management as part of devolution.

Land claims gave Aboriginal organizations rights, including participatory rights in relation to renewable resource decision making. The legislative framework is often territorial – for wildlife and forest for example. GNWT has legislation but it must make its legislation work with the land claim framework because it is paramount over territorial legislation.

In addition to appointing certain members, the GNWT contributes data and provides information from the research it conducts to the co-management boards. For example, renewable resource boards may formally request information under the control of ENR for use in the management of wildlife, and the Minister is obligated to provide the information as soon as practicable. The GNWT also works with boards to share information with communities and participate in information sharing, consultation, or engagement sessions. As the GNWT's role varies by region and by board, further detail is outlined below.

Some of ENR projects and activities related to renewable resources include:

- Reviewing applications for development projects to assess the potential impacts related to wildlife, water, and forests
- Managing most terrestrial non-land resources in the NWT (forests, water wildlife, non-migratory birds)
- Participating in environmental assessments as a Responsible Minister
- Conservation planning initiatives such as supporting the Department of Lands' work on land use planning and conservation network planning

ENR has decision-making authority for:

- Type A Water Licences or Type B Water Licences (where a hearing has been held)
- Forestry permits and licences
- Wildlife management permits and licences
- Wildlife research permits
- Changes to wildlife regulations for management actions

The GNWT Environment and Natural Resources (ENR) has responsibilities under several pieces of legislation. Key acts and regulations covered in this course include:

- *Wildlife Act (2014)*
- *Species at Risk Act (NWT) (2009)*
- *Protected Areas Act (2019)*
- *Forest Management Act (1988)*
- *Waters Act (2014)*
- *Northwest Territories Fishery Regulations (2012)*

The following sections describes the pieces of legislation listed above.

Wildlife Act (2014)

GNWT responsibility for wildlife management flows from the *Northwest Territories Act* (and *Wildlife Act*). The current *Wildlife Act* applies to vertebrates, other than fish, that are naturally found wild in the NWT. This includes mammals such as big game, small game and furbearers, birds, reptiles, and amphibians. The lead department for this Act is ENR. The *Wildlife Act* outlines the GNWT's responsibilities with respect to these renewable resources and includes:

- Licensing
- Wildlife management
- Hunting
- Possession and transportation of wildlife
- Enforcement
- Penalties and offences
- The requirement for a developer to provide a wildlife management and monitoring plan
- Emergency wildlife protection measures

As the above responsibilities for wildlife have the ability to impact Aboriginal and treaty rights, as well as rights granted under land claim agreements, management actions are developed based on input, consultation, and recommendations from the co-management boards in the settlement regions, and Aboriginal governments in unsettled regions. GNWT are the ultimate managers/decision-makers and must conduct any research needed to support such decision-making.

Wildlife Act Phase 2 Regulations (2019)

The NWT *Wildlife Act* (2014) allows for the development of regulations to implement the Act. The *Wildlife Act Phase 2 Regulations* came into force on July 1, 2019 following three years of extensive consultation and collaboration with Indigenous governments and organizations, wildlife co-management authorities, hunters, industry, tourism groups, and the public. The new regulations address issues raised during the development of the *Wildlife Act*, including:

- The import of harmful species, such as mule and white-tailed deer, llamas, alpacas, domestic sheep and domestic goats
- Additional habitat protection for bats and raptors
- The declaration of wild pigs as a pest species
- Conservation of boreal caribou
- Hunter training requirements
- Wildlife management and monitoring by industry

Guidelines have also been prepared to support the regulations for Wildlife Management and Monitoring Plans and provide clear expectations for developers on how to minimize impacts on wildlife and wildlife habitat.

The new regulations do not address the use and possession of drones while hunting. Additional collaborative work with the co-management partners are required before moving forward.

(Environment and Natural Resources, 2019)

Species at Risk Act (NWT) (2009)

The *Species at Risk (NWT) Act* came into force in February 2010 and provides a process and tools to identify, protect and recover species at risk in the Northwest Territories. It allows for concerns about species to be addressed at the NWT level. The *Species at Risk (NWT) Act* establishes two groups to assess, manage and recover species at risk: the Conference of Management Authorities and the Species at Risk Committee (Environment and Natural Resources, 2013).

The following are the status categories used:

- NWT List of Species at Risk
    - Extinct – no longer exists anywhere
    - Extirpated – no longer exists in the wild in the NWT
    - Endangered – facing imminent extirpation or extinction
    - Threatened – likely to become endangered if nothing is done
    - Special Concern – may become endangered or threatened because of threats and biological factors
- Assessed but not listed
    - Not at Risk – not currently at risk of extinction
    - Data Deficient – not enough information to determine status

Protected Areas Act (2019)

The Protected Areas Act enables the establishment of permanent protected areas in the Northwest Territories. The Act explicitly recognizes and affirms Aboriginal and treaty rights, including the commitments of land, resources and self-government agreements, and recognizes the role of co-management bodies.

Forest Management Act (1988)

Forest use is governed by the *Forest Management Act* and Forest Management Regulations, and is administered by ENR. The Act enables the issuance of the following authorizations to harvest timber such as a Forest Management Agreement, a Timber Cutting License, a Timber Cutting Permit, and a Timber Transport Permit (Government of Northwest Territories).

Forest Act (proposed)

Proposed to replace *Forest Management Act* of 1988, the *Forest Act* intends to bring NWT legislation in line with the many values and pressures on the forest, redefine NWT forests as an ecosystem, and reconsider the types of authorizations and their need for regulation. Should this legislation be passed, it would fall under ENR's jurisdiction.

Waters Act (2014)

The *Waters Act* came into force on April 1, 2014. It provides the GNWT with authority related to the permitting and use of water and the disposal of waste in bodies of water in the territory.

The GNWT has the legislative authority to make regulations under the Act to:

- Establish water management areas

- Define process, substances, classes, and concentrations of substances which constitute waste
- Determine thresholds for Type A and B water licences
- Set out Board procedures, forms, reports, records, samples, applications and feeds.
- Set the amount of security that may be required
- Establish standards for water quality, effluent and building works
- Set out the duties and powers of analysts and inspectors

The former federal *Northwest Territories Waters Act* and its regulations are now contained in the *Mackenzie Valley Resource Management Act*. This allows Canada to continue to manage federal lands that did not transfer to the GNWT, such as Contaminated Sites (Environment and Natural Resources, n.d.).

Northwest Territories Fishery Regulations (2012)

GNWT ENR officers are cross-appointed under the *Fisheries Act* and carry out the enforcement of sport fishing regulations, and sport fishing licenses may be purchased through their offices. These responsibilities were delegated from DFO through the *Fisheries Act*.

2.3.2 GNWT Department of Lands

The GNWT, Department of Lands is responsible for the management and administration of all public lands in the Northwest Territories, including:

- Administration and management of Territorial and Commissioner's Land
- Land use sustainability standards, guidelines and policies
- Land use initiatives
- Project assessments
- Land use planning
- Land use administration, including permitting and securities
- Compliance and enforcement of land use, including inspections

GNWT Lands' responsibilities stem from several pieces of legislation and regulations: the *Northwest Territories Lands Act*, *Commissioner's Land Act*, the *Area Development Act*, the *Surface Rights Board Act*, the *Mackenzie Valley Resource Management Act*, and the *NWT Devolution of Lands and Resources Agreement*.

For more information on these acts and the responsibilities of GNWT Lands, see: https://www.lands.gov.nt.ca/en/policies-and-legislation (Department of Lands, n.d.).

2.4 REGIONAL

The NWT is recognized as a world leader in the successful co-management of wildlife, lands, and other resources. As outlined in Chapter 1 of this Guide, the responsibility for wildlife management is shared between government, boards, and communities and was set up as a result of land claim agreements. Co-management boards provide direct involvement for the land claimant groups in wildlife management in their claimant area and region and are consulted

when any wildlife regulations, policies, or legislation is proposed. Wildlife management or renewable resources boards (co-management boards) have been established as the main instruments of wildlife management in areas where land claims are settled.

Before diving into the roles and responsibilities of the renewable resources boards and councils, it is important to recognize the other regional players – namely, land use planning boards, land and water boards, and environmental assessment and review boards – and the key processes involved with each. Refer to Figure 5 as a reminder of how these processes fit together. Note that the descriptions below represent a high-level overview of these processes, which in practice are different in the Mackenzie Valley compared to the ISR.

2.4.1 Land Use Planning

Land use plans, where they exist, stipulate where, when and how development can take place in a specific region. They can therefore stipulate land, water and other resources that should be conserved or protected, or be subject to only certain kinds of development, in order to ensure that wildlife and other conservation measures are employed.

Land use planning involves working with communities, industry, government and other stakeholders to define their land use issues, and considers both traditional and scientific knowledge, and biophysical and cultural values. Land use planning boards establish management zones and conditions associated with development activities (sensitive areas identified or protected in zoning policy).

In the Mackenzie Valley, the Gwich'in and the Sahtú Land Use Planning Boards fulfill these functions, and these boards may make a conformity determination on a particular land use activity. The conformity determination of the Board is final and binding. Plans are reviewed every five years. While there is no land use planning board for Wek'èezhìı, the Tłı̨chǫ Government has produced the Tłı̨chǫ Land Use Plan, which is specific to the lands owned by the Tłı̨chǫ Government.

In the ISR, CCPs fulfill the land use planning function. CCPs are endorsed by the IGC, but they are not legally binding documents. HTCs are responsible for initiating the review of CCPs every two years so that they stay current, while CCP Working Groups are responsible for conducting the reviews and updates, led by WMACs and FJMC (Inuvik, WMAC, and JS, 2008).

2.4.2 Land and Water Regulation and Permitting / Screening

All proposed developments and activities that require a license, permit, or other authorisation, must go through a preliminary screening. For example, holders of mineral claims, quarry owners, timber companies, etc., will likely require a license or permit to undertake certain activities.

In the Mackenzie Valley, preliminary screening is carried out by the land and water boards, and in the ISR, it is conducted by the Environmental Impact Screening Committee (EISC). The preliminary screening is a quick review of a proposed development to decide if it might have significant adverse impacts on the environment or might cause public concern. Impacts could include potential effects on animal migration patterns, such as caribou; on the quality of water in rivers which could then impact fish; or on various plants. If the proposed project is deemed to potentially cause significant adverse impacts, it is then referred to environmental

assessment/review (see below). If not, then the application can proceed to the permitting and licensing process, carried out by a land and water board, or other regulator.

The permitting and licensing process can include stipulating certain terms and conditions that the developer/other party must abide by in order to ensure minimal impacts on renewable resources.

Renewable resource boards in the Mackenzie Valley, or the IGC, the WMACs, and the FJMC in the ISR, can provide evidence during the screening process on the potential impacts to renewable resources – such as wildlife and habitat, present or future wildlife harvesting, fish and marine mammals, aquatic habitat, as well as plants and forests.

Land and water boards carry out some additional roles related to renewable resources management: developing best practice guidelines and determining when enforcement and compliance is needed.

2.4.3 Environmental Assessment / Review

MVEIRB in the Mackenzie Valley and EIRB/government assessment and review bodies in the ISR conduct environmental assessments/reviews (which are public processes) and thoroughly study a proposed development in order to determine if the development is likely to have significant adverse impacts on the environment, or is likely to cause public concern. The environmental assessment/review considers impacts on renewable resources as they relate to such things as the well-being and way of life of Aboriginal people. There are various process steps which allow parties and the public to submit this information and for the Board to hear this evidence (e.g. participation in project scoping, public hearings, submitting written interventions and final arguments, etc.).

Proponents of the proposed development project / activities need to conduct studies on the potential impacts of their project as part of the process, and various boards and other agencies, including renewable resource boards in the Mackenzie Valley or the IGC, the WMACs, and the FJMC in the ISR, are also all invited to provide evidence during the environmental assessment/review. The review board needs to take all of the submitted information into consideration when it makes its recommendation on whether the development should be approved, with or without mitigation measures, or if more review is required.

KEY TERMS:

- **Mitigation measures:** Mitigation measures are actions that are meant to reduce the adverse impacts that will likely occur. These measures can include programs for the developer to do follow-up such as wildlife monitoring, analysis and management of the proposed project.

2.4.4 Renewable Resources Boards

Since renewable resources management is the principal role of the renewable resources boards, this section will explain the core functions and of each renewable resource board, with regional distinctions.

Renewable Resources Actors in the Mackenzie Valley

Gwich'in Renewable Resources Board (GRRB)

Formed in 1992 under the *Gwich'in Comprehensive Land Claim Agreement*, the Gwich'in Renewable Resources Board (GRRB) is a public institution with responsibilities to manage wildlife (and habitat) and forestry in the Gwich'in Settlement Area. The GRRB is comprised of six members and a chairperson. Three members are nominated by the Gwich'in Tribal Council (GTC), one by the GNWT, one from ECCC, and one from DFO. The board members are appointed by the federal government from the nominated candidates. Additionally, there are six alternate board members chosen in the same manner as the full board members. The six appointed members then nominate a chairperson who is then appointed by the federal government.

The GRRB is tasked with the establishment of proposed regulation of:

- Wildlife harvesting
- Commercial wildlife harvesting
- Commercial wildlife operations (guiding and outfitting, fishing lodges, fur farms, processing and marketing of wildlife and wildlife products, etc.)
- Forestry and plants
- Protected areas

The GRRB may develop management plans for the renewable resources that fall under its mandate. The management plans provide a process where a renewable resource can be managed to ensure its conservation and sustainable use. The GRRB may also make decisions with respect to:

- Approving management plans
- Approving the designation of conservation areas and listings under COSEWIC/SARA/Territorial Species at Risk
- Approving policies and plans relating to wildlife and wildlife habitat

The GRRB may also hold public hearings and shall hold them when establishing a total allowable harvest.

The GRRB forwards all decisions to the appropriate Minister, who within 60 days must accept, modify, or replace the decision. Proposed modifications and revisions are sent back to the GRRB with written reasons. It then has 30 days to respond with a decision. The Minister has an additional 30 days to accept, modify, or replace, and once again must provide his rationale in a written response. After this round of back and forth, the government must as soon as practicable implement the decisions of the board accepted by the Minister in the first round, and the decisions of the Minster in the second round (and decisions of the board should the Minister fail to respond and miss the time limits for response GCLCA 12.8.29 (c)).

The GRRB also plays an advisory role and the government shall seek its advice on any legislation or policies being proposed which will likely have an effect on wildlife or other renewable resources. Examples include establishing new parks, public education programs, research policies, and the establishment of new co-management bodies. The GRRB may advise the government on any matters within its mandate at any time, regardless of if the government has requested such advice. Additionally, it may also provide comments at the screening and impact assessment stages of a proposed development.

The GRRB also has its own research capability and conducts/participates in research that is related to its mandate—that is, all renewable resource and harvesting studies in its area. It is, however, expected to not duplicate the efforts that it otherwise has access to. To date, the GRRB has conducted or participated in a variety of research projects in the region.

ʔehdzo Got'ı̨nę Gots'ę́ Nákedı (Sahtú Renewable Resources Board, SRRB)

The ʔehdzo Got'ı̨nę Gots'ę́ Nákedı (Sahtú Renewable Resources Board) is the co-management board established in 1993 by the *Sahtú Dene and Métis Comprehensive Land Claim Agreement* (SDMCLCA, 1993) with a mandate in wildlife, habitat and harvesting. Its Dene name means Helpers of Trap People, and refers to the collaborative relationship with ʔehdzo Got'ı̨ne (local Renewable Resources) envisioned in the SDMCLCA. The Board's mission arises directly from three of the objectives outlined in Chapter 1 of the Land Claim:

- To recognize and encourage the way of life of the Sahtú Dene and Métis which is based on the cultural and economic relationship between them and the land;
- To provide the Sahtú Dene and Métis the right to participate in decision making concerning the use, management and conservation of land, water and resources;
- To protect and conserve the wildlife and environment of the settlement area for present and future generations.

The SRRB may hold public hearings and must forward decisions to the appropriate Minister in the same manner as the GRRB. A major turning point for the SRRB was the 2016 Bluenose East ʔekwę́ (Caribou) Hearing in Délı̨nę, where for the first time (the first time in Canada for a wildlife management authority), the Board had an opportunity to review a community conservation plan alongside the standard Government of the NWT management plan to address concerns about declining ɔekwę́ populations. The Board approved Délı̨nę's *Belare Wíle Gots'ę́ ʔekwę́ – Caribou for All Time* plan, and the Final Hearing Report charted a new path for collaborative resource management based on the best available evidence.

In 2017, following two decades of implementation and considering the spirit and intent of SDMCLCA objectives along with the outcome of the 2017 Hearing and direction from ʔehdzo Got'ı̨nę and leaders over the years, the Board formally adopted an approach rooted in Dene ts'ı̨lı̨ (Dene ways of life) and community conservation planning. The approach is youth-centered, supports Dene and Métis leadership development, draws upon Dene language, accounts for traditional knowledge and science, and addresses conditions of social and environmental change. The Board's new strategy signifies a shift towards a more holistic and more biocultural approach to conservation in the region. This is consistent with the principle outlined in Article 8(j) of the international Convention on Biodiversity that recognizes Indigenous knowledge and ways of life as integral to biodiversity.

The Board's Vision

Dene ts'ı̨lı̨ hı̨dó dəots'erádí goghá ts'eda - ʔełexé ɔeghálats'eda nę k'ə edəots'erədí. Our vision for Dene ways of life – working together to make a living on the land.

The SRRB and its partners are adapting an Australian Indigenous "Healthy Country Planning" model to the Sahtú cultural context. Collaborative development of community conservation plans provides a way of charting a path for maintaining healthy relationships among people, wildlife and habitat. The SRRB is empowered to approve conservation or management plans and designation of conservation areas, and approve policies and plans in national parks that impact wildlife harvesting

The advisory role of the SRRB is also similar to that of the GRRB, where it may comment on any matter that may impact wildlife in the Sahtú region, whether requested by the government or not. The SRRB also comments in the preliminary screening and impact assessment phases of a proposed development project. In the Sahtú, the Wildlife Studies Fund was created to implement traditional knowledge studies and scientific research necessary for the SRRB to carry out its duties. The SRRB is also responsible for designing and conducting harvest studies in conjunction with the local ɔehdzo Got'ı̨nę.

Wek'èezhìı Renewable Resources Board (WRRB)

Established in 2005 as part of the *Tłı̨chǫ Land Claims and Self-Government Agreement* (TA, 2005), the Wek'èezhìı Renewable Resources Board (WRRB) has primary powers for wildlife, fish, birds, forests and plants in the Tłı̨chǫ settlement region. The WRRB differs from the other two renewable resources boards in several ways—the number of members, the absence of RRCs and, most notably, the presence of a self-government agreement.

The Board is comprised of eight members and a chairperson. Fifty percent of the members are appointed by the Tłı̨chǫ Government, and the other fifty percent are appointed by the GNWT and the Federal Government (ECCC and DFO). The chairperson is nominated by the board members, and all appointing governments must approve of the nomination.

As with the other renewable resources boards, the WRRB reviews proposals and applications from Parties to the Agreement (GNWT, Tłı̨chǫ Government, and Canada) and academics, may hold public hearings, participates in working groups and committees, and starts/supports projects and programs related to renewable resources (WRRB, n.d.). The WRRB is a referral agency in the regulatory process related to land use permits and water licences; in other words, the WRRB must be copied and asked for comments on land use permits and water licences. The WRRB applies both Tłı̨chǫ Knowledge and science as required by the Tłı̨chǫ Agreement, supporting the Tłı̨chǫ philosophy of "Strong Like Two People" (WRRB, 2017b).

As described in the Tłı̨chǫ Agreement (s. 12.4.1), **the primary powers of the WRRB** are related to:

- Wildlife management
- Commercial harvests and commercial activities
- Forest/plant management
- Protected areas

In the Wek'èezhìı, the WRRB may also:

- Monitor, collect data or participate in research related to wildlife harvesting
- Develop and conduct public education programs on wildlife harvesting and management
- Exercise any other powers relating to wildlife harvesting, including those respecting enforcement
- Recommend actions for management of natural resources in Wek'èezhìı
- Determine a total allowable harvest level and allocation for any population of wildlife in Wek'èezhìı, except for fish

WRRB does not have authority respecting:

- Wildlife or wildlife habitat in a national park (although currently none exist in the region)
- Fish or fish habitat in Great Slave Lake

Renewable Resources Actors in the Inuvialuit Settlement Region

Under the IFA, three renewable resources boards with responsibilities for wildlife, fish, and marine mammals were established in the ISR in 1986. Currently, there is no board in place for the co-management of forestry resources. For the purposes of this course, the WMAC North Slope is not covered, as it deals with the portion of the ISR that is in the Yukon. The IGC, an Inuvialuit institution and not a co-management board, represents the collective voice of Inuvialuit on issues related to wildlife management.

Wildlife Management Advisory Council (WMAC-NWT)

As outlined in the IFA, the Wildlife Management Advisory Council (WMAC) is the primary instrument for the management of wildlife in the ISR. The Council is tasked with advising the appropriate Minister—ECCC (CWS) or GNWT (ENR)—on all wildlife matters such as:

Policies, management, regulations, research, and enforcement of wildlife or wildlife harvesting:

- Proposed wildlife legislation
- Land use planning processes, impact screening, and impact review
- The federal government's position for international initiatives
- The protection of wildlife habitat.

WMAC NWT is also responsible for:

- Preparing management plans
- Working with local resource councils or HTCs to determine harvest statistics
- Determining harvestable quotas for wildlife and migratory birds
- Making decisions on commercial harvests.

The council has six members and a chair; three members are appointed by the Inuvialuit through the IGC, two are appointed by the GNWT, and one is appointed by the federal government. The GNWT selects the chair with the approval of both the IGC and the federal government. The members each have a vote, and the chair votes only in cases where a tie occurs between the members.

The IFA provides for exclusive and preferential access to harvest various species of wildlife and asserts the conservation of wildlife as a founding principle. The WMAC-NWT manages wildlife for the benefit of all in the ISR, in a way that takes Inuvialuit rights into consideration; they must balance the interests of the Inuvialuit, non-beneficiaries, and the government when making decisions in accordance with these aspects of the IFA. WMAC-NWT makes decisions on allowable harvests on advice from the IGC and communities and sends them to the appropriate Minister. At this stage, should the Minister reject the decision, they must provide in writing their reasoning, as well as provide the opportunity for a process of further reconsideration and resubmission.

Fisheries Joint Management Committee (FJMC)

As outlined in the IFA, the Fisheries Joint Management Committee (FJMC) is the instrument for the management of fisheries and marine mammals, such as whales and seals, in the ISR. The Committee is made up of four members and a chairperson. The IGC and DFO each appoint two members. The four members appoint the chairperson.

The FJMC is tasked with:

- Determining harvest statistics
- Regulating non-beneficiaries' entry to private lands for sport fishing
- Allocating the subsistence quotas to the communities
- Advising the Minister of DFO on regulations, policies, research, administration, and developing international agreements relating to fish or marine mammals that will affect the ISR

The FJMC is also responsible for making recommendations to the Minister of DFO for:

- Subsistence quotas for fish
- Harvest quotas for marine mammals
- Inuvialuit commercial fishing
- Regulations on sport fishing and commercial fishing on Inuvialuit private lands
- Identification of waters on Inuvialuit private land where fishing is prohibited

The Minister may then accept and implement, reject, or modify the recommendations. If DFO rejects the decision, the Minister must provide the FJMC with the reasons for decision within 30 days. After receiving the written decision, the FJMC then has 30 days to respond with a further submission. This process may go back and forth several times. For conservation purposes, the Minister may impose an interim decision until such a time as an accepted recommendation from the FJMC is received. Interim measures may not be implemented by DFO without giving the FJMC sufficient notice to provide a recommendation.

Inuvialuit Game Council (IGC)

The Inuvialuit Game Council (IGC), established in 1983, is a regional Inuvialuit institution, based in the IFA, that represents the six community HTCs. The Council is composed of 12 members, two appointed by each community HTC. The chairperson is elected from the directors of all six HTCs.

The IGC is important, as it is the body that appoints the Inuvialuit representatives to the co-management boards established under the IFA and represents the interests of Inuvialuit on matters relating to wildlife, fish, and marine mammals in the ISR. The IGC advises on any matter relating to the management of wildlife or fisheries through either the WMAC/FJMC co-management structure or otherwise. This includes such things as advising the WMACs on policy,

and administration related to wildlife, conservation, research, management and enforcement, as well as reviewing and providing advice on existing and proposed wildlife legislation/regulations through the WMACs and appropriate government departments. The IGC also assigns and determines the community hunting and trapping areas in the ISR, as well as allocates Inuvialuit harvestable quotas among the communities, where appropriate. The IGC may also advise the federal government on new international positions and appoints members whenever possible or appropriate for any Canadian delegation that deals with international matters affecting wildlife harvesting by the Inuvialuit.

2.5 LOCAL

This section describes how NWT renewable resources management occurs at the local level.

2.5.1 Renewable Resources Councils – Mackenzie Valley

In the Mackenzie Valley, renewable resources councils (RRCs) are present in both the Sahtú and Gwich'in settlement regions and were created as a result of the Sahtú Dene and Metis Comprehensive Land Claim Agreement and the Gwich'in Comprehensive Land Claim Agreement. In the two regions, there is an RRC for each community. The RRCs were created to encourage local participation in the management of wildlife. The Tłı̨chǫ Agreement does not have provisions for an RRC, and there are no RRCs in their region.

The roles and structure of the RRCs in the Sahtú and the Gwich'in settlement regions are similar and include the following:

- Allocate the minimum harvesting needs levels amongst beneficiaries
- Manage harvesting methods, seasons, and locations in a way that conforms to established laws
- Participate in harvester surveys and harvest data collection
- Raise local wildlife issues with the renewable resources board
- Work on committees established by the renewable resources board
- Review development applications during the regulatory consultation process

2.5.2 Hunters and Trappers Committees – Inuvialuit Settlement Region

In the ISR, the hunters and trappers committees (HTCs) were created as a result of the IFA. All six communities in the ISR have their own HTC. The HTCs were established as a means of representing the interests of Inuvialuit in wildlife management at the community level. The roles and structure of the HTCs are described in the IFA and are summarized as follows:

- Advise the IGC on local wildlife issues
- Allocate the quotas established in the co-management process by WMAC and FJMC at the local/individual level (issue tags locally)
- Make bylaws governing harvesting rights
- Encourage Inuvialuit participation in conservation, research, management, utilization, and enforcement of renewable resources in their respective communities
- Participate in the harvester survey and collection of harvest data
- Work on committees established by the wildlife co-management boards
- Raise harvesters' local concerns with the appropriate co-management board, which may then form a recommendation to be reviewed by the appropriate Minister

2.6 SUCCESSES

Advisory Committee for Cooperation on Wildlife Management (ACCWM)

Region: Northwest Territories and Nunavut

Timeline: Ongoing

Background/Objective: The Advisory Committee for Cooperation on Wildlife Management (ACCWM) was created to share information and coordinate wildlife management between inter-jurisdictional wildlife management boards, with a particular focus on the management of trans-boundary caribou herds.

Key Players: A Memorandum of Understanding for Cooperation on Wildlife Management (MoU) was signed in 2008 by the Gwich'in Renewable Resources Board, the Tuktut Nogait National Park Management Board, the Wek'eezhii Renewable Resources Board, the Sahtú Renewable Resources Board, the Wildlife Management Advisory Council-NWT, the Kitikmeot Regional Wildlife Board (KRWB), and the Nunavut Wildlife Management Board (NWMB).

Significance: In 2016 the ACCWM convened its first status meeting, and Action Plans Cape Bathurst, Bluenose East and Bluenose West were completed, approved by consensus of Member Boards, and submitted to the Minister of ENR. Status meetings and Action Plan updates have taken place annually since that time. The ACCWM also has an Education and Communication Working Group that supports regional efforts to build awareness and understanding of caribou conservation efforts.

Key Resource: Taking Care of Caribou

Edéhzhié Protected Area

Region: Dehcho territory (Southwest NWT)

Timeline: Ongoing

Background/Objective: In 2018, Edéhzhié was established as an Indigenous Protected and Conserved Area (IPCA). Complementing that designation, Edéhzhíe will be designated a National Wildlife Area (NWA) in 2020 and will be protected and managed according to the *Wildlife Area Regulations* under the *Canada Wildlife Act*.

Key Players: A Management Board has been created for Edéhzhié through the Establishment Agreement. This Board includes representatives from Fort Providence, Jean Marie River, Fort Simpson, Wrigley, Dehcho First Nations, Canadian Wildlife Service.

Significance: The Dehcho First Nations and the Government of Canada will co-manage Edéhzhíe Protected Area. Under the 2018 Edéhzhíe Agreement, these parties agreed to act in the best interests of Edéhzhíe, and to both be responsible for its management and operation. These designations will allow the Dehcho First Nations and the Government of Canada to protect the ecological integrity of Edéhzhíe from future development.

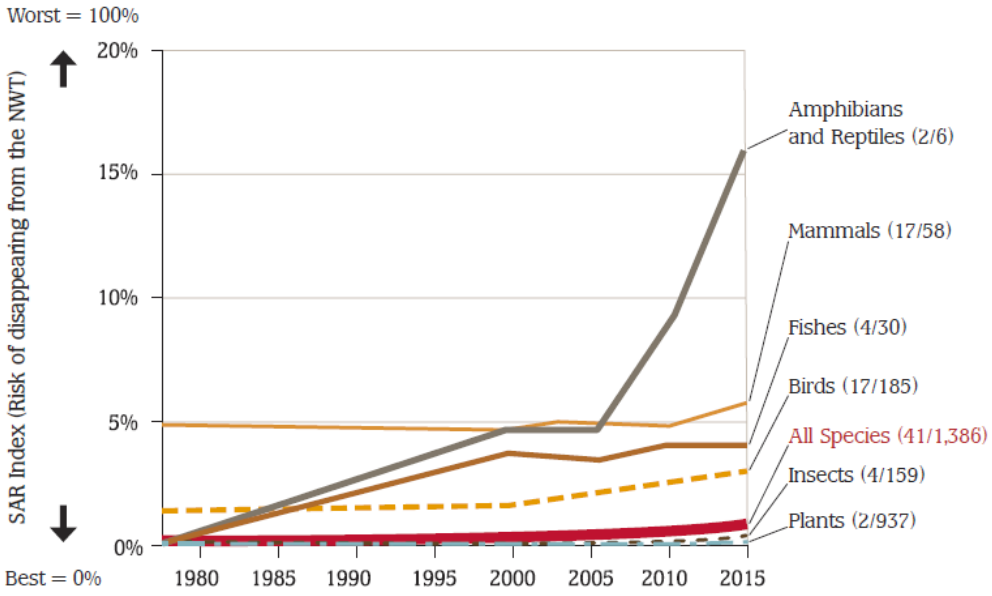
Key Resource: Edéhzhié Establishment Agreement

Chapter 3: Renewable Resources, Threats and Impacts

3.1 OVERVIEW

Many of the different resources within the Northwest Territories are exposed to similar threats and/or challenges; many of these have ties to human activity and, as such, if appropriate management measures are put in place, they can be managed. Some of the common threats include harvesting (either of the resource itself or something it depends on), industrialization (e.g. cutlines, noise/light/environmental pollution), the effects of climate change (e.g. floods, habitat degradation) and forest fires.

The Species at Risk Index (SAR Index) is based on quantitative assessments and projections of extinction risks and provides an overview of the risk of the species becoming extinct. In the NWT, the SAR Index has been slowly increasing (see Figure 7) and while overall, just about 1% of all tracked species in the NWT are at risk of becoming extinct, some groups (e.g. amphibians and reptiles) are more at risk than others (e.g. plants) (GNWT, 2018b).



Numbers in parentheses are the number of species at risk/total number of species tracked for each group. Detailed information is available from the Department of Environment and Natural Resources, GNWT.

Source: (GNWT, 2018b)

Figure 7: Northwest Territories Species at Risk Index

This Guide pays special attention to renewable resources of interest (e.g. caribou, bears, migratory birds, fishes and plants) but it should be noted, as suggested by the figure above, that there are 41 species at risk of disappearing from the NWT. Based on the best available information, this Guide provides an overview on the population, habitat, legislation and threats that affect the existence of these key species. Table 3, below, provides a summary of the listing status for the species covered.

Table 3: Summary of the status of species at risk that covered in this Reference Guide

	Species	Status in NWT		NWT General Status Rank*	Status in Canada		South Slave	Dehcho	North Slave/Tłı̨chǫ	Sahtú	Gwich'in	Inuvialuit
		SARC Assessment	NWT List of Species at Risk		COSEWIC Assessment	Federal Species at Risk Act list						
Caribou	Barren-ground Caribou	Threatened	Under consideration	At Risk	Threatened	Under consideration	✓	✓	✓	✓	✓	✓
	Boreal Caribou	Threatened	Threatened	At Risk	Threatened	Threatened	✓	✓	✓	✓	✓	✓
	Dolphin and Union Caribou	Special Concern	Special Concern	Sensitive	Endangered	Special Concern						✓
	Northern Mountain Caribou	Not assessed	No status	Sensitive	Special Concern	Special Concern		✓		✓	✓	
	Peary Caribou	Threatened	Threatened	At Risk	Threatened	Endangered						✓
Bears	Grizzly Bear	Special Concern	Under Consideration	Sensitive	Special Concern	Under Consideration	✓	✓	✓	✓	✓	✓
	American Black Bear*	-	-	Secure	Not at Risk	-	✓	✓	✓	✓	✓	
	Polar Bear	Special Concern	Special Concern	Sensitive	Special Concern	Special Concern						✓
Fish	Bull Trout	Not applicable	Not applicable	Sensitive	Special Concern	Under Consideration	✓	✓		✓		
	Dolly Varden	Not applicable	Not applicable	Sensitive	Special Concern	Special Concern				✓	✓	✓
	Northern Wolffish	Not applicable	Not applicable	At Risk	Threatened	Threatened						✓
	Shortjaw Cisco	Not applicable	Not applicable	At Risk	Threatened	No status	✓	✓	✓	✓		
	Inconnu (coney)*	Not applicable	Not applicable	Sensitive	-	-	✓	✓	✓	✓	✓	

Adapted from: (GNWT, 2018b) and * (GNWT, 2013a)

3.2 MAMMALS

This section highlights two types of the many mammals at risk and of critical importance to the public in the NWT: caribou and bears.

3.2.1 Caribou

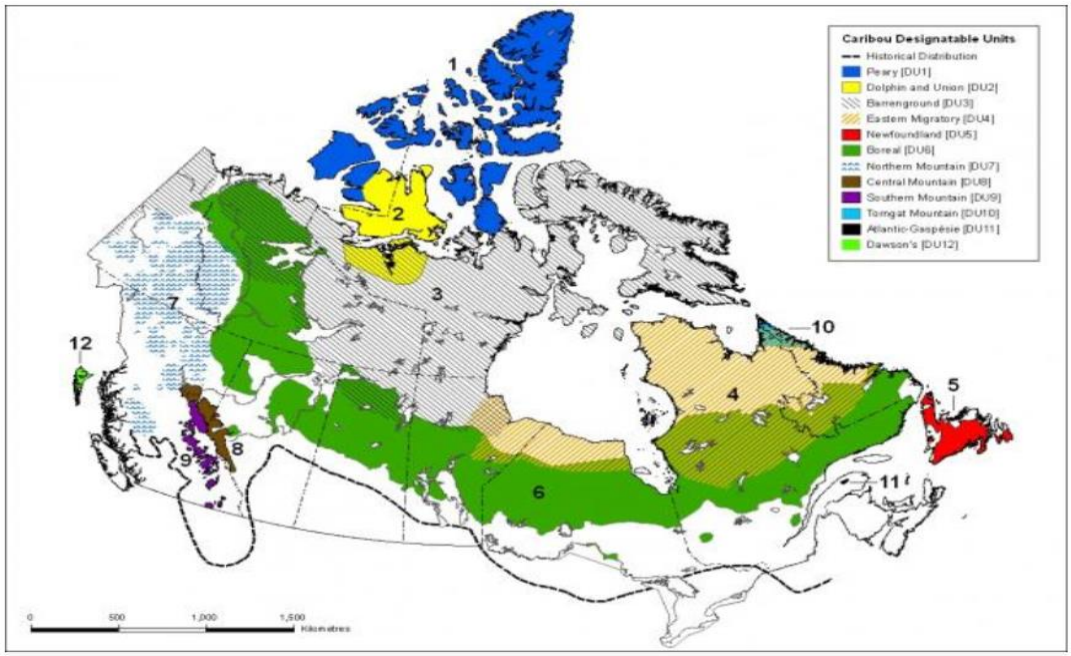
For many years, caribou and the issues surrounding them have been a central point of discussion in wildlife management and are often a central point of concern with regards to the management of harvests and development projects. Due to their importance, both to traditional economy and culture, they are arguably the most important species of wildlife in the NWT.

Photo by Chuck Blyth

Figure 8: Photo of caribou swimming in the Wind River

Habitat/Population Dynamics of Caribou

There are five subspecies of caribou found in the NWT: Peary caribou, Dolphin and Union caribou, Northern Mountain caribou, Boreal caribou, and Barren-ground caribou (GNWT, n.d.) (Figure 9).



Source: (COSEWIC, 2011)

Figure 9: Subspecies of Caribou in Canada.

About Barren-Ground Caribou

The harvesting of barren-ground caribou, the most abundant and widespread type of caribou in the NWT, is central to the cultural, social and spiritual well-being of many communities of Aboriginal peoples in the NWT. The populations of barren-ground caribou are declining however and as of July 2018, eight of the nine herds were listed as species at risk under the NWT Species at Risk legislation. This is related to multiple pressures facing caribou including weather, disease, food availability, climate change, harvesting, and industrial development.

(Government of Northwest Territories, 2018)

Legislation Affecting Caribou

In the NWT, Boreal caribou, Northern Mountain caribou, Barren-ground caribou, Peary caribou, and Dolphin and Union caribou are all listed as species at risk under federal and/or territorial species at risk legislation (e.g. the federal *Species at Risk Act*, and the *Species at Risk (NWT) Act*). Additionally, there are management obligations under the *Wildlife Act*, the *Mackenzie Valley Resource Management Act*, and the land and self-government agreements (GNWT, n.d.).

Threats to Caribou and Other Management Considerations

Caribou numbers decline naturally when predators, such as wolves and grizzly bears, predominate or when plants and lichens that caribou feed on decline. In the past, the herds have rebounded when predators decline (e.g., drop in wolves from rabies) or when vegetation growth increases. Wildlife experts suggest that human activities such as overhunting, industrialization (e.g. roads, cutlines, noise and light disturbances, pollution), forest fires, and the effects of climate change (e.g. flooding, disruptions in sea-ice distributions) are all factors in declining numbers of caribou (Blyth & Bathe Inc, 2014). This decline has impacts throughout the ecosystem as animals that prey on caribou will also struggle to survive and must adapt their primary food source. Aboriginal and non-Aboriginal residents and outfitters in the north, who depend on caribou for subsistence, will also struggle.

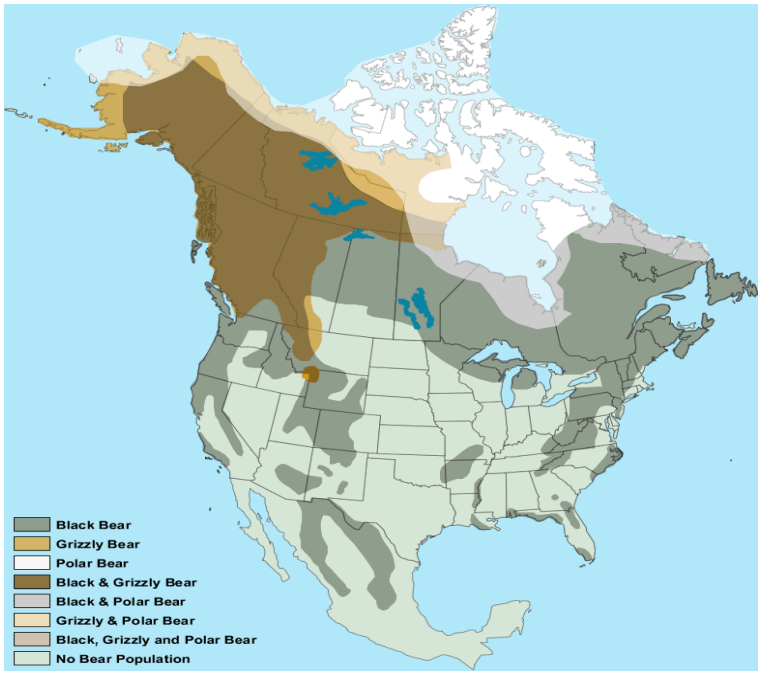
3.2.2 Bears

In the NWT, there are three types of bears: black (*Ursus americanus)*, grizzly (*Ursus arctos*), and polar (*Ursus maritimus*) (Figure 10). It is important for board members to consider the distinct ecological contexts for the different bear types when making decisions related to environmental assessment, permitting, and land use planning.

Source: (Geology.com, n.d.)

Figure 10: Black bear (left), grizzly bear (central), polar bears (right)

Habitat/Population Dynamics of Bears



Source: (Geology.com, n.d.)

Figure 11: Overlapping geographic ranges of three types of bears that inhabit North America - polar bears, black bears, and grizzly bears

In the NWT, black bears are found below the tree line. They can occasionally be seen on the tundra and in the Mackenzie Mountains, although they generally are not residents there. They prefer habitat that combines forested areas, which provide seclusion and safety, with open spaces that provide berries, shrubs, and grasses.

Grizzly bears in the NWT are found primarily in open alpine or tundra habitats, but they can also be found in forested areas. The highest concentrations of grizzly bears in the NWT are found in the Mackenzie and Richardson Mountains. Grizzlies require an adequate food supply, proper denning sites and protection from human disturbances. The density of grizzly bears throughout the NWT is naturally low and the population is thought to be stable, having not changed very much over the last 20 years (Species at Risk Committee, 2017).

Polar bears follow the ice. In spring, they can be found on the land-fast ice and coastal pack ice where they prey primarily on ringed and bearded seals. Once the ice melts in summer, polar bears may spend several months on land. As human habitation becomes more concentrated on the land in settlements and less migratory, bear-human interactions continue to increase.

Legislation Affecting Bears

Grizzly bears in the NWT are classified as a big game species and a furbearer. Currently in the NWT, there are management plans and quotas in place to manage the grizzly bear harvest in the Inuvialuit Settlement Region and the Gwich'in Settlement Area. Outside of these two regions, grizzly bear harvest in the NWT is regulated under the NWT *Wildlife Act*. There is a lifetime

harvest maximum of one grizzly bear per resident harvester in the Mackenzie Mountains of the NWT.

Given the robust health of the black bear population and its habitat, there is currently no notable legislation concerning black bear however the *Wildlife Act* still applies.

Polar bears in the NWT share three sub-populations with neighboring jurisdictions: Southern Beaufort Sea, Northern Beaufort Sea and Viscount Melville Sound. Polar bears were internationally protected in 1976 under the International Agreement on the Conservation of Polar Bears. This agreement requires governments of all signing nations to manage the bears according to "sound conservation practices" and to conduct research related to the conservation and management of polar bears.

Implementation of co-management plans in the ISR and Gwich'in Settlement Area represents a positive influence on the species.

The Inuvialuit have polar bear management agreements with the Inuit of Nunavut and the Inupiat of Alaska. Polar bear harvest is controlled by a strict quota system that limits the harvest of bears for subpopulations within or shared by the NWT and Nunavut. Outfitted hunts for non-residents are included in the quota system. These hunts play an important role in the economy of the region. The average polar bear hunt costs $15,000. About $10,000 remains in the local community. In addition to quotas, the hunting of denning bears or females with cubs is prohibited. To ensure that mainly male bears are harvested, the hunting season opens after the majority of females have denned for the winter. This two-pronged approach of quotas and encouraging male harvests helps maintain a healthy polar bear population in the NWT. See Chapter 4, Section 4.3.1 for further information about polar bear management in the ISR.

Threats to Bears and Other Management Considerations

Threats to the bear populations in the NWT vary by species. A range of management measures are available to help mitigate these threats.

Limiting factors for NWT grizzly bears are thought to be adult female survival and low reproductive output. Human activities may affect populations through harvesting and habitat degradation. As mineral and energy exploration, outfitting camps and road developments increase in the NWT, contact between humans and bears is rising. Contact may result in bears being destroyed or displaced from important habitat. Bears tend to abandon large sections of their home range if it is undergoing exploration or development by humans. In the mountains, grizzly habitat has some seasonal differences that are predictable. A prudent management measure is to undertake human activity and development in areas not frequented by grizzly bears. This can be planned by a careful review of

The polar bear is a symbol of Canada's north and the NWT, but its importance geopolitically stretches much farther than its physical habitat. People around the world focus attention on how Canada manages its polar bear populations.

the habitat and the bear populations. As industrial development proceeds, the need for comprehensive studies on grizzly bears is being recognized to inform future management practices.

Polar bears are limited by the availability of their main prey, seals. Sea ice is changing due to changing climate patterns, and this impacts polar bears' access to seals. In the short term, these changes may be positive for polar bears in some parts of the NWT but may be negative in others. This is because in the short term, optimal sea-ice will be lost in some areas and gained in others. Non-renewable resource exploration and development that disturb bears in maternity dens can result in premature abandonment and increased chances of cub mortality. Environmental changes such as crude oil spills could have a devastating effect on an entire sub-population. Excessive hunting is also a limiting factor. Polar bears reproduce slowly, and overhunting could severely deplete their numbers. The average annual rate of production of cubs in the central Canadian Arctic Islands was estimated to be 0.47 cubs per year per adult female (Furnell & Schweinsburg 1984). A female polar bear can usually produce only five litters in its lifetime. This is one of the slowest reproductive rates of any mammal (USFWS 1995).

Harvest of polar bears in the NWT is currently managed and maintained within sustainable levels through a quota system.

Regarding black bears, the GNWT ENR is placing increasing importance on finding solutions to manage nuisance bears. As the human population expands in certain areas of the territory and as industrial development encroaches into bear habitat, conflicts between humans and bears is increasing. Land use permits often carefully consider the prevalence of black bears and thus demand strict management practices, including garbage handling procedures.

3.3 MIGRATORY BIRDS

The NWT hosts over 300 species of migratory birds, with one species registered as extinct (Passenger Pigeon) and eight considered globally threatened species (Lepage, 2018). Ducks, geese, grouse, and ptarmigans (Figure 12) are essential food sources for northern families. Waterfowl hunting is part of people's traditional link to the land. Songbirds, shorebirds, and woodpeckers are major predators of insects and contribute to plant seed dispersal and, in the case of woodpeckers, provide homes for other species. Other migratory birds found in the NWT that are top predators include falcons, eagles, owls, and other raptors (GNWT, 2015b).

Photo by John Blyth

Figure 12: Rock ptarmigan and chick near a nesting site on the Ram Plateau

3.3.1 Habitat/Population Dynamics of Migratory Birds

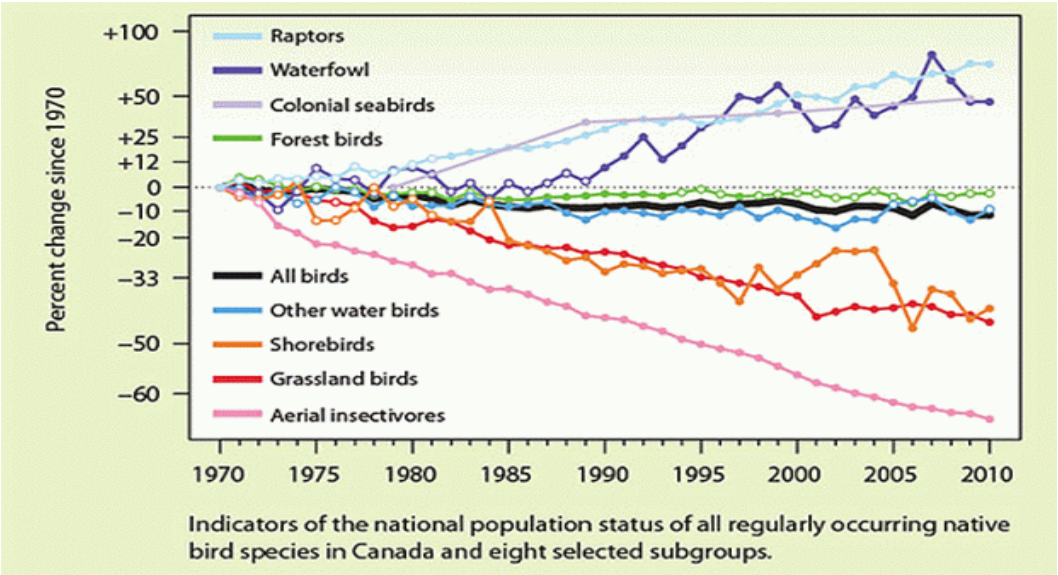
Typically, migratory birds require both aquatic and suitable terrestrial areas in their habitat. Different species prefer different aquatic conditions (e.g., dabbling ducks such as mallards require much shallower waters for feeding than diving ducks such as scaups). Terrestrial habitat may also vary from tundra, prairies, to small grassy areas, depending of the requirements of the species for nesting, predator avoidance, and foraging. Places containing the right combination of aquatic and terrestrial habitats are typically in low-lying and permafrost areas.

There are 23 sites listed as critical habitat for migratory birds in the NWT (Figure 13). These are:

1. Prince Patrick Island
2. Thomsen River
3. Banks Island Migratory Bird Sanctuary No. 1
4. Tahiryuak Lake
5. Kagloryuak River Valley
6. Cape Parry
7. Harrowby Bay
8. Lower Anderson River (and Mason River)
9. Kugaluk River
10. McKinley Bay – Phillips Island
11. Kukjutkuk and Hutchison Bays
12. Mackenzie River Delta
13. Ramparts River Wetlands (Tu'eyeta)
14. Lower Mackenzie River Islands
15. Brackett (Willow) Lake
16. Middle Mackenzie River Islands
17. Southeastern Mackenzie Mountains
18. Mills Lake
19. Beaver Lake
20. North Arm, Great Slave Lake
21. Northwest Point
22. Slave River Delta
23. Sass and Nyarling Rivers

Figure 13: Map of critical migratory bird habitat in the NWT

Since the 1960s-70s, many individual migratory bird species have experienced significant population changes, with some populations increasing (e.g. waterfowl) and others declining (e.g. shorebirds) (Figure 14). Some species have increased in numbers (e.g. lesser snow geese, peregrine falcon) potentially in response to increased availability of winter food through agricultural practices, and reduction in contaminant levels.



Source: (GNWT, 2015b)

Figure 14: Overall trends in all regions in Canada, by bird group

3.3.2 Legislation Affecting Migratory Birds

Most species of birds in Canada are protected under the federal *Migratory Birds Convention Act, 1994* (MBCA). The MBCA was passed in 1917 and updated in 1994 and 2005 to implement the Migratory Birds Convention, a treaty signed between Canada and the United States in 1916. As a result, the Canadian federal government has the authority to pass and enforce regulations to protect those species of birds that are included in the Convention.

Migratory birds are defined by Section 3 (Article I) of the Convention which names the families and subfamilies of birds protected. Bird species not listed in the MBCA may be protected under other measures such as territorial legislation, the federal *Species at Risk Act* or the Convention on Biodiversity an international agreement to which Canada is a signatory.

3.3.3 Threats to Migratory Birds and Other Management Considerations

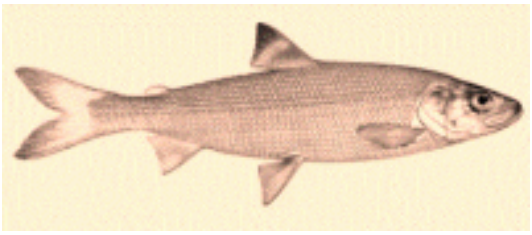
The major threats to migratory birds are related to widespread changes in the ecosystems often caused by pollution, habitat loss, over-harvesting, insect controls affecting the population of the preys, and climate change.

Migratory birds are especially vulnerable to ecosystem change, given the range of distances traveled and geographies relied-upon during their annual migration cycles. They, like other bird species have a breeding season. Due to their travel patterns, they require multiple geographic locations to be available to them such as breeding areas, feeding areas and migrating staging sites. It can also be noted that bird populations which occupy geographically restricted habitats are most vulnerable, as site-specific impacts may affect the region where the entire population of the species nests (e.g., whooping cranes). Additionally, migratory birds are also at increased risk due to the pressures tied to the range of meteorological conditions (such as fog, wind, etc.) and the physical structures they encounter while migrating (such as glass panels on building, guy wires, lighting in office towers, etc.).

3.4 FISH

Fish are one of the most important food and economic sources in the NWT. The NWT is home to 100 species of fish (Working Group on General Status of NWT Species, 2016). The status of many of these species is unassessed and/or undetermined, but the Shortjaw Cisco, Bull Trout, Inconnu, Dolly Varden, and Northern Wolffish species are highlighted below, as they have been designated as species at risk either at the federal and/or territorial levels (GNWT, 2018b).

3.4.1 Shortjaw Cisco



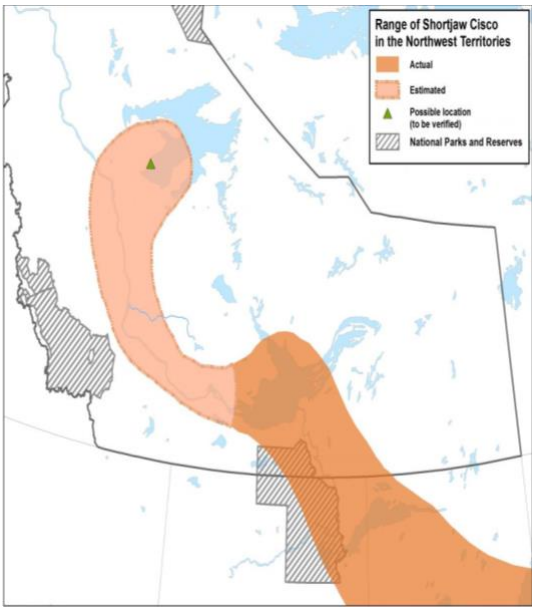
Source: (GNWT, 2013c)

Figure 15: Shortjaw Cisco in the Northwest Territories

The Shortjaw Cisco (Figure 15) is a member of salmon and trout family.

They are deepwater fish and occur in the Mackenzie River system, Great Slave Lake, and Great Bear Lake (Figure 16). Very little is known about Shortjaw Cisco populations in other areas, but they are not considered to be abundant in the NWT. They have been eliminated from much of their range in the south – vanished from Lakes Michigan and Huron, and severely depleted in Lake Superior.

The two main limiting factors for Shortjaw Ciscoes in the Great Lakes were commercial over-fishing and competition from introduced species. In the Great lakes pollution likely also had a serious impact on this species. Other threats may include habitat degradation, climate change and hybridization with other ciscoes.



Source: (GNWT, 2013b)

Figure 16: Map of the range of Shortjaw Cisco within the NWT

3.4.2 Bull Trout

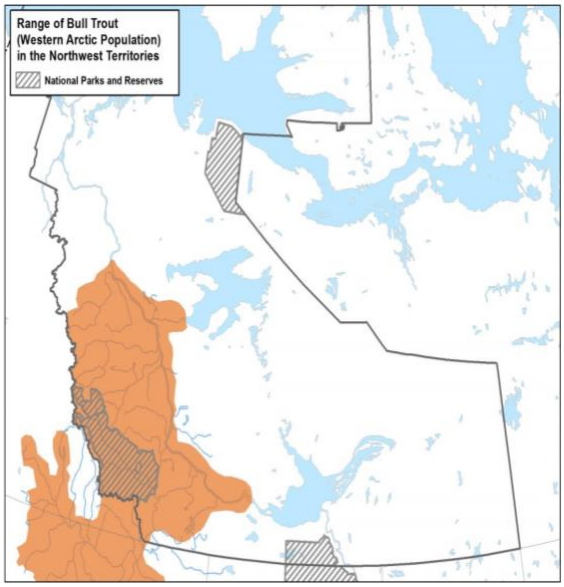
Source: (GNWT, 2018a)

Figure 17: Bull Trout (Salvenius confluentus)

Bull Trout (Figure 17) is a large char coldwater species found in lakes, streams and rivers within the southwestern and central NWT (Figure 18). The populations of Bull Trout are broadly

distributed but never abundant and, although there is some evidence of population decline in Alberta, little is known about population size and trends in the NWT (GNWT, 2013b).

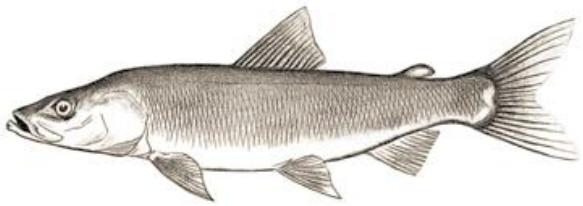
However, the potential threats to Bull Trout in the NWT include poor habitat and fragmentation due to industrial activities and infrastructure projects, and commercial fishing (GNWT, 2018b). The narrow habitat requirements for spawning and rearing (oligotrophic lakes and deep pools in cold water rivers and streams) make Bull Trout populations vulnerable to local extinction by habitat fragmentation and disruption. As slow-maturing but voracious predators, Bull Trout are also vulnerable to overharvesting and other stressors that target the older segment of the population. They do not compete well with other trout species at temperatures above 12°C and are vulnerable to the introduction of other trout species.



Source: (GNWT, 2013b)

Figure 18: Map of the range of Bull Trout within the NWT

3.4.3 Inconnu (coney)



Source: (GNWT, 2018a)

Figure 19: Inconnu (Stenodus leucichthys)

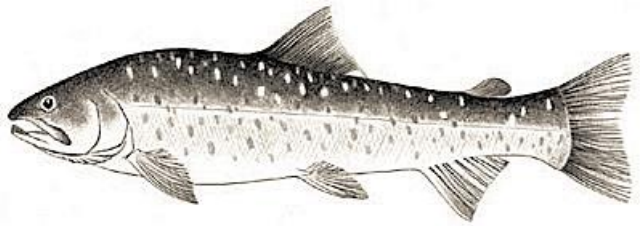
The Inconnu, commonly called coney in the NWT, is a member of the whitefish family distributed in northwestern North America and Eurasian Arctic watersheds.

The Inconnu is common in the Mackenzie Delta, and migrates upstream into the Peel, Artic Red and Mackenzie Rivers for spawning. Inconnu can also be found in Great Slave Lake and tributary streams (GNWT, 2018a). Inconnu are usually found in shallow, inshore areas of the main body of the lake; however, mature fish ascend rivers for spawning and some Inconnu enter deeper waters in winter, although rarely in waters deeper than 30 m.

Historically, Inconnu in Great Slave Lake were targeted in a commercial fishery, but in recent decades they have only been captured as by-catch in the lake whitefish commercial fishery. Data suggest that the Buffalo River stock of Inconnu was harvested in large quantities in the late 1970s, after which the population declined dramatically and has not recovered. Fisheries and

Aquaculture Management initiated a series of closure zones to help preserve the Inconnu stock. Harvest records from the commercial fishery and research results from tagging and sampling studies indicated that the stock was showing small signs of improvement. However, in the last few years the Inconnu stock has once again declined. The International Union for the Conservation of Nature lists the construction of dams as the major threat to Inconnu.

3.4.4 Dolly Varden



Source: (GNWT, 2018a)

Figure 20: Dolly Varden (Salvenius malma malma)

Dolly Varden (Figure 20), also a char from the salmon and trout families, resembles Bull Trout in terms of colouration but is smaller in size.

Dolly Varden inhabits the western Mackenzie Delta and fast-flowing cold streams along the northern slope of the Richardson Mountains as well as upstream on the Peel River watershed and can be found in the Beaufort Sea in the summer (Figure 21).

"Gwich'in knowledge indicates that spawning habitat requires relatively warm water, a fast current, and plenty of shoreline cover and vegetation, with abundant insect larvae available for food. (GNWT, 2018b, p. 79)"

Source: (GNWT, 2018a)

Figure 21: Map of the range of Dolly Varden within the NWT

The potential threats to Dolly Varden include drier and warmer conditions due to climate change, which could impact spawning and overwintering habitat, as well as over-fishing pressures, offshore developments that could restrict migrations, and land-based developments that could impact water quality and quantity (GNWT, 2018b).

3.4.5 Northern Wolffish

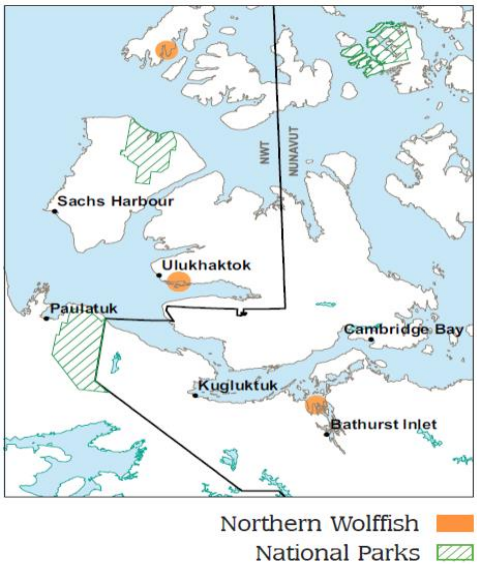
Source: (GNWT, 2018a)

Figure 22: Northern Wolffish (Anarhichas denticulatus)

The Northern Wolffish (Figure 22) is a marine fish that is slow-growing and long-lived.

It inhabits cold, deep ocean waters and does not undertake long migrations, so the size of its territory is restricted. In NWT, Northern Wolffish have been reported in Prince Albert Sound on Victoria Island and Mould Bay on Prince Patrick Island (Figure 23).

Northern Wolffish have a low capture number which may be more of a reflection of fishing effort as it is not widely fished (GNWT, 2018b).



Source: (GNWT, 2018a)

Figure 23: Map of the range of Northern Wolffish within the NWT

3.4.6 Legislation Affecting Fish

The *Fisheries Act* provides general protection and prohibits destruction of fish habitat. Additionally, the *Species at Risk Act* both federally and in the territories offers protection to the fish and fish habitat that require it.

3.4.7 Threats to Fish and Other Management Considerations

Each species of fish has different sensitivities to the impact of human development and activity. To help manage human-fish interactions DFO has created "restricted activity timing windows," to protect spawning fish, eggs, and fry when they are most vulnerable to disturbance or sediment. Restricted activity periods are determined on a case-by-case basis according to the species of fish in the water body, whether those fish spawn in the spring, summer, fall, or winter, and where the water body is located.

NWT restricted activity timing windows for the protection of fish and fish habitat may be found at http://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/nwt-eng.html

Chapter 4: Renewable Resources Management in Practice

4.1 OVERVIEW

As outlined in the previous chapters of this Guide, NWT's renewable resources are essential to the social, cultural, and economic well-being of the territory – and they also face a range of threats and impacts from human and natural disturbance. It has also been established that the management of these resources involves multiple actors and decision-makers. But how does this play out in practice? This chapter sheds light on the important regulatory processes, mitigation measures, and practices through which renewable resources are managed, including:

- **Project review and approvals** – From pre-engagement with proponents to public hearings, and how boards, organizations, and developers work together
- **Management plans** – Development and implementation of management plans
- **Wildlife harvesting** – Determining total allowable harvests, commercial harvesting
- **Monitoring** – Wildlife and environmental monitoring, monitoring programs
- **Respectful and effective use of Traditional Knowledge (TK)** – Gathering, assessing and using TK
- **Compliance and enforcement** – Fees and bonds, sanctions, enforcement measures

In reading this chapter, consider the principles outlined below and how they factor into the success cases shared throughout.

4.1.1 Principles in Practice

The NWT regimes represent an integrated and coordinated system, supported by co-management mechanisms. Within this system, and in the context of renewable resources management, there are additional principles that are either embedded into federal or territorial legislation, or are considered to be leading practices in the NWT. For example, the 'precautionary approach' and 'access to best available information' can be found in the *Environmental Rights Act* (2014). Four of these principles are described below.

Prevention approach

- It is more responsible (and often less costly) to take measures to prevent impacts to the environment and its inhabitants than it is to respond to them (Encyclopedia Britannica, 2019)

Precautionary approach

- Decision-makers have a duty to weigh in favour of the environmental component when evidence is insufficient (Canadian Environmental Law Association, 2017)
- In other words, do not risk irreversible damage to the environment when faced with uncertainty

Listen with both ears

- Evidence must be collected from the realms of both Western scientific and traditional knowledge
- Both bodies of evidence are to be treated with equal weight/value

Use best available information

- On issues of public interest, decision-makers and proponents and have a responsibility to make quality information available (e.g. information that is relevant, unbiased, and demonstrates a complete understanding of the issue)
- Complete information is not always available, in which case the precautionary approach should be exercised

It is essential that actors and decision-makers exercise the above principles in their day to day work, safeguarding the territory against unnecessary or irreversible damage to the environment and those whom rely on it.

The success cases provided throughout this chapter show how effective renewable resources management requires the implementation of these principles by decision-makers and local people alike, from federal departments to individual community members.

4.2 PROJECT REVIEW AND APPROVALS

As explained in Chapter 1, proposed development projects usually flow through a process of preliminary screening to determine if the proposed project or activity might have significant adverse impacts on the environment (including biophysical, social, cultural and economic aspects), or might cause public concern. If either of these is found to be the case, the application is referred to environmental assessment/review. If not, the application can proceed to permitting and licensing.

4.2.1 Environmental Assessment/Review

During an environmental assessment/review, the relevant authority (e.g. MVEIRB in the Mackenzie Valley and EIRB/government assessment and review body in the ISR) makes a determination on the likelihood of these impacts occurring and a recommendation on whether the development should be approved, with or without conditions, or if more review is required. Note that the specific options/language for decision-making is unique to each region. The recommendation is issued to the responsible Minister. A determination may also be made following an environmental assessment that an even more thorough examination of a proposed project is necessary, and an environmental impact review may be conducted by an independent panel.

The review boards engage early with project proponents to ensure that they submit complete project descriptions and environmental impact statements (EIS) to make the process more expedient (e.g. by providing guidelines and clear instructions). As part of the environmental impact statement preparation in the ISR, the project proponent can be required to undertake a worst-case scenario analysis to determine a maximum value or cost of damages for purposes of securing Inuvialuit harvesting rights (EIRB, 2013).

Consultation and communication between the parties at an early stage is important. Wise developers are recognizing that a good EIS will reduce the number of outstanding issues and

speed up a project assessment/review, as well as make it a better project. An EIS will build on the initial project description that was used to inform the environmental assessment scoping; systematically predict and characterize potential impacts on the environment, considering both project-related and cumulative impacts; and thoroughly describe the mitigations proposed to prevent or avoid impacts. Poor EISs result in numerous information requests from all parties throughout an assessment/review. The Boards may issue any number of information requests, which ensures that adequate information (including baseline studies) is provided by the proponent. Baseline information or pre-development surveys, may be required:

- If a species at risk is present and covered by a recovery plan, then pre-development surveys may be mandated by the GNWT.
- If fish-bearing waters are present, DFO has the authority to require that pre-development surveys take place.
- If a project occurs in a national park, Parks Canada may mandate the conduct of such a survey.

For example, monitoring caribou observations during early exploration stages of mining will be needed for a Caribou management plan, which will be a standard requirement of a land use permit. This valuable baseline information will also be used when predicting impacts in the proponent's EIS.

Throughout the assessment/review process, different boards, agencies and the public are involved. Many submit information requests as noted above, or provide evidence to be considered during the assessment/review on the potential impacts to renewable resources from the proposed development project/activity. Evidence may be submitted in technical reports (interventions) and other written submissions, and/or parties can present information during in-person technical and cultural impact sessions or at public hearings.

4.2.2 Mitigating Development Impacts

Review boards, as well as boards and agencies with the power to issue licenses and permits, have the ability to issue measures or terms and conditions to help mitigate the effects of a development on a renewable resource. When looking at the characteristics of a good measure or term or condition, consider the following questions:

- Is it clearly part of the board's authority?
- Does it have a clear purpose and rationale?
- Is it practical and enforceable?
- Does it match the scale of the project?; and
- Does it conflict with existing legislation (e.g., is it less stringent)?

Here are some examples of the types of measures or terms and conditions that may be outlined as part of an environmental assessment/review process in the Mackenzie Valley, or when a land use permit is issued in the ISR, with respect to wildlife and fisheries.

Table 4a: Example measures of an environmental assessment in the Mackenzie Valley

Wildlife and Fisheries Measures

Implementation of the *Recovery Strategy for the Boreal Caribou in the NWT, and* required range plans, for boreal caribou affected by the Project.
• Develop and implement range plans
• Information and adaptive management requirements
  ▪ Monitoring of population trends, abundance and distribution
  ▪ Determination of population thresholds and triggers to inform adaptive management
  ▪ Harvest monitoring and reporting including Aboriginal harvesting (voluntary) and non-Aboriginal hunting
  ▪ Identifying critical habitat
  ▪ Ongoing habitat disturbance monitoring
  ▪ Settling and meeting critical habitat objectives for each range
  ▪ Monitoring predator populations including densities, movements and predation rates

Determine sustainable harvest levels for boreal caribou and implement measures to ensure harvest is sustainable if required.
Prepare and implement a boreal caribou habitat offset and restoration plan.
Incorporate TK into monitoring of barren-ground caribou.
Develop and implement an Integrated Fisheries Management Plan for fisheries in the project area. • Understand baseline fishery and harvest conditions • Design and implement mitigation to prevent or manage project impacts • Design and implement monitoring plans • Design and implement an adaptive management plan
Monitoring harvest and managing wildlife to maintain successful harvest. • Develop and implement an Aboriginal harvest monitoring and reporting program • Use results of monitoring to inform wildlife management actions and mitigations
Bird species at risk and migratory bird data, mitigation, monitoring, and adaptive management. • Conduct pre-construction bird surveys • Use the results from surveys to inform mitigations • Implement monitoring and reporting • Implement adaptive management

Table 5b: Example terms and conditions of a land use permit in the ISR

Wildlife and Fisheries Terms and Conditions	Theme
The Permittee shall minimize damage to wildlife and fish habitat in conducting this land use operation.	HABITAT DAMAGE
The Permittee shall not feed or harass wildlife during this land use operation.	WILDLIFE
The Permittee shall construct and maintain all structures placed in streams frequented by fish, in such a manner that will not obstruct passage of fish.	FREE FISH MOVEMENT
The Permittee shall not obstruct the movement of fish while conducting this land use operation.	FREE FISH MOVEMENT
The Permittee shall use culverts of a size that will ensure the velocity of the stream flow is not increased.	CULVERTS SIZE
The Permittee shall place the bottoms of all culverts installed in streams inhabited by fish at a level that maintains the natural contour of the stream.	CULVERT INSTALLATION
The Permittee shall not allow any employees to harvest fish and wildlife for the duration of this land use operation.	NO HARVESTING
The Permittee shall not destroy or damage beaver dams or lodges.	BEAVER DAMS/LODGES
The Permittee shall not destroy or damage muskrat lodges.	MUSKRAT LODGES
The Permittee shall not detonate explosives within fifty (50) metres of any body of water that is not completely frozen to the bottom.	EXPLOSIVES WATER
The Permittee shall use food handling and garbage disposal procedures that do not attract bears.	BEAR/MAN CONFLICT
The Permittee shall construct and maintain the water intake with an adequate screening device to prevent entrapment of fish.	PREVENT ENTRAINMENT

4.2.4 Successes

Informing the Tłı̨chǫ All-Season Road Environmental Assessment Process

Region: Wek'èezhìı
Timeline: 2013 - 2015

Background/Objective: The Tłı̨chǫ All-Season Road is a two-lane, 97 km gravel road project that was proposed by the GNWT to create "transportation efficiencies will reduce the cost of living for the region and embrace social opportunities." The project is also intended to attract investment from industry in natural resources exploration and development (GNWT, 2019). With respect to the TASR, the WRRB took on a substantial role in collecting and providing information, sharing information with communities, and participating in engagement sessions. The WRRB made several submissions during the environmental assessment process, including presentations and technical reports.

Key Players: The WRRB was critical to informing the environmental assessment process each step of the way, as they acted as a wildlife management authority providing objective support to the review given that the GNWT was the proponent.

Significance: This case highlights the importance of renewable resources boards in environmental assessment processes where the territorial government is the proponent. The WRRB found that the there was "not enough certainty in the developer's evidence to suggest that incremental and cumulative effects of the [road would] not have a significant influence on the ability of tǫdzı (boreal caribou) to be self-sustaining and ecologically effective" (WRRB, 2017, p. 1). Recommendations were provided to the developer to strengthen the approach to the environmental assessment and the eventual construction and maintenance of the all season road. It was also recommended that a Wek'èezhìı/North Slave Boreal Caribou Range Plan be completed to inform the environmental assessment.

Key Resources:

- Wek'èezhìı Renewable Resources Board – Technical Report (Boreal Caribou) – Submission to the Mackenzie Environmental Impact Review Board for the Public Hearings on the Tłı̨chǫ All-Season Road Project EA-1617-01
- Report of Environmental Assessment and Reasons for Decision GNWT Tłı̨chǫ All-Season Road Project EA1617-01

NICO Mine – EA0809-002, Fortune Minerals

Region: Wek'èezhìı
Timeline: 2009 – 2013

Background/Objective: NICO Mine is a proposed underground and open pit cobalt, gold, copper and bismuth mine located nearby culturally and historically significant land of the Tłı̨chǫ people. This includes areas traditionally used for harvesting wildlife, fish and furbearers, gathering plants and other cultural activities (e.g. Hislop Lake, the Idaá Trail, and

the Marian River). The mine is proposed to be northeast of Whatì in the Wek'èezhìı region and traditional territory of the Tłı̨chǫ Government.

Key Players: Instructed by the Review Board, Fortune Minerals completed a *Developer's Assessment Report*. It included input from the Tłı̨chǫ Government who prepared their own traditional knowledge and traditional land use study funded by Fortune Minerals, and public hearings.

Significance: Traditional knowledge was integrated in the environmental assessment phases from baseline data collection, impact predictions, significance determination and impact mitigation. The input from the Tłı̨chǫ Government inspired Fortune Minerals to adapt the design of the mine and access road as well as waste rock pile, in part to protect harvesting. Additionally, Fortune Minerals recognized that the Tłı̨chǫ Government would be best placed to conduct a traditional knowledge and traditional land use study, to be used to determine potential impacts to wildlife, fish, water and cultural values.

Key Resource: Document List - Developer's Assessment Report/Environmental Impact Statement

4.3 MANAGEMENT PLANS

Management plans are one of the most important instruments renewable resources boards produce, which are utilized by other boards in land use planning, land and water permitting and regulation, and environmental assessment and review. Management planning can be done for any renewable resource, such as forests, plants, water, and wildlife. To date, water and caribou have been the subjects of most management planning in the NWT (SRRB, 2019).

In the case of wildlife, a management plan lays out the road map for the conservation of habitat, as well as species themselves. The plans may be put in place for a variety of reasons, one of which is if the species is listed as being "at risk." Under the *Species at Risk (NWT) Act* (2017), management planning is required for species listed of special concern and starting to occur for those species which are pronounced threatened or endangered (SRRB, 2019). Management plans are required within one year of a species being designated and recovery strategies within two years under the *Species at Risk (NWT) Act*.

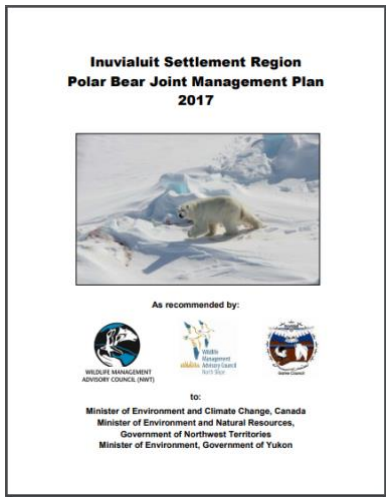
Community feedback is important to the creation of management plans. Community and RRC members contribute to the building of the management plans. Creating a plan includes identifying the need for the plan and doing research, consulting with communities, writing and recommending the plan. These tasks require the cooperation of many different groups and the renewable resources board's recommendation for their implementation. The process for developing management plans is important as these plans have provisions included within them to direct the use of a particular renewable resources in a region.

4.3.1 Successes

The Inuvialuit Settlement Region Polar Bear Joint Management Plan

Region: Inuvialuit Settlement Region

Timeline: 2014 – 2017



Background/Objective: The Wildlife Management Advisory Councils of NWT – WMAC (NWT) and WMAC (NS) – as well as the IGC recommended the Polar Bear Joint Management Plan to the Minister of ECCC, the Minister GNWT ENR, and the Minister of Environment, Government of Yukon (YG).

The purpose of this joint management plan is to describe and enhance the existing management system in the ISR in order to achieve the management goal of ensuring the long-term persistence of healthy polar bears in the ISR while maintaining traditional Inuvialuit use.

Key Players: The joint management plan was developed via input from GNWT ENR, WMAC NWT and NS, IGC, Yukon Government, ECCC, and Parks Canada. Additionally, comments were provided by the HTCs of Aklavik, Inuvik, Paulatuk, Sachs Harbour, Tuktoyaktuk and Ulukhaktok.

Funding was provided by the GNWT ENR, IFA Implementation funds and Species at Risk program funds.

Significance: This joint management plan facilitates coordination and cooperation amongst management partners based on the shared goal, objectives and approaches that it establishes for polar bear management in the ISR. This plan will assist management partners in planning and prioritizing their work in order to manage human impacts on polar bears in the ISR. Under the IFA, both science and Inuvialuit TK and local knowledge are considered when making management decisions.

Key Resource: Inuvialuit Settlement Region Polar Bear Joint Management Plan (2017)

Belare Wíle Gots'ę ʔekwę – Caribou for All Time: Délı̨nę's Conservation Plan for Bluenose East Caribou

Region: Sahtú

Date of Report: 2016 – 2026

Background/Objective: In 2015, the Government of the NWT's Bluenose East caribou survey showed a significant population decline. Recognized as the primary steward of Bluenose East ɔekwę (caribou) in the Sahtú Region, the community of Délı̨nę decided to make the case for setting aside the section of the Sahtú Dene and Métis Comprehensive Land Claim Agreement providing mechanisms for establishing a Total Allowable Harvest. In other words, Délı̨nę chose not to set a Total Allowable Harvest level to protect the caribou, even though their land claim would technically allow it. The community adapted an Australian Indigenous Healthy Country Planning model for developing the plan, seeking to achieve three things:

1. Build consensus on the community's vision for the people and ɔekwę in the future.
2. Develop a plan of action that is realistic and supports the vision.
3. Build support for a Délı̨nę Got'ı̨nę approach to ɔekwę conservation within the community, the region, the NWT, and beyond.

Key Players: This plan took a lot of work to prepare, was prepared with the help of a technical group, a Working Group, the leadership and the broader community.

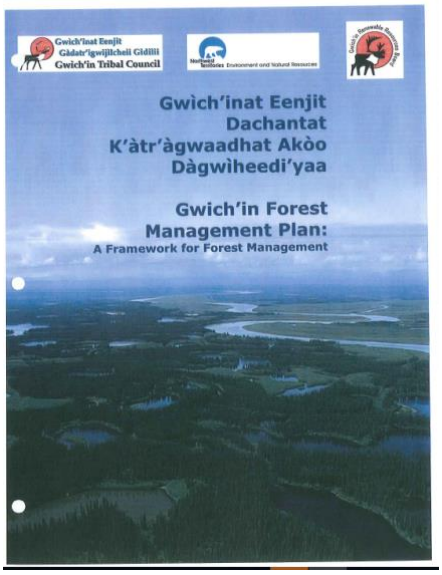
Significance: This plan was the first of its kind for barren-ground caribou in Canada. "For this plan, the community came to an agreement – łéhé godı kehtsı – choosing to only conduct a limited ceremonial harvest instead of a subsistence harvest. This is a response to what people are learning from ɔekwę – that some conditions on the land are changing and Dene may need to regulate their harvesting to give them a rest. We know that when we help to make it quiet on the land, it provides ɔekwę with an opportunity to replenish themselves and honours our agreement to behave respectfully towards them. This continues the Dene traditional practice of switching harvesting efforts to another source of food or a different area when one is no longer around or plentiful – dícho asíı k'ets'ęnę ajá t'á náze gha báts'odı (it's gone down so we're going to let it rest)." The plan was approved by the SRRB and the NWT Minister of Environment and Natural Resources in 2017. The Behdzi Ahda Nation (Colville Lake) is now working toward approval of its plan for Bluenose West ɔedə (caribou).

Key Resource: Belare wílé Gots'ę ʔekwę, Deline's caribou conservation plan

The Gwich'in Forest Management Plan

Region: Gwich'in Settlement Area
Timeline: 1995 - 2012

Background/Objective: The Gwich'in Forest Management Plan was developed to be in accordance with Gwich'in Comprehensive Land Claims Agreement (GCLCA). It is a framework for the management and protection of forests that identifies concerns and outlines solutions to guide forest-related activities while minimizing conflicts among various interests.



Key Players: The Gwich'in Forest Management Steering Committee developed the Gwich'in Forest Management Plan: A Framework for Forest Management, through extensive consultations with the communities of the Gwich'in Settlement Area. The plan was signed by the GRRB, the Gwich'in Tribal Council, and the GNWT ENR. Other players involved included the RRC members, the Gwich'in Land Use Planning Board (GLUPB), and the First Nations Forest Program which provided the funding for the development of this Management Plan.

Significance: Forests are co-managed under the GCLCA. Notable aspects of the plan include a forest use survey, documentation of historic and current forest use, forest monitoring plots, post-fire forest regeneration studies, driftwood use, and the Rat River biodiversity assessment. A lot of good monitoring information was used in the development of the management plan.

Key Resource: Gwich'in Forest Management Plan: A Framework for Forest Management

4.4 MONITORING

Board members need to be familiar with basic principles and approaches to renewable resources monitoring so that they can better understand the presentations and reports they are exposed to and are better equipped to ask questions and interpret results. An understanding of monitoring will assist the boards in the assessment of the validity and relevance of studies that are conducted or proposed as part of the regulatory process. Fundamentally, **monitoring can be scientific or community-based**; both types of monitoring provide invaluable information required for renewable resources boards to make balanced and informed decisions.

KEY TERMS:

- **Community-based monitoring as:** A process where community members, government, industry and scientists work together to collect, analyse, and communicate traditional knowledge and scientific information that has been gathered to increase common understandings of cumulative impacts on matters of high priority to the community. Community-based monitoring directly benefits communities, by improving understanding of the changes occurring on the land and water, and increasing the capacity of communities to participate in cumulative impact monitoring (NWT CIMP, 2012).

All good monitoring is based on **systematic and purposeful observations**. It requires a consistent collection of the same information over time for comparison purposes. In contrast, "inventory" work, although valuable as a starting point for monitoring, is strictly the collection of data that describes the total condition or takes stock of a resource at one particular time period.

Monitoring may also occur for the purpose of **determining effects**. Perhaps one of the most important places where monitoring is very relevant and important is the pollution prevention provision of the *Fisheries Act*, which prohibits the harm to fish or fish habitat from effluents in water unless authorised by regulations. Monitoring the health of a fish population or components of fish habitat can inform compliance with the Act.

Monitoring can be an extensive process and, therefore, its approach needs to be adaptable (e.g., to changing environment, to staff turnover, to funding, to new technology, to changes in animal populations, etc.). Because monitoring projects are typically considered long-term, it is also justified to implement improvements or changes to the monitoring approach over time (e.g., to adapt to changing circumstances or when mistakes have been made). This process is known as adaptive management. Adaptive management is a methodical process for continually improving management actions by learning from monitoring conducted as part of the original management objective. Reporting enables the gathered information to be used in making decisions.

KEY TERMS:

- **Adaptive management:** A methodical process for continually improving management actions by learning from monitoring conducted as part of the original management objective. Reporting enables the gathered information to be used in making decisions.

4.4.1 Features of Well-Designed Monitoring Programs

In December of 2011, the federal Commissioner of the Environment and Sustainable Development studied environmental monitoring practices at all levels of government and reached the following eight-part definition of a well-managed monitoring system:

1. **The Design** - The objectives of the monitoring system are well defined and describe what will be monitored, how the data will be used, what indicators will be prepared, and how stakeholders will be involved. The geographic and temporal monitoring details have also been determined—for example, frequency, timing, location, and density of monitoring stations.

2. **Implementation** - The parties responsible for each aspect of the system have been identified and have received the necessary training. The methods and sampling strategies have been tested and documented. Contingency plans are in place to respond to problems.
3. **Data collection** - Procedures and practices to obtain the data are established and applied. The samples and data records are documented and archived.
4. **Quality control** - The methods are consistently applied, following guidelines and standards. Other quality controls are in place to maintain the integrity of the data sets.
5. **Synthesis and analysis of the data** - The data are converted into summary forms, such as maps or graphs. Indicators are calculated and used to compare results to those for other times and locations, using statistically sound methods.
6. **Internal reporting and communication** - The results are communicated within the organizations responsible for monitoring. The data are available internally with a description of their properties and their limitations.
7. **External reporting and communication** - The results are communicated to external audiences (the public, Parliament, or international bodies, such as the secretariats responsible for international agreements). Specialized users have access to detailed monitoring results.
8. **Audit and review of the system** - Audits or evaluations of the monitoring system are conducted to assess whether it is achieving its objectives, and to identify opportunities for improvements.

(Commissioner of the Environment and Sustainable Development, 2011)

Note that while these features are considered best practice, it is also important that monitoring be designed and implemented in a manner that is appropriate for the community and/or region.

4.4.2 Roles in Monitoring

Different organizations and agencies may implement monitoring programs based on different needs and objectives. For example:

- **Industry** monitors wildlife alongside other environmental parameters to examine the effects of development on the environment (often as prescribed in a land use permit or water license).
    - E.g., **Snap Lake Caribou monitoring**: The monitoring of how caribou behavior (resting, feeding, moving) changes relative to the herd's distance from the mine site.
- **Government/Co-management Boards** monitor or set as a condition, the monitoring of wildlife populations, to assist with harvest management (connected to enforcement mandates) and to monitor wildlife alongside other environmental parameters and assist with the management of land use.
    - E.g., **FJMC** in the ISR is responsible for collecting harvest information and making recommendations on subsistence quotas for fish and harvestable quotas for marine mammals. The FJMC has also implemented a system to monitor sport fishing on both Crown and Inuvialuit owned lands.

- **Communities** monitor wildlife populations to understand environmental changes and relationships with the land and wildlife, often for the purpose of maintaining traditional activities.
    - E.g., **Ni Hat'ni Dene Program/Lutsel K'e Dene First Nation** monitoring fish and wildlife on Great Slave Lake while maintaining and exercising their traditional activities.

Monitoring is often done in partnership. Partnerships can occur between almost any combination of parties including government, non-government organizations, First Nations/Inuvialuit, communities or industry/developers. The Ni Hat'ni Dene Program illustrates an excellent example. Here valuable information regarding lake trout abundance, age, condition, and water quality is collected through a partnership of the Ni Hat'ni Dene with DFO and Parks Canada.

4.4.3 Baseline Monitoring

If we want to know the potential impact of activities on wildlife populations, we need to establish **baseline data** through a specially designed survey and monitor the populations, through repeated surveys, at certain intervals thereafter, while activities occur and after activities have ceased. Ideally, the survey is initiated before development and continues during development until it can be demonstrated that there are no effects or continues after development.

Often it is difficult to establish if human activity is linked directly to changes in a wildlife population, but monitoring studies aim at providing evidence for this connection. It is important to point out the difference between cause and effect versus correlation. Often a study will argue that X causes Y to change, whereas a developer, proponent, or board may ask to prove the causation, even if it is self-evident, so that good post-monitoring can be conducted. In other words, will we be measuring the "right thing"?

4.4.4 Wildlife Management & Monitoring Plans

Under Section 95(1) of the *Wildlife Act*, the Minister can require that a Wildlife Management and Monitoring Plan (WMMP) be produced by developers of existing or proposed developments or other activities if those activities are likely to:

(a) "result in a significant disturbance to big game or other prescribed wildlife;
(b) substantially alter, damage or destroy habitat;
(c) pose a threat of serious harm to wildlife or habitat; or
(d) significantly contribute to cumulative impacts on a large number of big game or other prescribed wildlife, or on habitat."

Alternatively, S.95(3) of the Act allows other plans to be accepted in lieu of a WMMP if the contents of the plan meet the requirements.

Section 95 (2) of the Wildlife Act stipulates that WMMPs must include:

(a) a description of potential disturbance to big game and other wildlife included in the regulations, potential harm to wildlife and potential impacts on habitat;
(b) a description of measures to be implemented for the mitigation of potential impacts;

(c) the process for monitoring impacts and assessing whether mitigative measures are effective; and
(d) other requirements that are outlined in the regulations.

To enable S.95, ENR is developing regulations:

- WMMPs would apply to territorially managed wildlife (not migratory birds or fish) assessed or legally listed as species at risk under federal or NWT legislation
- The Minister would have to inform a person or developer requiring a WMMP of the reasons why
- The development, proposed development, or activity must wait until the WMMP is approved by the Minister
- The development must comply with an approved WMMP or could face penalties under the Wildlife Act

(Government of Northwest Territories, 2018)

Baseline monitoring of bull trout in the Prairie Creek watershed

As part of the assessment for the proposed operation of the Prairie Creek Mine, the proponent stated that no fish were in Prairie Creek that should present any concern for development. Local peoples and Parks Canada disagreed, and working with DFO, conducted a study as a baseline for discussion regarding licencing and future monitoring. Habitat use, movement patterns, and population structure of bull trout were assessed in the Prairie Creek watershed.

The monitoring baseline determined that:

- Bull trout and sculpin—two species that need to be considered by regulators—were present in Prairie Creek and its tributaries year-round.
- Bull trout are extremely sensitive species, making them an excellent indicator of change in the aquatic environment, and an excellent species for future monitoring.
- Bull trout, being a species of special concern, are given importance by regulators.

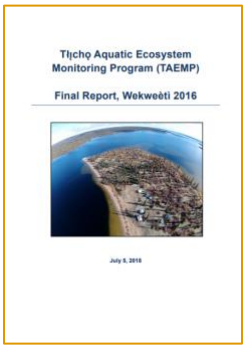
The question that could not be answered was: Is the current situation really a baseline, or are there trends and effects already occurring? There is in fact evidence that some pollution was occurring during the baseline study period. This is an important point to consider with many

4.4.5 Successes

Tłı̨chǫ Aquatic Ecosystem Monitoring Program

Region: Wek'èezhìı
Timeline: 2010 – 2018

Background/Objective: The Tłı̨chǫ Aquatic Ecosystem Monitoring Program (TAEMP) - started in August 2010 - is a community-based monitoring program to assess changes in quality of fish, water, and sediment over time, as well as safety to consume the local fish and the water. This program is based on both Tłı̨chǫ and scientific knowledge and is centred around the needs of Tłı̨chǫ people.



Key Players: The program is a collaboration between the WRRB and the the Tłı̨chǫ Government. The TAEMP rotates sampling through each of the four Tłı̨chǫ communities once every four years.

Other TAEMP partners include community members (e.g. elders, fishers and youth), the WLWB, DFO, ECCC, GNWT Department of ENR and GNWT Department of Health and Social Services (HSS).

Significance: As a successful community-driven program, it meaningfully involves community members in conducting contaminants-related research, including the collection of samples and observations using both Tłı̨chǫ and scientific knowledge to address the question: "Are the fish safe to eat and is the water safe to drink?" The TAEMP emphasized the importance of blending Western science and TK. Furthermore, the involvement of community members in the process helped to demystify scientific methods.

Key resources: FINAL REPORT-Tłı̨chǫ Aquatic Ecosystem Monitoring Program, Wekweètì 2016

Nę K'ədí Ke - Keepers of the Land Pilot Program

Region: Sahtú Settlement Area
Timeline: 2019-ongoing

Background/Objective: In January-February 2019, the Sahtú Dene Council partnered with the ʔehdzo Got'ı̨nę Gots'ę́ Nákedı (Sahtú Renewable Resources Board, SRRB) to undertake a monthlong on the land pilot Nę K' ədíkə́ – Keepers of the Land training program at Nárehten on the Rabbitskin River in order to lay the basis for a long term Guardian program. Following engagement with communities and leaders, six priority themes were identified: 1.Dene ts'ı̨lı̨ (way of life) and governance; 2. Cross-cultural learning with youth; 3. Understanding environmental changes; 4. Family areas and ɔehtęnę(trails); 5. Dene béré (traditional food); 6.Wellness and ceremony.

Key Players: Sahtú Dene Council, ʔehdzo Got'ı̨nę (Renewable Resources Councils), SRRB, indigenous leadership and Environment and Climate Change Canada.

Significance: NęK'ədí Ke program addresses a core land claim objective "to recognize and encourage the way of life of the Sahtú Dene and Métis which is based on the cultural and economic relationship between them and the land." A strength of the program will be in combining traditional knowledge research and science to understand changes in water, fisheries, birds, caribou, and other wildlife. Evidence from this research can be used by Sahtú leaders and co-management boards to make wise decisions.

Key resources:

For more information about this emergent program in the Sahtú Region, contact the SRRB. Information about Guardian programs in Canada can be found at www.ilinationhood.ca.

Great Bear Lake Fisheries

Region: Sahtú Settlement Area

Timeline: 2000 – ongoing

Background/Objective: The emphasis of this monitoring research has been on sampling lake trout among the different arms of the lake to better understand their size and age structure, growth, maturity and relative abundance for the purpose of assessing the status of harvested stocks. An additional component of the lake trout project has involved examining the presence of different forms of lake trout present in the lake and how they contribute to the biodiversity and functioning of the Great Bear Lake aquatic ecosystem. This is being accomplished through ongoing research that includes measuring different attributes of the shape of the trout from pictures taken in the field, gathering Traditional Ecological Knowledge of lake trout types through interviews with Délı̨nę community members, examining the diet and looking at the chemical properties of muscle tissue that provide us with an idea on long-term feeding habits, and looking at movements through archival tagging. The lake trout project was expanded in 2008 to include more comprehensive annual sampling for cisco in different depths.

Key Players: DFO and Délı̨nę Ɂehdzo Got'ı̨nę

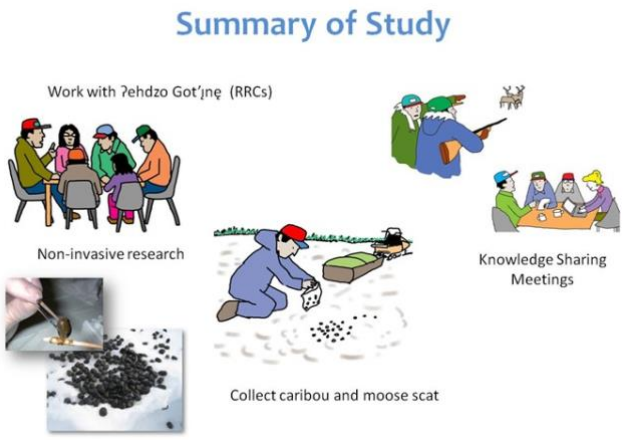
Significance: Although research on these key fish species is important, it is recognized that they do not live in isolation, but are part of a larger ecosystem. The partners have begun to build on this species-specific research by expanding the scope of our research for the lake. In 2012 a multi-year ecosystem study was initiated which maintains the lake trout and cisco assessment research, but has greater spatial coverage of different habitats, and includes the whole fish community together with water quality, primary productivity and invertebrate production which are essential for supporting fish populations. This expansion of the research will improve the understanding of the lake and how fish productivity is maintained. The large lake monitoring protocols developed and the baseline data collected through this study will form an important basis for tracking and understanding the cumulative effects of climate change, fishing and other anthropogenic (human induced) drivers on the Great Bear Lake ecosystem and its fisheries.

Key resource: 2000-ongoing Great Bear Lake Fisheries Web-page

Caribou Populations Study

Region: Sahtú Settlement Area

Date of Report: 2015



Background/Objective: The main goal of the caribou populations project was to develop a comprehensive understanding of the identities and relationships among caribou populations and Dene people in the Sahtú region in order to inform and prioritize management efforts. The project brought together traditional knowledge and non-invasive population genetics to organize and understand the biological diversity of caribou and to develop an approach to caribou research that balances and accommodates indigenous and scientific ways of knowing.

Key Players: Jean Polfus, Micheline Manseau, SRRB, Sahtú ʔehdzo Got'ıne, Sahtú community members and GNWT. Funding was provided by SRRB, ENR, CIMP, University of Manitoba, ESRF, NSERC and PCSP.

Significance: Including Dene voices in the planning process mobilized local knowledge and allowed the development of questions that are engaging to all invested parties. By respecting the lives and experiences of people that depend on the land we developed robust descriptions of caribou populations that more accurately reflected caribou biodiversity and promoted alternative ways of examining, defining, and relating to caribou populations in Canada.

Key Resource: 2012-2016 Caribou Populations Study Web-page

GNWT's Community-Based Water Quality Monitoring Program

Region: NWT-wide
Timeline: 2012 – present

Background/Objective: During the development of the NWT's water strategy, communities and Aboriginal Governments highlighted the need to be more involved in and know more about water stewardship. A community-based water quality monitoring program was developed, with input from communities, with the goal of giving NWT residents the opportunity to do water monitoring and answer community questions about water quality.

Key Players: The program is a collaboration of GNWT ENR, and a range of other water partners, including 21 communities involved in monitoring water quality at over 40 sites on 24 NWT rivers and lakes.

Significance: The program benefited from community input into its design, and provides valuable training and support to community monitors to collect water samples using standard methods. Water quality data is analyzed and results provided back to the communities, in accessible plain language formats. GNWT also worked with The Gordon Foundation, to make the program's data sets available to communities and researchers through Mackenzie DataStream, an online open access platform. Mackenzie DataStream allows users to access, visualize, and download full water quality datasets in the Mackenzie River Basin, empowering communities to use the data to answer their own research questions and be active water stewards.

Key resources: https://www.enr.gov.nt.ca/en/services/water-management/community-based-monitoring; https://www.nwtwaterstewardship.ca/node/105; https://mackenziedatastream.ca/#/

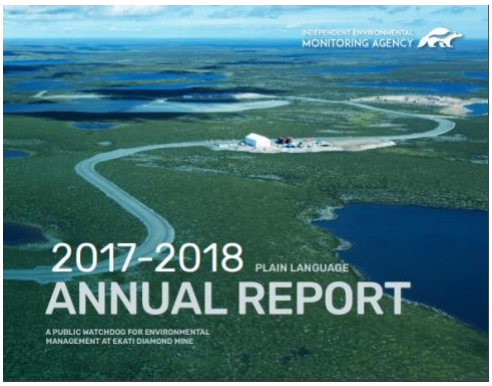
Ekati Mine's Independent Environmental Monitoring Agency

Region: Wek'èezhìı

Timeline: Ongoing since 1997

Background/Objective: The Environmental Agreement is a legal instrument to ensure Dominion Diamond Ekati ULC, the Government of Canada and the GNWT respect and protect land, water, wildlife and the land-based way of life essential to the well-being of the Aboriginal peoples.

Key Players: The Independent Environmental Monitoring Agency (IEMA) – formed in 1997 – is governed by a Board of Directors appointed by Akaitcho Treaty 8 First Nations (specifically, Łutsel K'e Dene First Nation and Yellowknives Dene First Nation), Tłı̨chǫ Government, North Slave Métis Alliance, Kitikmeot Inuit Association, Government of Canada, GNWT, and Dominion Diamond Ekati ULC.



Significance: The IEMA evaluates the annual environmental performance of the Ekati Mine in terms of closure and reclamation (e.g. vegetation monitoring), financial security, water and aquatic life (e.g. Aquatic Effects Monitoring Program – AEMP), air quality (e.g. Air Quality and Emissions Monitoring and Management Plan – AQEMMP), wildlife (e.g. Wildlife Effects Monitoring Plan and Caribou Road Mitigation Plan) and traditional knowledge (e.g. Tłı̨chǫ Boots-on-the-Ground Caribou Monitoring). It also offers recommendations for Dominion Diamond and for the regulators.

Key resource: Annual Report 2017-2018

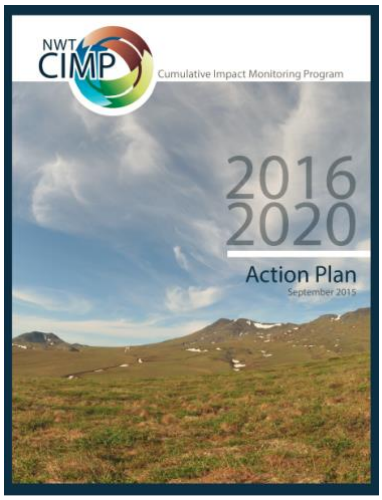
Cumulative Impact Monitoring Program (CIMP)

Region: Northwest Territories

Timeline: Ongoing since 1999

Background/Objective: The Cumulative Impact Monitoring Program of The Northwest Territories (NWT CIMP) is a requirement of settled NWT land claims and the MVRMA. The program coordinates, conducts and funds the collection, analysis and reporting of information related to environmental conditions in the NWT. The main purpose of CIMP is to support better resource management decision-making and the wise use of resources by better understanding cumulative impacts.

Key Players: Since 1999, NWT-CIMP has been guided by a Steering Committee of First Nations, Inuit, Métis, federal and territorial government representatives. Responsibility for the program devolved on April 1, 2014 from the federal government to GNWT ENR.



Significance: The NWT-CIMP mandate is based on the MVRMA and the Gwich'in, Sahtú and Tłı̨chǫ land claims and as such input of Aboriginal governments is a key aspect of the program. The program has been effective in terms of establishing a collaborative, multi-stakeholder governance structure and supporting multiple monitoring and capacity building projects, and developing key program management documents, guidelines and models.

Key resource: NWT CIMP Action Plan 2016-2020

4.5 WILDLIFE HARVESTING

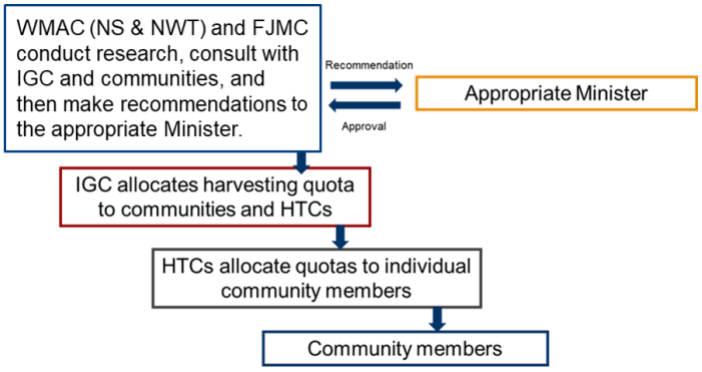
In relation to wildlife, harvesting means hunting, trapping or fishing activities carried out in conformity with a land claim agreement or, in respect of persons and places not subject to a land claim agreement, carried out pursuant to Aboriginal or treaty rights. This section will consider two of the key responsibilities that the boards play: setting total allowable harvests and developing harvest survey programs (GNWT ENR, n.d.).

4.5.1 Total Allowable Harvests / Harvesting Quotas

The responsibility of setting total allowable harvests (TAHs) and/or subsistence harvesting quotas varies by region. Renewable resources boards (as well as Inuvialuit organizations in the ISR) are considered the main instrument involved in setting policies and proposing regulations regarding wildlife harvesting and commercial activities related to harvesting (GNWT ENR, n.d.).

While all renewable resources boards in the Gwich'in and Sahtú and the HTCs in the ISR can recommend TAHs, the WRRB is the only one that makes an actual determination for a TAH (e.g. the WRRB sets a TAH and the Minister shall implement it). Where there has not been a TAH in the previous two years in the Wek'èezhìı region, a public hearing is required.

Below is an example of the wildlife subsistence quota setting process in the ISR. In terms of the process, the Minister sets the quota based on recommendations from these co-management bodies. The Inuvialuit Game Council allocates the harvesting quotas to the communities and the HTCs, and in turn, the HTCs allocate quotas to individual community members. The recommendations provided to the Minister by the co-management bodies are informed by advice from the IGC and HTCs.



Source: (Joint Secretariat, 2018)

Figure 24: The procedure for the determination and allocation of quotas in the ISR

KEY TERMS:

- **Gwich'in Minimum Needs Level:** The Gwich'in Minimum Needs Level sets the minimum number of a species that Gwich'in participants need to maintain a sustainable harvest.
- **Wildlife harvesting:** In relation to wildlife, harvesting means hunting, trapping or fishing activities carried on in conformity with a land claim agreement or, in respect of persons and places not subject to a land claim agreement, carried on pursuant to aboriginal or treaty rights.
- **Total allowable harvest:** The total number of individuals of a population or subpopulation that can be harvested each year (Joint Secretariat, 2018).
- **Subsistence quota:** The number of individuals of a population or subpopulation that may be harvested for personal use by Aboriginal groups within a given year (Joint Secretariat, 2018).

4.5.2 Harvester Surveys

TK and other forms of information can be collected through the use of a harvester survey program (e.g., Inuvialuit Harvester Survey Report, Gwich'in Harvest Study, Sahtú Settlement

Harvester Survey). These harvester survey programs are typically conducted over the long term on an annual or semi-annual basis. The surveys typically consist of two segments: 1) the quantification of harvest numbers, and 2) questions surrounding more qualitative measures such as overall health of wildlife, unusual sightings, or general concerns. These surveys utilize a census approach and attempt to cover as many of the harvesters as possible in the community. The individual sessions are short, lasting up to 15 minutes.

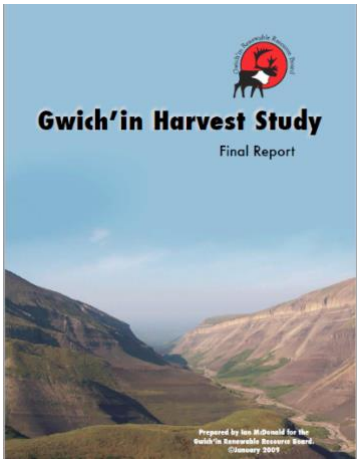
Harvester surveys are typically used as a means to quantify local harvest of resources. This can be done to satisfy a variety of objectives, such as the setting of commercial quotas, establishing the sustainability of the level of harvest on a population, and establishing and quantifying the levels of compensation required in the event of impacts from industry. Long-term harvester surveys also enable year-to-year comparisons of the qualitative measures included in the survey (e.g., caribou body condition, relative number of predators).

4.5.3 Successes

Gwich'in Harvest Study

Region: Gwich'in Settlement Area (GSA) and adjacent areas
Date of Report: 22 January 2009

Background/Objective: The Gwich'in Comprehensive Land Claim Agreement (GCLCA) of 1992, established between the Gwich'in Tribal Council and Canada, required the GRRB to conduct a harvest study, the GHS.



The objective of the GHS is to provide necessary harvesting data for the effective management of wildlife by the GRRB and government and was used to determine the Gwich'in Minimum Needs Levels (GMNL).

Key Players: The study was designed by the Harvest Study Coordinator, in consultation with the Harvest Study Working Group (HSWG), the RRCs, and the GRRB which were all created though the GCLCA.

Significance: As stated by the GCLCA, the GRRB (a co-management board that is the main instrument of wildlife management in the GSA) is required to conduct the GHS and involve the RRCs to the greatest extent possible, as well as the creation of the HSWG to support the study. The HSWG consisted of representatives from the Gwich'in and government agencies with wildlife management responsibilities in the GSA.

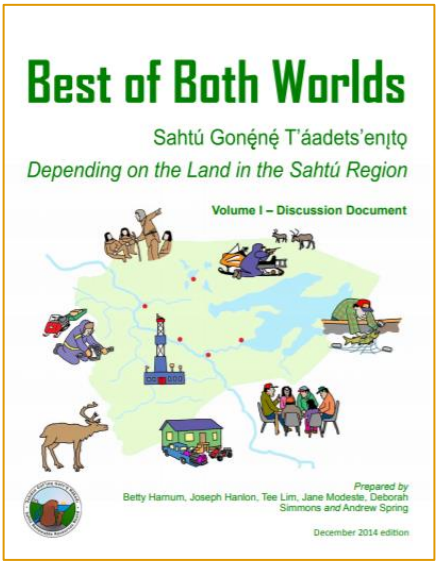
Key Resource: Gwich'in Harvest Study Final Report

Best of Both Worlds – Sahtú Traditional Economy Project

Region: Sahtú

Date of Report: 17 January 2014

Background/Objective: Best of Both Worlds is a two-phase project to develop an Action Plan for promoting workforce readiness to support a healthy mixed economy, of which harvesting is a key component. The discussion document is a product of Phase 1, which involved a literature review, workshop, focus group and interviews about the regional mixed economy. Recommendations from Phase 1 will inform community-based pilot projects and action planning in Phase 2 while priority items identified by communities will become evaluation criteria for the project.



Key Players: The project is funded by Canadian Northern Economic Development Agency (CanNor) and GNWT Industry, Tourism and Investment (ITI). It is overseen by the SRRB with assistance from the Pembina Institute and in partnership with Laurier Centre for Sustainable Food Systems (SFS), Wilfred Laurier University and the five ʔehdzo Got'ı̨nę of the Sahtú Region: Colville Lake ʔehdzo Got'ı̨nę, Délı̨nę ʔehdzo Got'ı̨nę, Fort Good Hope ʔehdzo Got'ı̨nę, Norman Wells ʔehdzo Got'ı̨nę, Tulít'a ʔehdzo Got'ı̨nę.

Significance: Phase 1 focused on the traditional sector of the mixed economy of the Sahtú Region and the discussion Phase 1 report provides an overview of the concepts of traditional and mixed economies, and the history of the Sahtú mixed economy, as well as a series of 29 recommendations related to areas of program and infrastructure development, education and training, communication and awareness-building, and research. The report uses Dene language terms to enhance cross-cultural understanding of Sahtú gonéŋ ę́ t'áadets'enıt̨ ǫ (the economy of the Sahtú Region).

Key Resource: Web page

4.6 RESPECTFUL AND EFFECTIVE USE OF TRADITIONAL KNOWLEDGE (TK)

TK plays an important role in many areas of renewable resources management. In the Mackenzie Valley, there is a requirement stemming from the MVRMA that the various boards shall consider TK and scientific information made available to them. This section of the guide provides a description of TK and identifies ways in which TK should be used by board members and staff.

4.6.1 What is traditional knowledge?

Traditional knowledge can be understood and described in many ways. The term TK itself is often used interchangeably with several other words, such as: traditional ecological knowledge (TEK), local knowledge (LK), Aboriginal knowledge (AK), and *Inuit Qaujimajatuqangit* (IQ).

Within the current resources management environment (in the MVRMA), the term TK typically refers to a concept that embodies aspects of all four other terms listed above. This can often become challenging as the lack of a consistent definition can make it difficult to apply in reaching management decisions about where to use it. To foster consistency, it may be most helpful to use the working definition provided by the MVEIRB in their *Guidelines for Incorporating Traditional Knowledge in Environmental Impact Assessment* (MVEIRB 2005). The MVEIRB defines TK by outlining three elements:

- **Knowledge about the environment –** This is knowledge about specific aspects of the environment gained through experience, which has been built up over generations. It is important to note this knowledge is not static and is continually changing over time.
- **Knowledge about use and management of the environment** – This is knowledge about how to use the land, or how to manage certain aspects of the land. This is also wisdom about how one should relate to the land.
- **Values about the environment –** This wisdom centres on what is considered significant as well as ethics surrounding interactions between humans and the various aspects of the land.

4.6.2 How is TK respectfully shared to inform renewable resources management and research?

Traditional knowledge is shared in partnership with community members who are experts in the particular subject of interest. As the knowledge being shared belongs to the community, there are three fundamental principles to consider: intellectual property, informed prior consent, and confidentiality.

- **The first principle in conducting TK work is the concept of intellectual property**. The wisdom and knowledge being documented is the result of generations of observation about the environment and is quite valuable. Throughout the documentation process, one has to be careful not to appropriate the knowledge and use it for personal gain (monetising a new medicine, for example), or for a purpose it was never intended. As a way of preventing its misuse, the release of TK by communities is often done through a formal data-sharing agreement. These agreements typically outline the ways in which the information can be used, who controls its use, as well as clauses that limit the totality of the information contained within.

- **The second fundamental principle in collecting TK is the concept of informed prior consent**. Prior consent is an essential component of every interview, workshop, or survey, and must be secured prior to commencing. Participants have the right to know why the information is being collected, who (or what organization) is collecting the information, what it will be used for, how it will be documented (audio, video, notes, and maps), and a note about confidentiality of identity/data storage. Information from a past project may be repurposed and used in a different context. As the past participants may not have consented to its use in this new context, every effort to seek consent should be made.
- **Thirdly, confidentiality—for both the informants and the sensitive TK information**—helps to protect the privacy of individuals and communities who contribute knowledge to TK projects. In certain cases, names of informants are published; however, for TK work in renewable resources management projects, this is almost never the case. Often the information collected for use in the project is not intended for public distribution; an example of this would be a map of all the cabins and burial sites in a particular area. Due to the sensitive nature of TK work, the actual data used in projects is filtered or removed from reports available to the public.

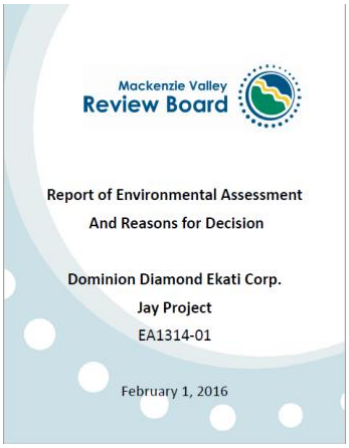
TK can greatly contribute to renewable resources management, monitoring, and research programs. The means in which TK can be documented includes workshops, surveys, and individual interviews.

4.6.3 Successes

Jay Project – EA1314-01, Dominion Diamond Ekati Corp.

Region: Wek'èezhìı
Timeline: 2013 - 2016

Background/Objective: The Jay Project is an expansion of the existing Ekati Diamond Mine and includes the construction of a new road to the Jay open pit and continued use of an existing access road to transport ore to the mill site. The haul road crosses a critical migration route for the Bathurst barren-ground caribou herd, which is a threatened species in Canada, and would be near Lac de Gras. Inspiration from TK produced an improved design of the mine and haul road was improved and key mitigation measures at key ecological and cultural locations.



Key Players: The Review Board completed its *Report of Environmental Assessment and Reasons for Decision* for the Jay Project which engaged the Tłı̨chǫ Government, Kitikmeot Inuit Association, Yellowknives Dene First Nation, Lutsel K'e Dene First Nation, Deninu Kue First Nation, and the Fort Resolution Métis Council. An independent Traditional Knowledge Elders Group (TKEG) was funded by the company and participated in the environmental assessment.

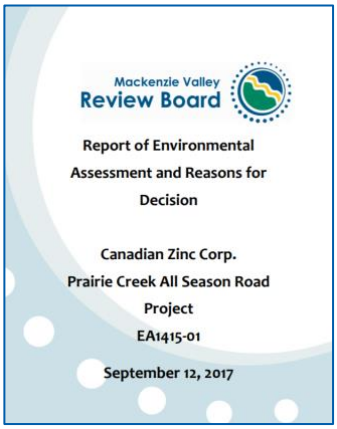
Significance: The incorporation of traditional knowledge (e.g. public hearings, cultural workshops) led to changes in the project design to minimize impacts, the development of practices to ease pressures of cultural change on Aboriginal communities, the identification of ecologically and culturally valuable lands, and the funding of an elders group to incorporate TK and retain cultural aspects and traditional uses of the area.

Key Resource: Report of Environmental Assessment And Reasons for Decision, Dominion Diamond Ekati Corp., Jay Project, EA1314-01

Prairie Creek All Season Road – EA1415-01, Canadian Zinc. Corp.

Region: Wek'èezhìı
Timeline: 2014 – 2018

Background/Objective: Canadian Zinc proposed the development of an all season road crossing federal and territorial lands, for which construction would take three years. Over the course of the environmental assessment, the proponent proposed Project modifications. The developer originally proposed building an airstrip on the Ram Plateau in Nahanni Park, but revised its Project during the environmental assessment to exclude it.



Key Players: MVERIB sought input from community members and TK holders in Fort Simpson and Nahanni Butte.

Significance: Following the science-oriented technical sessions, MVEIRB conducted cultural technical sessions in Fort Simpson and Nahanni Butte to inform the environmental assessment. A large map was brought to these sessions for information gathering. In Fort Simpson, Liidlii Kue First Nation presented specific TK information regarding flows and icing or glaciation potential at water crossing along the road and harvesters stated the importance of TK during the mitigation and monitoring phase with respect to caribou once the road was complete. In Nahanni Butte, community members emphasized their reliance on the traditional land based economy and emphasised that the best mitigation measure would be to involve the community directly in detailed decision-making related to the routing of the road. A community-driven approach would lessen impacts to wildlife, harvesting, and other traditional values. It was also recommended by MVEIRB that Canadian Zinc directly incorporate TK into monitoring of harvesting, water, and fisheries, and report on these aspects.

Key Resource: Report of Environmental Assessment and Reasons for Decision, Canadian Zinc. Corp. Prairie Creek All Season Road Project EA1415-01

Gwich'in Environmental Knowledge Project (GEKP) – Bluenose West Caribou

Region: Gwich'in Settlement Area
Date of Report: 15 April 2015

Background/Objective: A study was conducted by the Gwich'in Social and Cultural Institute (GSCI) to gather and present unrecorded Gwich'in Traditional Knowledge of the Bluenose-West Caribou herd in 2014 and 2015. This study also incorporated previously-recorded knowledge from the GSCI's digital archives to produce a final report on TK related to this species, which was reviewed in community verification sessions.

Key Players: The GSCI and GRRB have been conducting a project focused on Gwich'in knowledge of species at risk, led by a four-member steering committee with a member from Aklavik, Fort McPherson, Inuvik, and Tsiigehtchic, and representing all NWT Gwich'in communities and have produced reports detailing Gwich'in Knowledge of Species at Risk, including Rat River Dolly Varden char (2010), boreal woodland caribou (2011), grizzly bears (2013), and wolverine (2014). These have been supported by the knowledge of Gwich'in Elders and hunters. Funding was provided by GRRB and the Government of the Northwest Territories.

Significance: Gwich'in knowledge of Bluenose caribou has not been the primary focus of any previous traditional knowledge studies. Building on existing sources of Gwich'in knowledge, this study included interviews with 12 Gwich'in hunters and Elders, as well as public engagement sessions during which traditional knowledge was recorded.

Key Resource: Gwich'in Knowledge of Bluenose West Caribou

4.7 COMPLIANCE AND ENFORCEMENT

Governments and administrative organizations have responsibilities to ensure that monitoring or mitigation of negative impacts to renewable resources occurs. In the Mackenzie Valley, the GNWT ENR and Lands have inspection responsibilities, whereas in the case of the ISR, the Inuvialuit Land Administration also carries out these functions. The federal government, namely ECCC and DFO also have inspection responsibilities related to renewable resources, where legislation and regulations apply. The distinction between compliance and enforcement is further explained in this section.

GNWT's Compliance Model

Before resorting to enforcement for renewable resources management, the GNWT ENR uses what is known as the "compliance triangle" or Compliance Model (Figure 25). Education and prevention are the primary tools to achieve compliance. Enforcement is viewed as a tool of last resort.

A guiding principle of ENR's Compliance Model is that compliance can best be maximized through cooperative inclusion of the public and stakeholders, building consensus in resource and environmental management decisions, activities and regulatory initiatives. Preventative enforcement, including public education programs that encourage attitudes and values that promote compliance with environmental and resource laws, are a major focus of ENR's compliance activities.

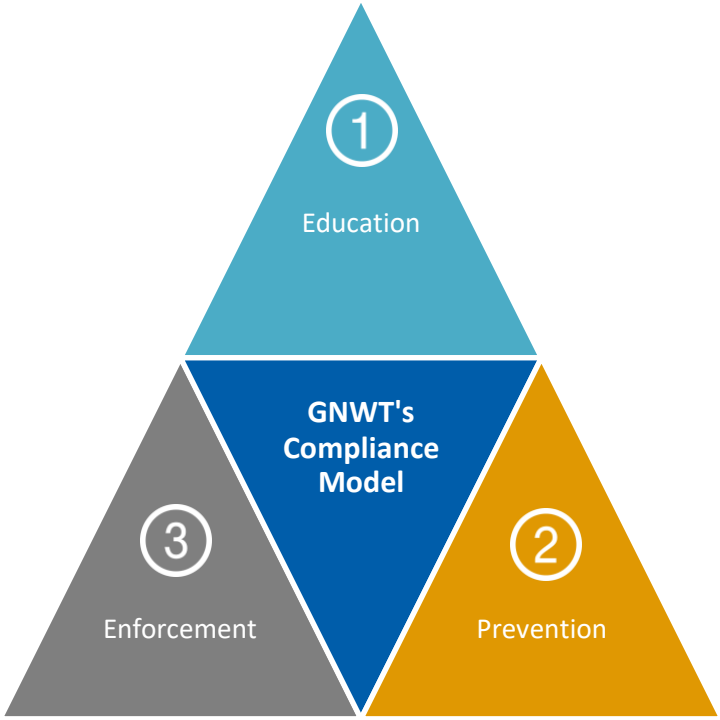


Figure 25: The GNWT's Compliance Model for the management of renewable resources

Types of Inspectors

In general, there are two types of inspectors:

1. **Compliance**: Issuance of fines, stop work orders, and other commands to a person or company to get them to comply with a term or condition.

2. **Enforcement**: Legally enforcing an act or regulation. Enforcement officers may charge someone with breaking the law; in such case, the defendant is compelled to appear in court.

4.7.1 Compliance

Sanctions are a major tool used to compel compliance. Types of sanctions include: fines and penalties, the suspension of operations, and bonds.

Fines and penalties

One type of sanction that can be used as a tool to compel compliance is that of a fine or penalty. Fines or monetary penalties can be invoked if a term or condition of a land use permit, water licence, etc. is not followed or environmental damage occurs. The scale of fines or monetary penalties is important to note. If fines or penalties are not large enough, they might be considered just a cost of doing business. In other words, if the size of a fine or penalty is less than the cost of restitution or compliance for industry, then there might be a tendency to just pay the fine rather than to stop causing damage.

Suspension of operations

Compliance officers have the power to issue a stop work order. This is a significant power that often compels compliance. However, one must remember that a stop work order does not immediately stop work, and before it does, it is subject to appeal.

Bonds

In general, the fees for (or the use of) renewable resources and/or the posting of a bond is intended to ensure the terms and conditions of a permit, licence, or authorisation are adhered to. Proponents are often required to either post a bond before commencing work or must post a bond as part of obtaining a permit. This measure helps to confirm that the proponent has the financial capacity to carry out the project. This mechanism also offers some protection, such that should the proponent “walk away” or cause major damage, the holder of the bond has a way to fund the required remediation.

It should be noted that if a proponent does not post a required bond, it leaves the permit or licence in a state of non-compliance – which should trigger the stoppage of the project or prevent it from being undertaken in the first place. In theory, bonds are calculated using models that attempt to estimate the true cost of remediation and reclamation, but sometimes they are negotiated to a lower level or phased-in. They are often not money actually held by the government but are often promissory notes.

4.7.2 Enforcement

Solid information, charges, and prosecution lead to penalties such as imprisonment or fines, which deter future criminal action. However, law enforcement is often not a preferred option over forms of compliance because it requires monetary resources and time that governments would rather not spend. For instance, the laying of information to inform the case, charges, and prosecution of the holder of a land use permit for a small camp or lease where a defined person is responsible is somewhat different than at a major mine site owned by 63 million shareholders.

4.7.3 Successes

Mobile Core Bathurst Caribou Management Zone

Region: Northwest Territories
Timeline: Ongoing

Background/Objective: The Mobile Core Bathurst Caribou Management Zone was implemented as a wildlife management zone to inform hunters on restrictions on harvesting in order to protect barren-ground caribou under the NWT *Wildlife Act*.

Key Players: The GNWT ENR updates, monitors and enforces the Mobile Zone.

Significance: The Mobile Zone is updated every Tuesday according to new information on animal distribution. Harvesting caribou within the Mobile Zone is in violation of the *Wildlife Act*. If a hunter is found harvesting barren-ground caribou within the zone, the situation will be investigated and charges may be laid

Key Resource: Mobile Core Bathurst Caribou Management Zone Webpage

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