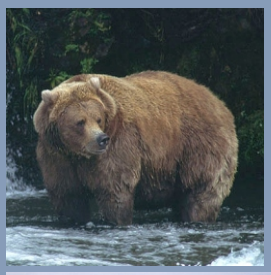
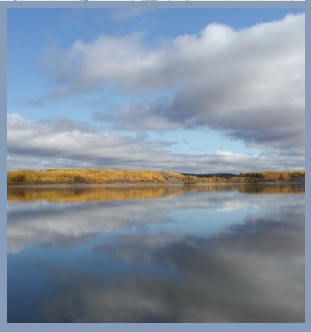
NORTHWEST TERRITORIES ENVIRONMENTAL AUDIT 2005

Main Report





December 2005

Audit Summary and Conclusions

INTRODUCTION

This report is the outcome of the first Northwest Territories (NWT) Environmental Audit completed in 2004/05. The "Audit" was conducted pursuant to Part 6 of the Mackenzie Valley Resource Management Act (MVRMA) which requires an evaluation of the status of the environment, the effectiveness of methods to monitor cumulative impacts and the effectiveness of the regulation of uses of land and water and deposits of waste on the protection of key components of the environment from significant adverse impact. While the Inuvialuit Settlement Region (ISR) does not fall under the MVRMA, the ISR was included in the Audit as per the Audit Terms of Reference.

AUDIT OF REGULATORY REGIMES

The major components of the NWT's regulatory regimes include: land use planning, regulation (i.e., issuance and enforcement of permits and licences) and environmental impact assessment. It is important to note that the Audit of Regulatory Regimes focussed on an evaluation of the *effectiveness* of these major components in protecting the environment from significant impacts, *not their efficiency*. Each of the components is discussed separately in the following sections. We have also provided an overview of the use of traditional knowledge (TK) in regulatory processes.

LAND USE PLANNING

Regional land use planning in the NWT has been in progress since 1984, when the Basis of Agreement on Northern Land Use Planning was signed by the federal and territorial governments, with the participation of the Aboriginal organizations which existed at the time. The MVRMA, enacted in 1998, also established land use planning requirements. Despite these efforts, and requirements under the MVRMA, insufficient progress has been made in developing land use plans in the Mackenzie Valley. Today, less than 1/5th of the area covered by the MVRMA is protected by legally enforceable land use plans. The ISR has had a greater degree of success in developing and implementing its land use planning process.

In the ISR, Community Conservation Plans have been developed for the lands surrounding each of the Inuvialuit communities. Similarly, a comprehensive Land Use Plan consistent with the requirements of the MVRMA has been developed for the Gwich'in Settlement Area. While the Inuvialuit Settlement Region and the Gwich'in Settlement Area have developed land use plans that are playing an important role in identifying and protecting areas of environmental importance, progress in other parts of the NWT has lagged behind.

More than ten years after the signing of the Sahtu Dene and Metís Comprehensive Land Claim Agreement, a functional Sahtu Land Use Plan has not been developed or approved. Progress

has been made in the Dehcho Territory, as evidenced by the recent preparation of a revised draft land use plan and background report. Little to no formal land use planning activity has occurred in the remainder of the NWT.

The lack of land use plans in many areas of the NWT is a significant void that is adding increased complexity and uncertainty to environmental management processes. Land use plans for the remaining portions of the NWT should be developed as soon as possible, with provisions established to honour these plans in areas where land claims have not been settled.

REGULATION

Overall, we found that the MVRMA and ISR regulatory processes are adequately protective of land and water; however, regulatory and institutional gaps are preventing the regulatory system from managing potentially adverse impacts to all environmental components in an integrated manner. These gaps include, to varying degrees: the management of air quality; the management of social and cultural impacts; and compliance and enforcement. In addition, the assessment process for permit and licence applications is complicated by the absence of land use plans, as noted above.

The regulatory regimes of the NWT possess some important and unique attributes that distinguish them from the approaches in use throughout most of Canada. In addition, the MVRMA and ISR regulatory regimes are, to varying degrees, relatively new and they continue to evolve as additional operational experience is obtained. The ISR process has had more time to evolve than that of the Mackenzie Valley. As such, it has progressed beyond many of the initial challenges, frustrations and uncertainty of process being faced in parts of the Mackenzie Valley. Much of the uncertainty of process being experienced is directly related to the absence of settled land claims.

Although they are different and relatively new, the regulatory regimes of the NWT are not substantively more complex than those of other jurisdictions. What is unique is the extent and proactive nature of community involvement, and the degree to which public input can influence the process. This focus on public involvement has provided value to the regulatory regime, but the current method of participation has come with a significant administrative and communication burden for all participants.

One of the most commonly cited and forcefully stated challenges to the NWT regulatory process was the meaningful participation of communities due to capacity limitations. Despite improvements in community involvement and consultation, room for improvement remains. Current consultation practices were found to overload the capacity of local communities to participate in a meaningful manner. Additional community capacity challenges relate to differing expectations for public consultation, effective communication, and management of the consultation process within communities themselves.

A streamlining of the application notifications process is recommended, together with a study of the consultation process to identify those aspects that are working well and those areas that are ineffective and need revision. An evaluation of the capacity of Aboriginal communities to participate in environmental and resource management processes should also be completed. These two activities need to proceed in concert.

In general, Boards are functioning effectively; however, the ability of the Boards to exercise their responsibilities and issue licences and permits in a timely and effective manner has been hampered by delays in a complicated and protracted nomination and appointment process.

Boards are not providing sufficient information to monitor their performance. Reporting has focused on fiscal matters with limited performance and accountability information being provided. Board effectiveness may also be constrained by the limited training/orientation provided to Board members.

Streamlining of the nominations and approvals process, better Board accountability reporting and additional training and support to Board members is required to address these deficiencies.

A major gap in the regulatory system is the failure of either Canada or the Government of the Northwest Territories (GNWT) to accept responsibility for the protection of air quality throughout the whole of the NWT. As a consequence, air quality impacts associated with activities in the NWT remain, with few exceptions, largely unregulated.

A second shortcoming in the regulatory regimes of the NWT is the absence of clear regulatory tools to assess and mitigate social, economic and cultural impacts from development. Although a variety of non-regulatory approaches are being used, we heard from many interested parties that such impacts are not being addressed to the same extent as biophysical impacts. While we agree, we were unable to determine if this has resulted in significant adverse impacts that can reasonably be addressed by an environmental management regime. Nonetheless, there is a clear need for action on a wide array of social and cultural issues. We believe that responsibility for addressing these issues rests primarily with government agencies that have health and social service mandates.

INAC, in its role as lead inspection and enforcement agency for regulatory instruments issued in the ISR and under the MVRMA, has developed an inspection process using a sound risk assessment approach, with inspection frequencies found to be adequate. Based on the information presented to the Audit team, the inspection and enforcement regime generally appears to be playing its intended role (i.e., to ensure that permit and licence conditions are enforced). However, in some circumstances uncertainty existed with respect to the enforceability and responsibility for enforcement of permit and licence conditions among INAC, GNWT, DFO, and Environment Canada. This has led to gaps in the development of permit and licence conditions and in the monitoring and enforcement of land use permits, water licences and wildlife management.

Resolution of these gaps is needed to improve the regulatory framework.

ENVIRONMENTAL IMPACT ASSESSMENT

We found the Environmental Impact Assessment (EIA) regime to be protective of the environment within a consultative process. Initial proposal screening occurs through the regulatory framework and allows for input from all potentially affected parties. We found that where potentially significant impacts or public concerns were identified, these concerns were assessed in an appropriate manner, with the system deferring to a conservative approach in the event of uncertainty. Decisions have generally been protective, with the decision-making processes evolving in a positive direction. The Mackenzie Valley Environmental Impact Review Board (MVEIRB) has taken a leadership role in developing tools to ensure the effectiveness of the system.

Notwithstanding the above, concerns were expressed about the timeliness of EIA processes. We were also informed that the number and nature of proposals being referred to Environmental Assessment was inappropriate. Data suggests that the time taken by the MVEIRB to develop Reports on Environmental Assessment (REA) is reasonable. The data also suggest that the number of projects referred to Environmental Assessment is not unwarranted and is reflective of the rights conferred under the MVRMA for the public to cite their concerns for proposed projects.

TRADITIONAL KNOWLEDGE

Historically, traditional knowledge was not used in the regulatory process. This is changing with most process participants appearing to recognize TK as a potentially important source of information for decision-making. The use of TK was apparent in all stages of NWT environmental management processes. For example, TK has played an important and, in some cases, central role in NWT land use planning, where this planning has taken place. It has also been used as the basis for decisions during regulatory processes and genuine efforts are being made to ensure that it is considered during Environmental Assessments.

Despite clear evidence that efforts are being made to use TK in environmental decision-making, numerous challenges to the process were identified. Increased emphasis needs to be placed on documenting TK and ensuring that it is passed between generations. Participants in the environmental management regime should be given the training necessary to ensure they have the capacity to collect and use TK effectively. Further, the expectations of all parties should be clearly stated in processes involving the exchange of TK.

AUDIT OF THE CUMULATIVE IMPACT MONITORING PROGRAM

In 1992, the Government of Canada committed to the Gwich'in that a method to monitor cumulative impacts would be provided. Since then, similar commitments have been made to the Sahtu, Tlicho and, through the MVRMA, to all residents of the Mackenzie Valley. Despite years of planning, a Cumulative Impact Monitoring Program (CIMP) has not yet been implemented and limited regional/territorial environmental baseline and cumulative impact data are available to decision makers.

The absence of systematic approaches to identify, evaluate and respond to regional/territorial cumulative effects was identified as one of the most common reasons that projects are referred to Environmental Assessment. Regulatory decision-makers lack the tools necessary to make informed planning and approval decisions based on the regional/territorial cumulative effects of projects. This gap is tied directly to the absence of land use plans and a fully implemented CIMP.

While a lengthy planning process for implementation of the CIMP has taken place, work remains. The identification and implementation of specific monitoring needs requires further detail and long term funding has not been secured.

A detailed operational plan for the CIMP needs to be finalized, funded and implemented. This should be an immediate priority.

TRENDS AND STATUS OF THE ENVIRONMENT

A major component of the Audit was the evaluation of information on the environment in order to assess trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends. This review focused on seven major environmental components:

- atmospheric environment (including air quality, climate and climate change);
- freshwater aquatic environment;
- marine environment;
- terrestrial environment;
- permafrost, ground ice and snow;
- human health; and
- socio-economic and community wellness.

The valued components (VCs) identified in the INAC report, *A Preliminary State of Knowledge of Valued Components for the NWT Cumulative Impact Monitoring Program and Audit* were selected as a starting point for the Status of the Environment assessment. Key indicators of change for the selected VCs were then identified and carried forward through the study.

For each of the key indicators, available data were analyzed and assessed to identify: trends; potential contributing factors to any changes in the environment; the significance of any trends identified; the likely impact of the trends; activities to mitigate the factors/emissions that are causing the observed trends; and, data gaps.

Overall, environmental quality in the NWT was found to be favourable for most components. In some cases it was difficult to determine the current condition of an environmental component or evaluate trends due to a lack of adequate baseline data. However, where data were sufficient, several instances of unfavourable conditions and deteriorating trends were identified. The two most disturbing of these are: the recent large decreases recorded for the size of caribou herds that Aboriginal people living in the NWT rely on as a major source of subsistence; and, the need for action in the area of socio-economics and community wellness. With respect to the latter, while traditional economic indicators show that the NWT population and economy are growing, there is no commensurate progress in community wellness with numerous measures of social well-being being found to be less favourable than national comparisons. The social problems identified appear even more pronounced in the NWT smaller communities and are more associated with the Aboriginal population. This situation requires action by government agencies that have health and social service mandates.

Looking forward, climate change is expected to have a profound effect on the Canadian North. The potential effects extend to all components of the environment ranging from: loss of permafrost conditions in some parts of the NWT; increased erosion of river banks and shorelines; reduction in the Arctic ice fields; changes in vegetation coverage and animal habitat; increased mobility of nutrients and organic and inorganic contaminants; and, changes in the quality and availability of traditional foods. Additional research is required in a number of areas to improve the understanding of the effects of climate change on all components of the environment.

INTEGRATION

By definition, the integration of the NWT's regulatory regimes requires that all of their components be fully operational; the absence of a single component has the potential to diminish the ability of the total system to adequately protect the environment.

At the time of the Audit, two major components in the NWT's environmental management regimes had not yet been fully implemented: enforceable land use plans had been established in the ISR and a small portion of the Mackenzie Valley and limited progress had been made on the Cumulative Impact Monitoring Program.

While both of these gaps constrain the performance of the system, we believe that the lack of land use plans is the more critical. These plans should reflect northern and Aboriginal values with respect to how lands and lives are to be impacted through development. In the absence of land use plans, regulatory and EIA Boards are being asked to make fundamental value

decisions on a project-by-project basis. This has created uncertainty in the process for communities, developers, Boards and government and represents a critical stumbling block in efforts to meet the objectives of the MVRMA. Once land use plans are developed and administrative issues resolved, Boards will be in a better position to more effectively address their mandates under the MVRMA.

In summary, the regulatory system is generally addressing the management of environmental issues with several noted exceptions. In this regard, resolution of issues associated with air and enforcement should be relatively straightforward. Resolution of social and cultural impacts, however, may be significantly more challenging and beyond the scope of the NWT's environmental management regimes. The absence of the CIMP, while providing challenges, does not have the same impact on the system as the lack of land use plans. The results of the environmental trends analysis can be used to prioritize responses to deficiencies in the system.

Table of Contents

Audit Participants

SENES wishes to acknowledge the participation of the following organizations in the NWT Audit:

BHP Billiton
Canadian Arctic Resources Committee
Canadian Association of Petroleum Producers
Canadian Parks and Wilderness Society
Canadian Zinc
CEAMF Secretariat
CIMP Secretariat
De Beers Canada
Department of Fisheries and Oceans
Designated Gwich'in Organization - Aklavik
Ecology North
Environment Canada
Environmental Impact Review Board – Inuvialuit Settlement Region
Environmental Impact Screening Committee - Inuvialuit Settlement Region
Environmental Monitoring Advisory Board – Diavik Diamond Mine
Fisheries Joint Management Committee - Inuvialuit Settlement Region
GNWT - Department of Environment and Natural Resources – Compliance Division
GNWT - Department of Environment and Natural Resources – Env. Protection Division
GNWT - Department of Environment and Natural Resources – Forest Management Division
GNWT - Department of Environment and Natural Resources – Inuvik Region
GNWT - Department of Environment and Natural Resources – Policy, Legislation and Communications Division
GNWT - Department of Environment and Natural Resources – Sahtu Region
GNWT - Department of Environment and Natural Resources – Wildlife Division
GNWT - Department of Health and Social Services
GNWT - Department of Industry, Tourism and Investment – Industrial Initiatives
GNWT - Department of Industry, Tourism and Investment – Mackenzie Valley Pipeline Office
GNWT - Department of Industry, Tourism and Investment – Minerals, Oil and Gas
GNWT - Department of Municipal and Community Affairs
GNWT - Department of Transportation
Gwich'in Land and Water Board
Gwich'in Land Use Planning Board
Gwich'in Renewable Resource Board
Gwich'in Renewable Resource Councils – Aklavik and Inuvik
Gwich'in Social and Cultural Institute
Gwich'in Tribal Council – Lands, Resources and Implementation
Imperial Oil
INAC Headquarters – Claims and Indian Government, Comprehensive Claims Branch
INAC Headquarters – Claims and Indian Government, Implementation Branch
INAC Headquarters – Claims and Indian Government, Self Government Branch

INAC Headquarters – Corporate Services
INAC Headquarters – Northern Affairs Program
INAC NWT – Aboriginal and Territorial Relations Directorate
INAC NWT – Board Relations Secretariat
INAC NWT – Claims Negotiations
INAC NWT – Colomac Project Team
INAC NWT – Contaminants and Remediation Directorate
INAC NWT – Corporate Services
INAC NWT – Environment and Conservation
INAC NWT – Giant Project Team
INAC NWT – Indian and Inuit Services
INAC NWT – Mineral and Petroleum Resources Directorate
INAC NWT – North Mackenzie Operations
INAC NWT – Operations
INAC NWT – Pipeline Readiness Office
INAC NWT – Renewable Resources and Environment Directorate
INAC NWT – South Mackenzie Operations
INAC NWT – Water Resources
Inuvialuit Game Council
Inuvialuit Land Administration
Inuvialuit Land Administration Commission
Inuvialuit Traditional Knowledge Study for the Northern Gas Project
Mackenzie Valley Environmental Impact Review Board
Mackenzie Valley Land and Water Board
National Energy Board
Northern Gas Project Secretariat
NWT and Nunavut Chamber of Mines
NWT Status of Women Council
NWT Water Board
Parks Canada
Sahtu Land and Water Board
Sahtu Land Use Planning Board
Sahtu Renewable Resource Board
Sahtu Renewable Resource Councils – Déline, Ft. Good Hope, Colville Lake and Norman Wells
Wildlife Management Advisory Council (NWT) - Inuvialuit Settlement Region

The following organizations were contacted, but did not to participate in the Audit:

Akaitcho First Nation
Dehcho First Nation
Dene Nation
Designated Gwich'in Organizations – Inuvik
Inuvialuit Community Corporations – Aklavik, Inuvik and Tuktoyaktuk
Inuvialuit Hunters and Trappers Committees – Aklavik, Inuvik and Tuktoyaktuk
North Slave Metís Alliance
NWT Metís Nation
Tlicho First Nation

Public Open Houses

Aklavik
Fort Good Hope
Inuvik
Norman Wells
Tuktoyaktuk
Yellowknife (2)

Glossary of Common Acronyms

ASC - Audit Sub-Committee
CEAA - Canadian Environmental Assessment Act
CEAMF - Cumulative Effects Assessment and Management Framework
CIMP - Cumulative Impact Monitoring Program
DFO - Department of Fisheries and Oceans
EA - Environmental Assessment
EIA - Environmental Impact Assessment
EIR - Environmental Impact Review
EIRB - Environmental Impact Review Board
EISC - Environmental Impact Screening Committee
ENR - Environment and Natural Resources (GNWT)
FJMC - Fisheries Joint Management Committee
GLUPB - Gwich'in Land Use Planning Board
GLWB - Gwich'in Land and Water Board
GNWT - Government of the Northwest Territories
IBA - Impact Benefit Agreement
IFA - Inuvialuit Final Agreement
IGC - Inuvialuit Game Council
ILA - Inuvialuit Land Administration
IMA - Interim Measures Agreement
INAC - Indian and Northern Affairs Canada
ISR - Inuvialuit Settlement Region
LWB - Land and Water Board (generic)
MVEIRB - Mackenzie Valley Environmental Impact Review Board
MVLWB - Mackenzie Valley Land and Water Board
MVRMA - Mackenzie Valley Resource Management Act
NEB - National Energy Board
NGO - Non-Governmental Organization
NWT - Northwest Territories
OAG - Office of the Auditor General
PAS - Protected Areas Strategy
REA - Report on Environmental Assessment
SLUPB - Sahtu Land Use Planning Board
SLWB - Sahtu Land and Water Board
TK - Traditional Knowledge
VC - Valued Component
WMAC - Wildlife Management Advisory Council

Preamble

SENES Consultants Limited (SENES) is pleased to have conducted the first Northwest Territories (NWT) Environmental Audit. The "Audit" is a unique endeavour that blends traditional performance audits with state of the environment reviews. The Audit scope encompassed a vast land area and a broad spectrum of organizations and cultures. The Audit occurred at a time when systems and organizations were at varying stages of evolution and maturity. In some cases, these systems and organizations were undergoing the strains and stresses associated with the negotiation and settlement of land claim agreements.

In the context of this setting, SENES strived to establish an Audit framework and methodology (the Audit Plan) that could be implemented in a manner respectful of all organizations and groups. The Audit Plan also needed to be consistent with the fiscal limitations of the project. The development of the Audit Plan required careful and deliberate thought, significant time, and the cooperation of many individuals. In particular, the members of the Audit Sub-Committee (representatives of Aboriginal Land Claimant organizations, the government of the Northwest Territories and the government of Canada), laboured to develop the terms of reference for the Audit, met with and provided feedback and guidance to SENES in the development of the Audit Plan, and provided support to SENES in establishing contacts for the Audit.

In completing the Audit, SENES received input from of a wide range of organizations and individuals. Audit participants included members of the public, advisory boards and organizations, government departments and agencies, resource management boards, chiefs and councils, claimant organizations as well as individuals from industry and non-governmental organizations across the NWT. We would like to acknowledge the time, cooperation and input received from all those who participated in the Audit process.

It is our hope that the results of this Audit will provide constructive information to those involved in the challenge of managing and protecting the environment of the NWT within the commitments made in the land claim agreements and the Mackenzie Valley Resource Management Act (MVRMA). We also hope that the lessons learned in developing and implementing this first NWT Audit will be of significant benefit for future Audits.

1.0 INTRODUCTION

1.1 CONTEXT

The first NWT Environmental Audit was completed within the complex, dynamic and evolving nature of the Northwest Territories.

1.1.1 The Natural Environment

For perspective, with a land mass of 1.3 million square kilometres, Canada's Northwest Territories (NWT) is roughly equivalent in size to Alberta and Saskatchewan combined. In contrast, the total population of these provinces is more than 100 times that of the NWT.

The vast geographic expanse of the NWT is accompanied by remarkable environmental and ecological diversity. From south to north, the boreal forest gradually transforms into the taiga, the tundra and ultimately the arctic coast. These environments are home to a tremendous variety and abundance of wildlife. Peary caribou, muskoxen, polar bears, arctic hares and beluga whales are among the mammals that inhabit the far north. Vast herds of caribou traverse the barren lands on their annual migrations. The Mackenzie Mountains are home to woodland caribou, Dall's sheep, grizzly and black bears, lynx, martens, golden eagles and a variety of small birds and mammals. The Mackenzie River delta provides important habitat for muskrats and nesting waterfowl. In the southern boreal forest or taiga, moose, wolves, woodland caribou, lynx, red foxes and several types of weasel are found. Vast networks of lakes and rivers contain numerous fish species including trout, pike, whitefish and many others.[1]

1.1.2 The People

The NWT is also home to a diverse human population that originates from across Canada and around the World. While many residents of the NWT have made the north their home relatively recently, approximately half of the population has a connection to the NWT that is much older. Dispersed in communities throughout the NWT, the Aboriginal population is far from being a homogeneous group; instead, they represent a wide array of cultures and histories that are reflective of the varied environments their ancestors have inhabited for thousands of years. Although differences do exist, the Aboriginal people of the NWT have one particularly important attribute in common: a profound connection to the land. Despite major lifestyle changes over the past 50 years, many Aboriginal households continue to spend part of each year on the land and "country foods" form a significant part of their diets. Not surprisingly, the land is at the centre of Aboriginal culture, spirituality, tradition and identity. The role of the environment in the lives of Aboriginal people cannot be overstated.

[1] Adapted from: "Aboriginal Communities and Non-Renewable Resource Development", National Round Table on the Environment and the Economy, 2001.

1.1.3 The Economy

The modern economy of the NWT has been dominated by activities in the non-renewable resource sector. While some efforts are being made to diversify into other sectors, it is likely that non-renewable resources will continue to underpin the economy of the NWT for decades. Interest in the NWT's resources is substantial and current activity has all the hallmarks of a major resource boom. Two world-class diamond mines have come into production over the past eight years and a third is under development. Strong commodity markets are likely to stimulate interest in the development of other mining sectors throughout the NWT including, gold, uranium and base metals. The same can be said for the hydrocarbon reserves of the territory. Active oil and gas exploration is occurring in several areas of the NWT and a pipeline to transport natural gas in the Mackenzie delta to southern markets is currently undergoing a joint panel review to determine potential environmental impacts associated with the undertaking.

In the eyes of many Northerners and the rest of Canada, the NWT's natural resources can serve as a platform for northern "development". The need for change is undeniable, above all for Aboriginal people facing a daunting set of economic and social challenges. Within Aboriginal communities, levels of basic literacy and educational attainment are well below national averages. At the same time, unemployment levels and the incidence of drug and alcohol abuse, domestic violence and gambling are significantly higher than in non-Aboriginal populations.

Resource extraction activities have made important contributions to the economy of the NWT for almost 70 years. Despite these contributions, many Northerners are concerned about the negative environmental and social legacies associated with these activities. Historic resource development in the NWT has resulted in significant localized environmental impacts and millions of dollars of financial liability as historic operations are remediated to the present day standards. In some cases, these impacts are aggravated further by external impacts on the northern environment including climate change and long-range transport of contaminants. In addition to "bio-physical" effects, Aboriginal people and communities have, in many cases, experienced adverse social and cultural impacts as a result of contact with non-Aboriginal society. In some cases these impacts are a simple reality of the modern era. Nonetheless, it is important to recognize that this reality influences the perspectives of Northerners towards future resource development prospects.

While the role of natural resource industries in shaping a positive future for the NWT is acknowledged by many Northerners, proper management is required to prevent and mitigate impacts on the environmental, social, cultural and spiritual foundations of northern environments and communities. Land Claims Agreements and legislation have been designed to facilitate the participation of Northerners, particularly Aboriginal people, in decision-making and represent an important step in efforts to ensure that the environment of the NWT is protected from significant adverse impacts.

1.1.4 The Political Environment

The well-being and vitality of Aboriginal people, communities and cultures of the NWT will depend, in large part, on their ability to maintain a connection with their traditional lands and a healthy natural environment. This principle has served as the foundation for Land Claims Agreements between the Government of Canada and Aboriginal peoples of the NWT. The first such agreement was reached in the Inuvialuit Settlement Region more than 20 years ago. Subsequent agreements for the Gwich'in, Sahtu and Tlicho[2] Settlement Areas have also been completed. Land claims negotiations between Canada and the Dehcho First Nations, Akaitcho Territory (Treaty 8) and the South Slave Métis are currently occuring.[3] Ultimately, virtually all NWT lands will be incorporated into Aboriginal Land Claims Agreements.

The Land Claims Agreements and associated legislation such as the *Mackenzie Valley Resource Management Act* (MVRMA) were designed to ensure that Aboriginal people and other Northerners are given opportunities to participate in a meaningful way in decision-making processes that have the potential to affect their lives and their environment. To assist in meeting this goal, a number of decision-making and advisory bodies have been established throughout the NWT. The responsibilities assigned to these organizations are of critical importance, particularly within the context of increasing interest in the development of the north's natural resources.

Despite the magnitude of changes that have occurred over the past two decades, the evolutionary process will continue for many years. The on-going negotiation of unsettled Land Claims is one of many factors that will contribute to this process. Similarly, the devolution of federal powers and responsibilities to territorial and Aboriginal governments has the potential to influence the regulatory, political and resource development landscapes of the NWT. At the same time, northern communities will continue their struggle to navigate the difficult transition between past and future.

[2] The Tlicho Agreement breaks new ground by combining a land claim settlement with an agreement on self-government.
[3] The North Slave Métis Alliance, although not recognized by the federal government, is also interested in settling land claims.

1.2 AUDIT BACKGROUND

What is the NWT Environmental Audit?

The Gwich'in, Sahtu and Tlicho Land Claims Agreements[4] require that independent environmental audits be conducted in the Mackenzie Valley on a periodic basis. This requirement has been incorporated into the *Mackenzie Valley Resource Management Act* (MVRMA), the legislation that implements the Land and Water Chapter of the Land Claims Agreements and which provides the legislative framework for environmental and resource management in the majority of the NWT.[5] While the scope of the MVRMA does not include the Inuvialuit Settlement Region, the Terms of Reference for the "Audit" called for an NWT-wide approach that included this Settlement Region.

Part 6, section 148 of the MVRMA requires the Audit to include:

1) *An evaluation of information, including information from cumulative impact monitoring pursuant to section 146 of the MVRMA, in order to determine trends in environmental quality, potential contributing factors to changes in the environment, and the significance of those trends;*
2) *A review of the effectiveness of methods used for carrying out cumulative impact monitoring pursuant to section 146 of the MVRMA;*
3) *A review of the effectiveness of the regulation of uses of land and water and deposits of waste on the protection of key components of the environment from significant adverse impact; and*
4) *A review of the response to any recommendations of previous environmental audits.* [It should be noted, however, that no previous Audits have been performed and, as a consequence, the fourth component does not apply for this Audit.]

These categories have been used as the guiding framework for Audit implementation and reporting.

[4] Unless indicated otherwise, the phrase "Land Claims Agreements" is used to indicate the settled claims in the Mackenzie Valley (i.e. the Gwich'in Comprehensive Land Claim Agreement, the Sahtu Dene and Métis Comprehensive Land Claim Agreement and the Tlicho Agreement.)

[5] The jurisdiction of the MVRMA includes all of the NWT excluding those lands associated with the Inuvialuit Settlement Region and the Wood Buffalo National Park of Canada.

What is the purpose of the Audit?

The purpose of the Audit, as defined in the Audit Terms of Reference, is to:

a) Comply fully with the legal requirements for environmental audits under Part 6 of the MVRMA and pursuant to the Gwich'in, Sahtu and Tlicho Land Claims Agreements;
b) Use the MVRMA framework as the basis for a territory-wide environmental audit that includes both the Mackenzie Valley and the Inuvialuit Settlement Region (ISR);
c) Act as a catalyst for change, by providing specific, practical and constructive recommendations for improvements to environmental and natural resource management in the Mackenzie Valley, in the ISR and throughout the NWT;
d) Lay the foundation for subsequent environmental audits in the Mackenzie Valley, in the ISR, and throughout the NWT by describing baseline conditions, identifying priority issues, highlighting opportunities for improvement, and suggesting how performance indicators could be developed to support ongoing monitoring and periodic audits;
e) Reflect the objectives of ensuring sustainability and protecting and conserving wildlife and the environment for present and future generations that are embodied in the Land Claims Agreements;
f) Consider impacts on the environment, including biophysical impacts and impacts on wildlife harvesting and on the social and cultural environment and on heritage resources;
g) Focus on specific issues and topics, within each component of the audit that are relevant to decision-makers and other interested parties involved in environmental and resource management in the NWT;
h) Focus on specific issues and topics, within each component of the audit, that are likely to result in recommendations that can be implemented by decision-makers and others involved in environmental and resource management in the NWT; and
i) Result in data, analysis, conclusions and recommendations that can be applied distinctly to the Mackenzie Valley, to the ISR, and to the NWT as a whole.

Who is responsible for the Audit?

As specified in section 148(1) of the MVRMA, the Minister of Indian and Northern Affairs Canada (INAC) is responsible for ensuring that the Audit is conducted by an independent body or person.

While the Minister of INAC retains overall responsibility for the Audit, a multi-party Audit and Cumulative Impact Monitoring Program (CIMP) Working Group was established to action specific commitments of the Land Claims Agreements and Part 6 of the MVRMA. An "Audit Sub-Committee" (ASC) of the Working Group was formed to:

a) develop the Audit Terms of Reference;
b) select an independent auditor; and,
c) facilitate the implementation of the Audit.

The membership of the ASC included one representative from each of: the Gwich'in Tribal Council, the Sahtu Secretariat Inc., the Tlicho First Nation, the Dehcho First Nations, the North Slave Métis Alliance, the NWT Métis Nation, the Inuvialuit Game Council, the Government of the NWT (Department of Environment and Natural Resource) and the Government of Canada (INAC, Environment Canada and DFO).[6]

What considerations were used in selecting the independent auditor?

The independence of the auditor, as required by subsection 148(1) of the MVRMA, is an essential feature of Audit. The selection of the auditor was guided by specific requirements that the auditor be independent of:[7]

- Federal and territorial governments;
- Boards established under Land Claims Agreements in the Mackenzie Valley, the MVRMA and the Inuvialuit Final Agreement (IFA), and other resource management boards with jurisdiction in the NWT;
- First Nations, Métis and Inuvialuit governments and organizations in the NWT;
- Industry in the NWT; and
- Other organizations that participate in their own right in environmental and resource management processes in the NWT.

In the summer of 2004, the ASC initiated a public competition to identify organizations or individuals qualified and interested in serving as the independent auditor. After an extensive review process, the ASC selected an Audit team led by SENES Consultants Limited to undertake the Audit.

What was the timing of the Audit?

The MVRMA requires that an Audit be carried out at least once every five years. The Audit was initiated more than a year after the first Audit should have been conducted under this five year frequency.[8] The formal public announcement of the Audit by the Minister of INAC occurred in December, 2004, and Audit implementation activities were carried out from January through April 2005, in accordance with the Audit Plan[9]. A draft Audit report was submitted to the ASC for review in September 2005. Following the consideration of input from the ASC, a revised draft of the Audit report was distributed to "Directly Affected Parties" for review in November, 2005. The final Audit report was submitted to the Minister of INAC in December, 2005.

---

6 The Akaitcho Territory Government was also invited to participate in the ASC.

7 Terms of Reference for the NWT Environmental Audit (April, 2004)

8 The current planning process has recognized the delay in initiating the Audit and has scheduled the next Audit to occur by 2009/10.

9 SENES Consultants Limited, 2005, Northwest Territories Environmental Audit - Final Audit Plan. Prepared for The Audit Sub-Committee c/o the Audit Sub-Committee Secretariat. April

It should be noted that the Tlicho Land Claims and Self Government Act (i.e., the Tlicho Agreement) received Royal Assent during the period in which the Audit was being carried out. Further, due to other priorities associated with the implementation of the Tlicho Agreement, the Tlicho Government was unable to participate in the Audit process. As a consequence, the information presented in the Audit report is consistent with the situation that was in place prior to the Tlicho Agreement coming into effect. We anticipate that future Audits will address the new resource management framework that now exists in the Tlicho Settlement Area.

What is the geographic scope of the Audit?

From a regulatory perspective the NWT can be divided into two major jurisdictions: the Mackenzie Valley, as defined in the MVRMA; and, the Inuvialuit Settlement Region (ISR) as defined by the Inuvialuit Final Agreement (IFA). While the IFA contains no specific requirements for periodic environmental audits, Inuvialuit leadership requested that the ISR be included in the Audit. In doing so, the geographic scope of the Audit was extended beyond the Mackenzie Valley to include the entire NWT, as depicted in Figure 1.1. The decision to include the ISR is consistent with the reality that the region is a significant and integral component of the Mackenzie Valley "watershed".

However, it is important to note that the environmental management regime of the ISR is more than 20-years old and, as such, its processes and institutions have had a significant amount of time to evolve and mature. Similarly, other institutions that participate in environmental management in the ISR (e.g., federal and territorial governments) have developed a solid understanding of their role within the regulatory regime. In contrast, the MVRMA regime is relatively new and represents a significant departure from classic environmental management processes; numerous new institutions have been created and existing institutions have new roles. On this basis, while the Audit has assessed the ISR's regulatory framework and provides comments on its performance, the majority of the Audit report deals with findings associated with the evolving MVRMA environmental management framework.

What approach was used in undertaking the Audit?

The Audit was conducted in accordance with Part 6 of the MVRMA and the April 2004 Terms of Reference for the NWT Environmental Audit, as developed by the NWT CIMP and Audit Working Group. The Audit was completed under the oversight of the Audit Sub-Committee (ASC).

Figure 1.1 – Geographic scope of the NWT Audit [10]

[10] The map illustrates the approximate boundaries of settled and unsettled land claims in the NWT. Relevant land claim organizations, INAC and/or the GNWT should be contacted for up-to-date and accurate information on land claim boundaries. (Map courtesy of the MVEIRB).

A two phase approach was used in undertaking the Audit. The first phase, the "Audit Planning" phase, was used to establish the work scope, audit criteria, and methodology. The second phase, identified as the "Audit Examination" phase, included efforts directed towards the implementation of the Audit Plan.

An Audit Plan, consistent with the statutory requirements for the Audit and with the Terms of Reference, was developed. The Audit Plan was presented to the ASC for review and comment, with the Audit Plan revised to reflect comments received.

The Audit examination phase was completed as three distinct, but interrelated components, these being:

- a review of regulatory regimes;
- a review of cumulative impact monitoring activities; and
- a review of environmental trends, consistent with the requirements of subsection 148(3) of the MVRMA.

Details of activities planned for the examination phase for each of these components are described in the Audit Plan. A summary of the approach that was used for each of the three Audit components is provided below.

Audit of Regulatory Regimes

We audited the regulatory process that was established by the Land Claims Agreements, the *Mackenzie Valley Resource Management Act* and other relevant federal and territorial legislation and regulations. We developed broad implementation plans and schedules for the review of the regulatory regime including audit criteria, considerations and lines of inquiry.

Using this information as a guiding framework, tailored sets of questions were developed for distribution to the organizations that participate in and are impacted by the environmental management regime in the NWT. Specific Audit questions were developed for: a) Co-Management Boards; b) Regulatory, Advisory and Co-Management Bodies; c) Non-Regulatory Organizations; d) Industry in the NWT; and e) Non-Governmental Organizations (NGOs).

Audit activities included meetings with representatives from: Land Claim organizations; the federal and territorial governments, agencies and departments; regional government and advisory organizations; co-management board members and their staff; co-management advisory groups; community advisory groups and organizations; industry organizations and companies; as well as NWT special interest groups, NGOs, and interested individuals.

We examined how co-management boards, the Government of Canada, Government of the NWT and other organizations discharge their responsibilities as set out in the MVRMA and the IFA. This included comprehensive reviews of selected case studies, guiding legislation,

practices, procedures, internal administration, decision-making processes and any mechanisms in place to monitor and improve the effectiveness of the regime.

Based on their roles as the dominant environmental management tools of the NWT, the Audit focused on an evaluation of land use plans, environmental assessments, land use permits and water licences. In situations where other authorizations and agencies interact with these environmental management tools, these agencies and their instruments were also addressed.

We also explored how traditional knowledge (TK) is collected and used in the NWT's environmental management regimes.

Audit of Cumulative Impact Monitoring Activities

We audited the cumulative impact monitoring process that was established by the MVRMA. In particular, we looked at INAC's role as the responsible agency for developing and implementing the Cumulative Impact Monitoring Program (CIMP) [11]. The evaluation included interviews with INAC officials and members of the NWT CIMP and Audit Working Group and reviews of CIMP program documents. In addition, we interviewed key interested parties, including members of co-management boards and their staff; Land Claim organizations; the federal and territorial governments, agencies and departments; community advisory groups and organizations; industry organizations and companies; as well as NWT special interest groups, NGOs, and interested individuals.

We developed tailored sets of questions related to the CIMP for distribution to the organizations that would be expected to rely upon or have input into the CIMP. Specific Audit questions were developed for: a) Co-Management Boards; b) Regulatory, Advisory and Co-Management Bodies; c) Non-Regulatory Organizations; d) the Cumulative Impact Monitoring Program; e) Industry in the NWT; and f) Non-Governmental Organizations (NGOs).

We also assessed the role of other studies and programs that consider cumulative impacts (e.g., the Cumulative Effects Assessment Management Framework and Strategy).

Status of the Environment and Trends

We assessed environmental trends using Valued Components (VC) identified in the INAC report, *A Preliminary State of Knowledge of Valued Components for the NWT Cumulative Impact Monitoring Program (NWT CIMP) and Audit*[12] as a starting point.[13] We then identified

---

[11] The CIMP is being developed under the leadership of INAC as the primary mechanism for the fulfillment of cumulative impact monitoring requirements of the MVRMA. The Audit component dealing with the evaluation of cumulative impact monitoring in the NWT has therefore focused on this program.

[12] DIAND, 2005, *A Preliminary State of Knowledge of Valued Components for the NWT Cumulative Impact Monitoring Program (NWT CIMP) and Audit. Final Draft, February 1, 2002, Updated February, 2005.*

key VCs within each VC grouping and key indicators of change for the selected VCs which were carried forward through the study. For these key indicators of change, we assessed trends in environmental quality in the Mackenzie Valley, the Inuvialuit Settlement Region and the NWT as a whole.

We relied extensively on previously completed studies, particularly where they involved the assessment of trends in environmental quality. Evaluations completed by others were supplemented with original data analysis where required; however, conducting original research was not within the scope of the Audit. In carrying out the review, the specialists used a range of information sources and contacted various individuals as appropriate for the VC being assessed.

For each of the key indicators, we analyzed and assessed available data to identify: trends; potential contributing factors to any changes in the environment; the significance of any trends identified; the likely impact of the trend; activities to mitigate the factors/emissions that are causing the observed trend, and, data gaps.

What did we expect to find (Audit Criteria)?

Audit of Regulatory Regimes

In general, the environmental management regimes of the NWT are intended to protect the environment from significant adverse impacts that might be associated with uses of land and water and deposits of waste. With this in mind, we expected to find the following elements as we carried out the Audit:

- Land Use Planning, Environmental Impact Assessment and Land and Water boards that are constituted and functioning in accordance with land claim agreements and statutory requirements;
- Fully implemented and transparent decision-making processes that are consistent with established rules;
- Roles and responsibilities that are clearly defined, understood and coordinated;
- Mechanisms that protect all environmental components;
- Decisions that are based on the consideration of sufficient environmental information;
- Monitoring, inspection and enforcement activities that are adequate to protect the environment;
- Communities and local/territorial NGOs that are engaged in the regulatory process;

[13] The INAC report provided a summary of the current state of knowledge on each Valued Component (VC) (e.g., baseline conditions) and identified information sources which were reviewed, expanded and assessed by the auditor. In the audit the VCs of human health from community wellness were split as they involve very different measures and marine life was added as a VC

- Industry proposals and activities that are balanced with environmental protection considerations in an effective and timely process.

As we assessed the regulatory regime, we used practices in other Canadian jurisdictions as a reference point, with due consideration of the unique nature of the NWT and its environmental management processes.

Audit of Cumulative Impact Monitoring Program

In evaluating the CIMP we expected that INAC would manage this process by:

- Developing a clearly defined program structure, objectives and tasks;
- Identifying environmental monitoring and cumulative impact information requirements and addressing these requirements;
- Analyzing available information on cumulative impacts;
- Ensuring that communities are actively involved in the CIMP; and,
- Ensuring that CIMP information is available to regulators, researchers, developers, communities and other interested parties.

Status of the Environment and Trends

In evaluating information to determine trends in environmental quality, the significance of trends and potential contributing factors, a variety of screening criteria / considerations were used including:

- The magnitude and relevance of trends (e.g., is there a reasonable possibility that environmental, social, economic and cultural sustainability will be compromised?);
- The likelihood that a trend will continue in the future (e.g., is it associated with factors that can reasonably be predicted?);
- The potential for mitigation (e.g., can contributing factors be addressed to reduce or remove the trend and/or can the impacts of the trend be mitigated?); and,
- How well the trend is known (e.g., statistical certainty?).

What limitations and constraints were associated with the Audit?

It is significant to note that the Terms of Reference prepared by the ASC acknowledged that the scope of the Audit, both in terms of subject matter and geographic extent, had the potential to be substantially greater than the available funding. Our experience corroborates this observation.

Similarly, the timeframe for the completion of the Audit was quite limited given the magnitude and importance of the assignment. With these challenges in mind, an exhaustive review of all components of the environment and the regulatory process was not feasible. Nonetheless, we endeavoured to maintain an appropriate balance between the breadth and depth of

investigations by focusing on selected Valued Components and by investigating the regulatory regime to various depths and intensities, as appropriate. The primary determinant for the level of investigation was the importance of the subject area to the overall effectiveness of the regulatory regime. The Audit team had full discretion in making this determination.

In the assessment of the regulatory regime, the Audit focussed on past, completed and verifiable activities. Regulatory efforts for new or proposed projects such as the Mackenzie Gas Project were deemed beyond the scope of the review. Given the infancy of the MVRMA regulatory framework, we also focussed our efforts on assessing the ability of the regime to protect the environment and not the efficiency of the process. Notwithstanding this focus, we endeavoured to consider the concerns of interested parties with respect to issues of efficiency. Comments to this effect are provided in Chapter 6.

Further, it should be noted that the MVRMA regulatory process includes provisions for bridging between the old and new regulatory regimes. While we are aware of projects that fall into this category, we chose not to focus on these undertakings as transitional issues should not be a recurring issue in the future. We do, however, recognize that there have been challenges and frustrations for developers who found themselves within this transitional framework of the MVRMA.

How did we involve Northerners in the Audit?

Notices in local media throughout the NWT were used to inform the public of the Audit and to indicate how they could participate. Open houses were also held to discuss the Audit and receive public input. Out of respect for the various positions taken by regional Aboriginal groups, open houses were only held in communities where the regional leadership had agreed to participate in the Audit. Communities in which Audit open houses were held included Aklavik, Fort Good Hope, Inuvik, Norman Wells, Tuktoyaktuk and Yellowknife.

Who participated In the Audit?

A list of organizations that participated in the Audit is included in the Audit Participants section at the front of this report.

Who was on the Audit Team?

Project Director: Bruce Halbert
Project Manager: Gerd Wiatzka
Lead Auditor: John Peters
Auditors of the regulatory regime and cumulative impacts monitoring:
Tony Brown, Paul Kirby, Phil Shantz, Gerd Wiatzka

Assessment of environmental trends:

Bruce Halbert, Anne Jane Grieve, Paula Coutts, Dr. Igor Holubec, Dr. Bernard Lebeau, Dr. Colin Macdonald, Richard Roberts, Phil Shantz, Dr. Bruce Stewart, Dr. Lesbia Smith

1.3 STRUCTURE OF THE REPORT

Main Audit Report

This report has been organized to correspond directly to the main components of the Audit. Each of the themes has been addressed in a separate chapter of the report according to the following structure. In addition, a chapter dealing with common themes noted during the Audit is provided, as well as a chapter summarizing the status of the environment review.

Audit Summary and Conclusions

Part A: Audit of Regulatory Regimes
Chapter 2 – Overview of the Regulatory Framework
Chapter 3 – Land Use Planning
Chapter 4 - Regulation
Chapter 5 – Environmental Impact Assessment
Chapter 6 – Cross Cutting Themes
Chapter 7 – Traditional Knowledge

Part B: Audit of the Cumulative Impact Monitoring Program
Chapter 8 – Cumulative Impact Monitoring Program

Part C: Status of the Environment
Chapter 9 –Status of the Environment Summary

Part D: Considerations for Future Audits
Chapter 10 – Considerations for Future Audits

A separate companion document entitled ***"NWT Environmental Audit 2005, Supplementary Report on the Status of the Environment"*** (SOE) discusses the findings of the status of environment review.

Summary findings are presented in bold text at the beginning of each chapter and before many of the sections. In situations where recommendations have been identified, they are presented at the end of relevant sections. Key findings and recommendations have been brought forward in the Audit Summary and Conclusions section of the Audit report.

PART A: AUDIT OF REGULATORY REGIMES

2.0 OVERVIEW OF THE REGULATORY FRAMEWORK

2.1 INTRODUCTION

As mentioned previously, there are two "regulatory jurisdictions" in the NWT, both of which are included in the scope of the Audit. They are:

- The Mackenzie Valley; and
- The Inuvialuit Settlement Region.

The legislation, regulatory institutions and practices associated with environmental and resource management differ significantly between these jurisdictions. The following descriptions are provided as an overview of the key attributes of the two systems.

2.2 THE MACKENZIE VALLEY

Section 24.1.1 of the Gwich'in Agreement, 25.1.1 of the Sahtu Agreement and 22.1.1 of the Tlicho Agreement call for "an integrated system of land and water management in the Mackenzie Valley" and for coordination between adjacent settlement areas. Enacted in 1998, the MVRMA, which applies to the entire Mackenzie Valley[14], including areas in which Land Claims Agreements have not yet been reached, is to fulfil this function. Provisions are available to amend the MVRMA to make it consistent with any future Land Claims Agreements.

What is the MVRMA*?*

The MVRMA's intended purpose, as stated in the long title is "*…to provide for an integrated system of land and water management in the Mackenzie Valley and to establish certain boards for that purpose*," with the goal of protecting the environment from any significant adverse impacts that may be associated with the use of land and water in the Mackenzie Valley. This is to be achieved within the context of a consultative, inclusive and collaborative process. Additional insights into the principles upon which the MVRMA is based are provided by the following definitions.

[14] Excluding Wood Buffalo National Park of Canada

*Definitions (*MVRMA *Part 1)*

The MVRMA defines ”environment” as including:

a) *land, water and air, including all layers of the atmosphere;*
b) *all organic and inorganic matter and living organisms; and*
c) *the interacting natural systems that include components referred to in paragraphs a) and b) (s. 1)*

An “impact on the environment” is defined to include both bio-physical and human components of the environment:

> *Any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources (s. 111).*

Who is responsible for implementing the MVRMA*?*

The MVRMA is federal legislation. Primary responsibility for its implementation and performance rests with the Minister of Indian and Northern Affairs Canada (INAC). The Minister of INAC is assigned governance and operational responsibilities for environmental and resource management in the Mackenzie Valley.

Most operational aspects of the MVRMA are to be achieved by independent resource management institutions or boards established by the Act. These boards are divided into two broad categories: Regional Boards and Mackenzie Valley Boards. Regional Boards focus on resource management and environmental issues that are generally limited in geographic scope to a specific settled land claim area. The Mackenzie Valley Boards have authority that extends beyond individual settlement regions to the entire Mackenzie Valley.

Regardless of their geographic jurisdiction, the Boards have been established by the MVRMA as “institutions of public government,” exercise legal authority and make decisions and recommendations which affect both public and private interests. The Boards are to be independent from government and any of the bodies which nominate Board members. Although the Boards receive funding from the federal government and are subject to federal Treasury Board guidelines, they are not considered to be part of the federal or territorial government.

The composition of the Boards is determined by the provisions of the Land Claims Agreements. Nominees of Aboriginal groups constitute approximately half of the membership of the Boards. The remaining members are nominated by the federal and territorial governments. The final authority to appoint board members and chairs resides with the Minister of INAC.

In the signing of Land Claims Agreements, the Gwich'in, Sahtu, Tlicho, territorial and federal governments made a commitment to the principles of co-management. By virtue of their membership and their enabling legislation, the co-management institutions and Board members are to represent not just the interests of the group that nominated them but, instead, those of all residents of the Mackenzie Valley and Canada. In particular, Aboriginal values and approaches are to be respected in MVRMA processes and outcomes.

What are the operational aspects of the MVRMA*?*

The operational aspects of environmental and resource management in the Mackenzie Valley are compartmentalized according to the various "Parts" of the MVRMA. These include:

Part 1 - General Provisions Respecting Boards
Part 2 - Land use Planning
Part 3 - Land and Water Regulation
Part 4 - Mackenzie Valley Land and Water Board
Part 5 - Mackenzie Valley Environmental Impact Review Board
Part 6 - Environmental Monitoring and Audit
Part 7 - Transitional Provisions, Consequential Amendments, and Coming Into Force.

Part 1 and Part 7 serve administrative functions and are not considered to be components of the operational process. The other Parts of the Act establish the lead organizations and processes for specific steps in the regulatory process. The MVRMA also identifies key linkages between the Parts which are to assist in integrating the operational compartments of the regulatory system. Brief overviews of the MVRMA's operational compartments are provided in the following descriptions. More detailed discussions are provided in subsequent chapters.

Land Use Planning (Part 2)

In the Mackenzie Valley, land use plans are to play an integral part in the regulatory process. This is evidenced by Part 3 (s. 61) of the MVRMA which prohibits the issuance of a licence, permit or authorization except in accordance with an applicable land use plan.

Land use planning for a settlement area must be guided by the following principles:

(a) the purpose of land use planning is to protect and promote the social, cultural and economic well-being of residents and communities in the settlement area, having regard to the interests of all Canadians;
(b) special attention shall be devoted to the rights of the Gwich'in and Sahtu First Nations under their land claim agreements, to protecting and promoting their social, cultural and economic well-being and to the lands used by them for wildlife harvesting and other resource uses; and

(c) land use planning must involve the participation of the first nation and of residents and communities in the settlement area (s. 35).

The MVRMA envisions that land use planning in the Mackenzie Valley will be undertaken primarily at the Land Claim level. Towards this end, Part 2 of the MVRMA has created the Gwich'in Land use Planning Board (GLUPB) and the Sahtu Land use Planning Board (SLUPB). These Boards have been given the power and responsibility to develop land use plans within their respective regions and to ensure that future use of lands is carried out in conformity with those plans. As other regions settle their claims, additional planning boards may be established.

Land and Water Regulation (Parts 3 and 4)

Within the Mackenzie Valley, the primary instruments of environmental regulation are land use permits and water licences. The Land Claims Agreements and the MVRMA created three[15] co-management Boards for the purpose of issuing and managing these instruments:

- the Gwich'in Land and Water Board (GLWB);
- the Sahtu Land and Water Board (SLWB); and
- the Mackenzie Valley Land and Water Board (MVLWB).

The objective of the Land and Water Boards (LWBs) is to:

> *Regulate the use of land and waters and the deposit of waste so as to provide for the conservation, development and utilization of land and water resources in a manner that will provide the optimum benefit to the residents of the settlement area and of the Mackenzie Valley and to all Canadians (s. 58).*

The Mackenzie Valley Land Use Regulations and the Northwest Territories Waters Act/Regulations are the guiding legislation for the administration of permits and licences. If a project is limited to the Gwich'in or Sahtu Settlement Areas, the Board for the area in question has jurisdiction. If a project is proposed for an unsettled area or is likely to have an impact on more than one area (e.g., transboundary projects), the MVLWB has regulatory authority. The LWBs are not charged with enforcing/inspecting the instruments they issue. Instead, this responsibility rests with inspectors appointed by the Minister of INAC.

While limited to surface use only, the jurisdiction of the LWBs includes the use of land necessary for the exercise of subsurface rights. This jurisdiction does not extend to national parks and historic sites, or to the use of land within the boundaries of a local government, to the extent that the local government regulates that use.

[15] A fourth board, the Wek'èezhìi Land and Water Board, created under the Tlicho Agreement, was in the process of being established at the time the Audit was conducted.

In an effort to create an integrated system, a number of formal linkages have been established to promote interaction between the LWBs and other components of the regime. For example, in addition to requirements to comply with approved land use plans, the MVRMA specifies that LWBs may not issue a licence or permit unless the environmental impact assessment provisions of the Act (Part 5) have been met (i.e., Preliminary Screenings and any subsequent evaluations that are deemed to be necessary). Public participation in the process is encouraged through community consultation requirements.

Environmental Impact Assessment (Part 5)

Part 5 of the MVRMA establishes an environmental impact assessment process consisting of up to three stages. The first stage, Preliminary Screening, is completed by Land and Water Boards or other organizations with regulatory authority. The second and third stages of the process, Environmental Assessment (EA) and Environmental Impact Review (EIR), are the responsibility of the Mackenzie Valley Environmental Impact Review Board (MVEIRB). The MVEIRB conducts Environmental Assessments and reviews of development applications referred to it by other boards and prescribed organizations or on its own motion, under prescribed conditions. Based on information presented to it by developers, regulators and other interested parties, the MVEIRB may recommend ways to protect the environment from impacts caused by a development. It can also recommend that a project be subjected to an EIR or that a development be rejected because its impacts are too great.

Environmental Monitoring and Audit (Part 6)

Part 6 of the MVRMA provides for a feedback system consisting of cumulative impacts monitoring and periodic audits of the effectiveness of the land and water regulatory system, for an examination of the status of the cumulative impacts monitoring system for the Mackenzie Valley, and for an assessment of the status and trends in environmental quality. The Cumulative Impact Monitoring Program and the NWT Environmental Audit are the primary mechanisms through which the objectives of Part 6 are to be met.

2.3 INUVIALUIT SETTLEMENT REGION

While the Mackenzie Valley has an independent piece of legislation to provide a framework for environmental and resource management (i.e., the MVRMA), a different approach has been used in the ISR. Instead, the Land Claim Agreement (i.e., the IFA) and pre-existing federal and territorial legislation provide the framework for environmental and resource management in the Region.

What is the IFA?

The IFA identifies the following basic goals:

a) *to preserve Inuvialuit cultural identity and values within a changing northern society;*
b) *to enable Inuvialuit to be equal and meaningful participants in the northern and national economy and society; and*
c) *to protect and preserve the Arctic wildlife, environment and biological productivity (s. 1).*

These goals underpin the IFA and provide the guiding framework for, among other things, environmental management in the region. Processes and responsibilities related to environmental management are defined in the IFA and its implementing legislation, the *Western Arctic (Inuvialuit) Claims Settlement Act*, S.C. 1984, c.24.

Who is responsible for environmental and resource management in the ISR?

Within the ISR, environmental and resource management responsibilities are shared between the Inuvialuit and the governments of Canada, the Northwest Territories and the Yukon.[16] Five co-management organizations contribute to the co-operative management of wildlife, habitat and the environment. These include:

- Wildlife Management Advisory Council (Northwest Territories) (WMAC (NWT));
- Wildlife Management Advisory Council (North Slope) (WMAC (North Slope))[17];
- Fisheries Joint Management Committee (FJMC);
- Environmental Impact Screening Committee (EISC); and
- Environmental Impact Review Board (EIRB).

These organizations are institutions of the IFA, but are not institutions of public government as are their counterparts in the Mackenzie Valley. The primary role of these organizations is to provide an advisory function to federal and territorial government institutions that have regulatory authority for environmental management (in contrast to Boards established under the MVRMA which have legislative authority). In addition to the co-management organizations, the Inuvialuit Game Council (IGC) is an exclusively Inuvialuit organization that plays an advisory role in issues related to game management. Local Hunters and Trappers Committees also provide input to the process.

[16] The ISR is located in both the NWT and Yukon Territory. This Audit has addressed only the NWT portion of the ISR.

[17] The jurisdiction of the WMAC (North Slope) is the Yukon portion of the ISR.

What are the operational aspects of environmental and resource management in the ISR?

Land Use Planning

The IFA provides for land use planning that is to be completed under the Inuvialuit Renewable Resources Conservation and Management Plan in which the WMAC (NWT) works with each community to develop and update Community Conservation Plans (last revision in 2000). These plans identify areas of environmental sensitivity or cultural value. Development proposals are reviewed by local Hunters and Trappers Committees to ensure compliance with the Community Conservation Plans and their advice is taken into account during any authorization processes.

Land and Water Regulation

The IFA designates the Inuvialuit beneficiaries as owners of large blocks of land within the ISR. The Inuvialuit Land Administration (ILA) has been established for the management of these lands. Operating under a unique set of rules and procedures, the ILA issues its own permits which include measures to mitigate against potential adverse impacts.

Decisions on authorization of land use and issuance of rights on Crown lands within the ISR are made by government departments or agencies. Specifically, INAC issues land use permits and the NWT Water Board issues water licences. Enforcement of these instruments is provided by INAC. The Department of Fisheries and Oceans and Environment Canada may also issue permits that relate to the regulation of land and water (e.g., fisheries authorizations for waters containing fish habitat or Migratory Bird Permits for sanctuaries).

With the exception of the ILA, the Inuvialuit institutions set up pursuant to the IFA do not have final decision-making authority in relation to environmental management. These institutions do, however, provide advice to the authorities that make such decisions.

Environmental Impact Assessment

The IFA mandates that licences or approvals for proposed developments be issued only if applicable EIA requirements have been met. The EISC is responsible for undertaking the first step in the EIA process, Environmental Screening. If the EISC finds that a proposed project could have a "significant negative environmental impact," the project can be referred for further review by a panel of the EIRB or by another review authority. Most applications are dealt with fully by the EISC without having to go to the EIRB for further assessment.

In addition to the requirements under the IFA, the *Canadian Environmental Assessment Act* (CEAA) sets out requirements for Environmental Screening and Review. The IFA Environmental Impact Screening and Review Processes do not relieve the federal government from its obligations to ensure that a development meets the requirements of the CEAA. To minimize duplication, the EISC and EIRB are working with the Canadian Environmental

Assessment Agency and federal departments/agencies to identify opportunities for coordination that meet the requirements of both the IFA and CEAA.

2.4 LAWS OF GENERAL APPLICABILITY

In addition to laws and regulations specific to the Mackenzie Valley and the Inuvialuit Settlement Region, there is a range of federal and territorial legislation that imposes successive layers of regulatory processes for approval and subsequent compliance. Apart from exceptions established by the Land Claims Agreements, laws of general application (see Tables 2.1 and 2.2) apply to all lands in the NWT.

Table 2.1 Sampling of Federal Laws of General Application

Arctic Waters Pollution Prevention Act - Arctic Waters Pollution Prevention Regulations - Arctic Shipping Pollution Prevention Regulations - Pollutant Substances Regulations	*Federal Real Property and Federal Immovables Act* - Federal Real Property Regulations
Canadian Environmental Assessment Act - Inclusion List Regulations - Exclusion List Regulations - Law List Regulations - Comprehensive Study Regulations - Federal Coordination Regulations	*Fisheries Act* * - Fishery (General) Regulations - Metal Mining Effluent Regulations
	Migratory Birds Convention Act - Migratory Bird Regulations - Migratory Bird Sanctuary Regulations
Canada National Marine Conservation Areas Act	*Northwest Territories Waters Act* - Northwest Territories Waters Regulations
Canada National Parks Act	*Oceans Act* - "Marine Protected Areas Policy," 1999
Canada Petroleum Resources Act - Frontier Lands Petroleum Royalty *Regulations* - Frontier Lands Registration Regulations	*Navigable Waters Protection Act* - Navigable Waters Bridges Regulations - Navigable Waters Works Regulations
Canada Oil and Gas Operations Act - Canada Oil and Gas Certificate of Fitness Regulations - Canada Oil and Gas Drilling Regulations - Canada Oil and Gas Geophysical Operations Regulations - Canada Oil and Gas Installations Regulations - Canada Oil and Gas Operations Regulations - Canada Oil and Gas Production and Conservation Regulations - Oil and Gas Spills and Debris Liability Regulations	*Species at Risk Act*
	Territorial Lands Act (TLA) - Territorial Lands Regulations - Canada Oil and Gas Drilling Production Regulations - Canada Mining Regulations - Territorial Coal Regulations - Territorial Dredging Regulations - Territorial Land Use Regulations - Territorial Quarrying Regulations
Canada Water Act	*Transportation of Dangerous Goods Act* - Transportation of Dangerous Goods Regulations
Canada Wildlife Act	
Canadian Environmental Protection Act * - Disposal at Sea Regulations - Environmental Emergency Regulations	

** sampling of regulations only*

Table 2.2 Sampling of Territorial Laws of General Application

Area Development Act - Enterprise Corridor Development Area Regulations - Enterprise Development Area Regulations - Inuvik Watershed Development Area Regulations - Mackenzie Development Area Regulations - Norman Wells Development Regulations - Yellowknife Watershed Development Area Regulations	*Historical Resources Act* - Historical Sites Declaration Regulations
Commissioner's Land Act - Commissioner's Land Regulations	*Pesticide Act* - Pesticide Regulations
Environmental Protection Act - Environmental Protection Regulation - Spill Contingency Planning and Reporting Regulations - Various Guidelines - Used Oil and Waste Fuel Management Regulations	*Planning Act* *Public Health Act* - Camp Sanitation Regulations - General Sanitation Regulations - Public Sewerage Systems Regulations
Environmental Rights Act	*Scientists Act* - Scientists Act Administration Regulations - Western NT
Forest Management Act - Forest Management Regulation	*Territorial Parks Act* - Territorial Parks Regulations
Forest Protection Act	*Transportation of Dangerous Goods Act* - Transportation of Dangerous Goods Regulations
	Wildlife Act - Certification and Disposal of Wildlife Regulations - Critical Wildlife Areas Regulations

Table 2.3 Sampling of Regulatory Agencies of General Application

FEDERAL REGULATORY AGENCIES	TERRITORIAL REGULATORY AGENCIES
Canadian Env. Assessment Agency	Aurora Research Institute
Fisheries & Oceans Canada	Dept. of Health and Social Services
Environment Canada	Dept. of Municipal and Community Affairs (MACA)
Indian and Northern Affairs Canada	Department of Environment and Natural Resources
National Energy Board	Department of Industry, Tourism and Investment
Transport Canada	Department of Transportation
Parks Canada	Prince of Wales Northern Heritage Centre

3.0 LAND USE PLANNING

3.1 EXPECTATIONS FOR LAND USE PLANS

In the NWT, where development is a relatively recent phenomena and a significant portion of the population participates in traditional activities, the biophysical, social and cultural impacts of development are of increasing concern. Land use planning should assist in addressing this concern.

Land use planning is a central tool in managing any public or private land area.[18] Land use planning can do many things, but in general it sets out a future vision for the protection, conservation and development of land and resources. Community-based land use plans allow institutions of public government to identify, conserve and protect areas of special values and resources. The areas protected could be important for resource or traditional use, environmental protection, social and spiritual significance or a combination thereof.

Fundamentally, there are five criteria that drive the allocation of public lands into different use categories or zones of activities. These are: physical feasibility and biological sustainability; economic efficiency; distributional equity; social and cultural acceptability; and operational practicality or administrative feasibility[19]. The relative importance of these criteria varies significantly from jurisdiction to jurisdiction and planning decisions are often driven by the fundamental values of the particular area.

Land use plans strive to integrate opportunities for responsible economic development within a context of wise stewardship and protection of natural resources and the environment. They can also identify where development can occur, what types of activities should be allowed and at what level of development intensity. Public planning systems can range from simple delineation between protected areas (emphasizing protection) and general use land designations (where all uses are allowed subject to other forms of environmental approvals) to systems in which there is a more comprehensive suite of zones, guidelines and restricted use areas.

Approved land use plans provide information to the public, industry and government on which areas can be developed, which cannot be developed or which can be developed subject to certain conditions and other processes. The existence of land use plans can increase the public's comfort regarding the protection of environmentally significant features/areas and provides industry information on where it can operate.

---

[18] Land use Planning in this section generally refers to the planning of private (i.e. those lands that are collectively owned by the settlement group) or "crown" lands outside of organized municipalities.

[19] Loomis, John. Integrated Public Lands Management. Principles and Applications to National Forests, Parks, Wildlife Refuges and BLM Lands. Columbia University Press: New York. 1993.

3.2 MACKENZIE VALLEY LAND USE PLANNING

3.2.1 Status of Land Use Plans

Regional land use planning in the NWT has been in progress since 1984, when the Basis of Agreement on Northern Land Use Planning was signed by the federal and territorial governments, with the participation of the Aboriginal organizations which existed at the time. The MVRMA, enacted in 1998, also established land use planning requirements. Despite these efforts, and requirements under the MVRMA, little progress has been made in developing land use plans in the Mackenzie Valley. Today, less than 1/5th of the Mackenzie Valley is managed under legally enforceable land use plans. A greater degree of land use planning success has been achieved in the ISR.

The lack of land use plans in many areas of the NWT is adding increased complexity and uncertainty to the regulatory processes for resource management and environmental protection.

The land claims agreements and the MVMRA have established legislated requirements for land use planning only in the Gwich'in and Sahtu Settlement Areas. Under the land claim agreements and Part 2 of the MVRMA, two land use planning boards have been created: the Gwich'in Land Use Planning Board (GLUPB) and the Sahtu Land Use Planning Board (SLUPB). These Boards are to develop and periodically update land use plans. They are also to assess the compliance of development activities with any approved plans.

The MVRMA specifies that land use plans may include: maps, diagrams and other graphic materials; written statements, policies, guidelines and forecasts; descriptions of permitted and prohibited uses of land, waters and resources; authority for the planning board to make exceptions to the plan and the manner of exercising that authority; and, any other information that the planning board considers appropriate. Planning Boards are to take into consideration a land use plan proposed by the first nation for its settlement lands and may incorporate that plan into the land use plan for the settlement area.

In 1990, the Office of the Auditor General of Canada (OAG)[20] noted:

> *There are both actual and potential adverse consequences of not having land use plans. [INAC] acknowledges that piecemeal land use control, as practised through the issuance of permits and licences, does not address the larger questions. These relate to such areas as minimization of risks to the environment, avoidance of conflict between water users, and development opportunities associated with larger regions and their complex characteristics. Other adverse impacts include possible threats to aboriginal cultures, disincentives to investors, environmental damage, and perhaps economic stagnation. While land use plans would not necessarily provide all the answers, a sound plan would provide a better balance of economic development and environmental protection and a better consideration of social/cultural issues.*

While interested parties have emphasized the critical role that land use plans should play in the environmental management of the NWT, little has changed since the 1990 OAG report. At present, there is only one completed and approved land use plan in the Mackenzie Valley, the Gwich'in Land Use Plan.

Part 3 (s. 61) of the MVRMA prohibits the issuance or amendment of "a licence, permit or authorization except in accordance with an applicable[21] land use plan". However, in situations where there are no applicable plans (i.e., everywhere except the Gwich'in Settlement Area) land and water boards and the MVEIRB are forced to make decisions on a case-by-case basis without the guidance provided by a plan. As such, the lack of land use plans is adding increased complexity and uncertainty to the regulatory and EIA processes for resource development and environmental protection.

The MVEIRB indicated that many Environmental Assessments are either being triggered, or their complexity increased, by the absence of land use plans. Specifically, the MVEIRB stated:

> *The frequent referral of very small developments situated in sensitive areas to Environmental Assessments (e.g., mineral exploration in the Drybones Bay area) is indicative of a lack of comprehensive land use planning. The Board is asked to determine whether development should occur in a specific area or not. Such a determination is ordinarily done through land use planning or through the designation of protected areas, not through specific EA.*

---

[20] Office of the Auditor General of Canada, 1990. 1990 Report of the Office of the Auditor General of Canada. Chapter 19: Department of Indian Affairs and Northern Development - Northern Affairs Program

[21] The word "applicable" has been interpreted to mean that it has been "approved" by the First Nation, Canada and the GNWT. Any other plan has no legal force.

According to the MVEIRB, the following Environmental Assessments have either been driven by land use concerns or their complexity increased by the lack of land use planning: Diamond Exploration in the Wool and Drybones Area by North American General Resources Corporation (EA 03-003), New Shoshoni Ventures Ltd. (EA 03-004) Snowfield Development Corporation (EA 03-006); Paramount Resources, Cameron Hills Extension (EA 03-005); Canadian Zinc Corporation Underground Decline/Exploratory Drilling and Metallurgical Pilot Plant Development (EA 00-002).

3.2.2 Gwich'in Land Use Plan and Board

The Gwich'in Land Use Planning Board has developed a comprehensive Land Use Plan and has implemented sound measures to maintain and update the Plan, consistent with requirements of the MVRMA.

The Gwich'in Land Use Plan came into effect August 7, 2003. The preparation of the plan was initiated in 1993 by an interim Land Use Planning Board that ultimately became the Gwich'in Land Use Planning Board. Work on the Gwich'in Land Use Plan was preceded by approximately ten years of effort to develop the Mackenzie Delta Beaufort Sea Land Use Plan (which was produced but neither approved nor implemented). Preparation of the Gwich'in Land Use Plan involved extensive consultation with the public and other interested parties.

We found that the GLUPB articulated a clear vision, consistent with the MVRMA:

> *The Planning Board envisions a Gwich'in Land Use Plan where land, water, wildlife and other resources are conserved, developed and used to protect and promote the existing and future well being of the residents and communities of the settlement area, while having regard to the interests of all Canadians.*

The Gwich'in Land Use Plan segmented the settlement area into four types of zones: general use; conservation; heritage conservation; and, special management. The Gwich'in General Use Zone permits all land uses in accordance with necessary regulatory approvals. Gwich'in Special Management Zones permit all uses as long as conditions outlined in the Land Use Plan are met and necessary approvals obtained; no restrictions are placed on traditional activities. Each of these zones includes a rationale for protection and conditions around particular uses. Gwich'in Conservation Zones or Gwich'in Heritage Conservation Zones are zones which do not permit a variety of resource extraction uses such as oil and gas exploration and development, mineral exploration and development requiring licences, permits, or other authorizations permit.

In addition to establishing an overall framework for land use in the Gwich'in Settlement Area, the plan also addresses specific developments which were considered to be reasonably foreseeable at the time of its preparation. For example, the plan identified a set of rules for a pipeline connecting significant oil and gas reserves in the Mackenzie Delta-Beaufort Sea region with southern markets and for any extension of the Mackenzie Valley Highway. The Plan also

included a discussion of eleven land use issues (e.g., economic development, renewable resources) and identified goals, objectives and recommendations for each of the issues.

The major challenge encountered in the implementation of the Gwich'in Land Use Plan has been the lengthy process required for amending the Canada Mining Regulations which currently do not allow for land use plans to inhibit prospecting and the potential development of mines. This restriction fundamentally challenges the purpose and intent of land use plans. The federal government has initiated a process of making housekeeping amendments to the Regulations, and as part of the federal government's approval of the Gwich'in Land Use Plan, agreed to include in this process new provisions for recognizing the pre-eminent legal status of land use plans over the Regulations. We understand that this process is to be completed, approved and gazetted before January 2008 when an Order in Council for the five-year interim land withdrawal for the Gwich'in Conservation Zones expires.

Amendments can be made to the Gwich'in Land Use Plan and a comprehensive review is to occur every five years. The GLUPB acknowledges that the Plan is a living document where new information can be incorporated and has also identified performance criteria against which the Plan should be assessed in the first review.

3.2.3 Sahtu Land Use Plan and Board

More than ten years after the signing of the Sahtu Agreement, a functional Sahtu Land Use Plan has not been prepared or approved.

By 2002/2003 a preliminary draft Sahtu Land Use Plan had been released, with the SLUPB hoping to incorporate comments from a consultation process into a final draft plan. However, at that time, the SLUPB was experiencing major governance problems and subsequently operations of the Board ceased.

In 2004, the Sahtu Implementation Committee hired a consultant, with funding from INAC, to review the status of the draft land use plan. The consultant determined that the draft plan lacked the substance necessary to fulfill its intended function. In spite of this, it was noted that a significant amount of useful Traditional Knowledge and GIS work had been completed to date. The same consultant was subsequently retained to facilitate preparation of the Sahtu Land Use Plan.

During the same period, the SLUPB began to re-establish itself; beginning in March, 2005, the Board achieved quorum for the first time in approximately a year and was in the process of hiring staff. At the time of the Audit, the new SLUPB was working with the consultant on the preparation of a revised draft map with three zoning categories and candidate protected areas.

While it appears that the new SLUPB and their consultant are making progress, the Plan does not appear close to being finalized, with only a revised draft map having been prepared.

Although the Board has initiated the process of collecting input from Sahtu communities and industry, significantly more consultation is required.

Recommendation 1: The Sahtu Land-Use Plan should be completed and approved as soon as possible.

3.2.4 Land Use Planning for the Balance of the Mackenzie Valley

Within the Mackenzie Valley, outside the Gwich'in and Sahtu Settlement Areas, there is no legal requirement for the development of land use plans. However, the absence of land use plans has resulted in a significant void in environmental management processes.

Tlicho Settlement Area

To our knowledge, limited formal land use planning has been initiated for the Tlicho Settlement Area. The Tlicho Land Claims and Self Government Act, which received Royal Assent on February 15th, 2005, included no requirements for the establishment of a land use plan within the Tlicho territory (Wek'èezhìi). However, as specified in the Claim, the Government of Canada may establish a mechanism for the preparation, approval and implementation of a land use plan that applies to all parts of Wek'èezhìi, other than Tlicho private lands, national parks and lands in a community. On Tlicho private lands, the Tlicho Government has the power to enact laws in relation to the use, management, administration and protection of Tlicho lands and the renewable and non-renewable resources found thereon. In addition, the Government of Canada, the Tlicho Government and the Tlicho community governments may, by agreement, establish a land use planning body and a mechanism for the preparation, approval and implementation of a land use plan that applies to all of Wek'èezhìi (including Tlicho private lands). The CEAMF Blueprint also recommends that there be an exploration of options for comprehensive land use planning in the North Slave Region which includes Wek'èezhìi.

Dehcho Territory

In May 2001 the Dehcho First Nations (DFN) Interim Measures Agreement (IMA) was signed, committing Canada, the Government of the NWT and the DFN to negotiate agreements on land, resources, and governance. The Dehcho Land Use Planning Committee was established under this agreement and given four years to complete a land use plan for the Dehcho territory. The Committee released the first Draft Land Use Plan in June 2005. Following extensive consultations and comments, the Revised Draft Land Use Plan and Background Report were released in November 2005. The Final Draft Plan and Background Report will be submitted to the Dehcho First Nations, GNWT and Canada for approval by March 31, 2006.

The Plan includes zoning which identifies where oil and gas, mining, forestry, tourism and agriculture are permitted or restricted. Currently, about 50% of the region has some form of protection through land withdrawals, Conservation Zones or other mechanisms. The Plan also

includes over 60 terms which provide further clarity on permitted or restricted uses, conditions for development, actions required to address information gaps or issues, and recommendations. One of the terms establishes cumulative effects management indicators and thresholds to manage the overall impacts of development within Special Management and General Use Zones where development is permitted. This is the first land use plan in the north to introduce landscape thresholds for cumulative effects management.

Assuming the Land Use Plan is approved before a final land claim agreement is reached for the Dehcho Territory, the Minister of INAC may provide written policy direction in relation to the plan which would be binding on the MVLWB.

Akaitcho Territory

The Akaitcho chose to not participate in the Audit process. To our knowledge there have been no substantive land use planning initiatives in the Akaitcho Territory.

North Slave Metís Alliance

The North Slave Metís Alliance did not participate in the Audit process and, to our knowledge, have not pursued planning initiatives.

NWT Metís Nation

The NWT Metís Nation did not participate in the Audit process and, to our knowledge, have not pursued planning initiatives.

Recommendation 2: **In partnership with Canada and the GNWT, Aboriginal groups in areas that lack land use plans should take immediate steps to develop and implement plans for their areas. This should be performed in consultation with interested parties. If required, provisions to honour these plans should be established until land claims agreements are settled.**

3.3 LAND USE PLANNING IN THE INUVIALUIT SETTLEMENT REGION

In the Inuvialuit Settlement Region, Community Conservation Plans have been developed and are playing an important role in identifying and protecting areas of importance.

Community Conservation Plans have been established for regions surrounding each of the communities in the Inuvialuit Settlement Region. These Plans were prepared by Hunters and Trappers Committees, Community Corporations and Elders Committees in the communities, with the WMAC (NWT) acting as the coordinating body. The creation of these Plans was the first objective of the Inuvialuit Renewable Resource Conservation and Management Plan

(1988), a document jointly prepared by the WMAC (NWT) and the Fisheries Joint Management Committee in partial fulfillment of their obligations under the Inuvialuit Final Agreement.

Extensive consultation was undertaken with Inuvialuit and non-Inuvialuit groups during the preparation of the Community Conservation Plans. These documents are intended to serve as resources to provide information on current conservation and resource management systems in the ISR. Updated in 2000, the Plans address issues such as how to identify and manage important wildlife habitat, seasonal harvesting areas and cultural sites, as well as educational initiatives and strategies for enhancing the local economy. The Plans also address a process for making land use decisions and protecting community values and resources.

In combination with other forms of conservation planning (e.g., national parks and wildlife sanctuaries), Community Conservation Plans were found to be playing an important role in decision-making processes in the ISR. While not legally binding, the documents are consulted during the regulatory and EIA processes that are applied in the settlement region.

3.4 OTHER LAND USE PLANNING EXERCISES

Land use planning exercises independent of those required under the MVRMA and IFA have been and are being undertaken. Once implemented, these initiatives can make important contributions to environmental management. However, lack of certainty around the development and expansion of protected areas has encumbered regulatory and environmental impact assessment processes.

Conservation area planning is a form of land use planning. There are currently four national parks, one wildlife sanctuary, one territorial park, five migratory bird sanctuaries and 12 national historic sites, partly or wholly in the NWT. In addition, the NWT Protected Areas Strategy (PAS) was created by representatives from communities, Aboriginal organizations, government, industry, and environmental organizations to facilitate the community-based development of a network of protected areas throughout the NWT. The goals of the NWT-PAS are to preserve special natural and cultural areas and to protect core representative areas within each eco-region. NWT-PAS is attempting to alleviate concerns that future resource development will compromise the protection of special natural areas. In turn, this will help resource-based industries and tourism interests to obtain greater clarity about land status, land use access and development options.[22] While nine candidate protected areas have been nominated, no new protected areas have been established under the NWT-PAS.

[22] Mackenzie Valley Five-Year Action Plan (2004-2009) – Conservation Planning For Pipeline Development October 31, 2003. Prepared by NWT Protected Areas Strategy Secretariat (http://www.enr.gov.nt.ca/pas/pdf/mac_action0409.pdf)

Significant effort has also been directed towards other exercises that relate to land use planning. The West Kitikmeot Slave Study, for example, is promoting the collection, consolidation and evaluation of information on the environment and traditional land uses. The Great Bear Lake Watershed Management Plan is endeavouring to provide similar insights. Once implemented, these initiatives have the potential to make valuable contributions to formal and informal land use planning processes.

While existing conservation areas are having a positive impact on the environmental management regime of the NWT, lack of certainty around the development and expansion of new protected areas has encumbered regulatory and environmental impact assessment processes. For example, the MVEIRB has voiced concerns that mining and other development activities in areas adjacent to the Nahanni National Park Reserve of Canada may be adversely affected by the lack of an articulated government policy with respect to areas around the Park. In this regard, the MVEIRB stated: "the EA process under the MVRMA is not the appropriate forum for a resolution of land use and policy conflicts that are best resolved by the Government of Canada." (MVEIRB, 2002)

3.5 TRADITIONAL KNOWLEDGE

As with other components of the MVRMA system, traditional knowledge (TK) is to be used in land use planning. A discussion of TK, including its use in land use planning, is provided in Chapter 7.

3.6 FUTURE CONSIDERATIONS FOR LAND USE PLANNING

Currently, land use plans are developed on a settlement area basis. We were told that informal consultations between the Sahtu and Gwich'in Settlement Areas were occurring in the development of the Sahtu land use plan to ensure that the approaches being used in the two areas are consistent. The Dehcho have had similar discussions with the Sahtu and Gwich'in planning areas. We view this as a positive activity that should be encouraged as future plans are developed or current plans are modified to ensure consistency and integration across settlement areas.

Existing land use plans in the NWT do not limit the quantity of development, either in a spatial or temporal context (e.g., number of seismic lines or wellheads in a particular region). The cumulative effects of such projects have both temporal and spatial dimensions that can disrupt communities, impact wildlife and disturb other ecological, social, and cultural values. A more complex suite of planning tools may assist in assessing and delineating appropriate levels of resource use intensity.

Recommendation 3: **In areas where land use plans have been approved, and in new land use plans, consideration should be given to the identification of maximum development density thresholds.**

4.0 REGULATION

4.1 EXPECTATION FOR REGULATION

In general, the MVRMA and ISR regulatory processes are adequately protective of land and water; however, there are regulatory and institutional gaps preventing the regulatory system from managing other potentially adverse impacts to all environmental components in an integrated manner.

The fundamental objective of a comprehensive and integrated environmental regulatory regime is to prevent and/or mitigate significant adverse impacts to all components of the environment, as envisioned by the broad definitions of the "environment" and "impact on the environment" used in the MVRMA.

This chapter provides an evaluation of the extent to which the MVRMA regulatory regime meets the above objective. Although the chapter focuses on the MVRMA system, many of the observations and recommendations also apply to the regulatory regime in the Inuvialuit Settlement Region (ISR). In situations where they do not apply to the ISR, we have endeavoured to identify substantive differences.

4.2 OVERVIEW OF THE APPROVAL PROCESS

While the MVRMA and ISR regulatory processes are evolving and have varying degrees of complexity, these processes are not substantively more complex than other jurisdictions with respect to the involvement of multiple permitting agencies (e.g., DFO, others). What is unique is the extent and proactive nature of community involvement and the degree to which public input can influence the process. This involvement has provided value to the regulatory regime; however, the current method of public participation has come at a cost of significant administrative and communication burdens.

Most uses of land and water in the NWT require land use permits or water licences. As indicated in Chapter 2, the Gwich'in, Sahtu and Mackenzie Valley Land and Water Boards (LWBs) are responsible for issuing, amending, renewing and suspending these regulatory instruments. Activities that require a land use permit are prescribed in the Mackenzie Valley Land Use Regulations. Activities that require a water licence are prescribed in the Northwest Territories Waters Regulations. In the ISR, water licences and land use permits are issued by the NWT Water Board and INAC respectively. Projects on Inuvialuit "private"[23] lands are regulated by the Inuvialuit Land Administration (ILA).

[23] The term "private" is used to refer to lands within the settlement region that are collectively owned by the beneficiaries of the claim.

Depending on the type of activity being proposed, the LWBs may issue two types of land use permits or water licences, Type A or Type B. Generally speaking, Type A projects have the potential to cause more significant environmental effects than Type B projects. Water licences are issued for up to twenty-five years and land use permits in the Mackenzie Valley may be issued for up to five years with an option to extend an additional two years. Type A water licences are subject to public hearings and require the approval of the Minister of INAC.

A flowchart describing the steps taken by LWBs to issue permits and licences is provided in Figure 4.1. Upon receipt of an application for a permit or licence, a LWB performs a conformity check to verify that all required information has been provided. Once an application is determined to be complete, the review process begins and the LWB must provide a decision for land use permits within a period specified by the regulations (42 days for Type A permit and 15 days for Type B permits). These time limits can be extended in situations where the LWB determines that a public hearing or further analysis is required. Similar time restrictions have not been imposed on decisions related to water licences

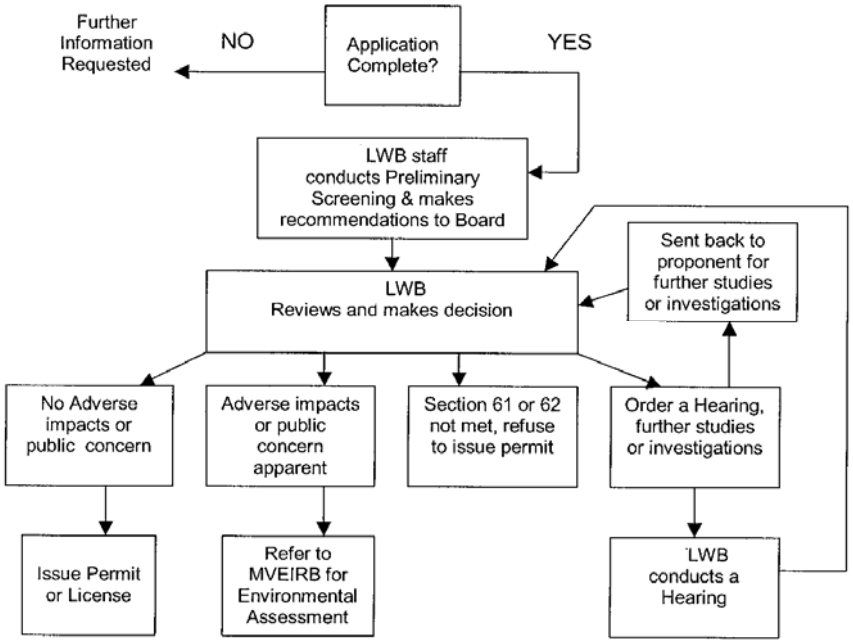
The LWB distributes the applicant's submission to government departments and agencies, affected Aboriginal people, and local governments, for review and comment on the application. While the distribution list varies from application to application (subject to the location and nature of the activity), it is common for an application to be distributed to between 20 and 45 separate organizations/agencies.

In addition to the above, public participation in the process is also encouraged through advertisements made in local media by LWBs and requirements that applicants consult with potentially affected parties (community participation is discussed more fully in Chapter 6).

The application review process forms part of the LWB's Preliminary Screening of the development.[24] If during a Preliminary Screening the LWB determines that a project might result in significant adverse environmental impacts or might be a cause of public concern, the project is referred to the MVEIRB for an EA. In situations where this occurs, licences or permits cannot be issued until a final EA decision is rendered.

[24] Although conducted primarily by LWBs, Preliminary Screenings are part of the Environmental Impact Assessment process. A detailed discussion of that process, including Preliminary Screenings, is provided in the next chapter.

Figure 4.1 – Land use permit and water licence application process.



While the LWBs provide an implicit level of integration with respect to the issuance of land use permits and water licences (i.e., a single board issues the substantive permit/licence for a project) and notification of projects (i.e., distribution of applicable project information to responsible agencies and other affected parties), additional permits may be required from other responsible authorities, as discussed below. This requirement has led to the perception by some that the permitting process is cumbersome and unwieldy; however, the need for permits from multiple agencies (e.g., federal and territorial/provincial) is common across Canada. The uniqueness of the approvals process in the NWT versus the rest of Canada is attributable to the degree of community involvement, the proactive nature of this involvement and the degree of influence that communities can have in the decision-making process.

Guidance documents have been developed by the LWBs, government agencies, industry and others to educate participants in the approvals process. In addition to providing general overviews of the process, some initiatives have focused on the preparation of sector-specific guidance (e.g., oil and natural gas exploration and production; and mineral exploration). We view this as a positive initiative.

In many respects, the environmental regulatory processes in the ISR are similar to those in the MVRMA; however, these processes are implemented and administered by different Boards, agencies and government institutions (see Section 2.3).

Recommendation 4: **Boards and governments should continue in their efforts to educate participants in the requirements of the approvals process.**

4.3 TRADITIONAL KNOWLEDGE

As with other components of the MVRMA system, traditional knowledge (TK) is to be used in land use permitting and water licensing processes. A discussion of TK, including its use in these processes, is provided in Chapter 7.

4.4 REGULATION OF SPECIFIC ENVIRONMENTAL COMPONENTS

In addition to the land use permitting and water licensing process, there are additional federal and territorial regulatory tools available to identify and address potentially adverse environmental impacts. Specific observations related to the regulatory framework are summarized by environmental media below. Comments on monitoring and enforcement activities are provided separately in Section 4.9.

4.4.1 Air Quality

Neither Canada nor the Government of the Northwest Territories has accepted responsibility for the protection of air quality throughout the whole of the NWT. As a consequence, air quality impacts associated with activities in the NWT remain largely unregulated.

Definitions of the environment in the MVRMA and the Land Claims Agreements all include references to “air quality”. As such the MVRMA and its process should endeavour to identify and mitigate potentially significant air quality impacts. However, with few exceptions (e.g., occasional flare management plans for gas well evaluations), conditions to avoid and/or mitigate air quality impacts are not incorporated into permits and licences issued by the LWBs. Notably, neither the Land or Water Regulations explicitly provide for the inclusion of air quality conditions in land use permits and water licences; any air considerations need to be managed indirectly through other permissible conditions outlined in regulation.

The territorial *Environmental Protection Act* (NWT EPA) provides the Government of the NWT with the authority to protect air quality from adverse impacts. To assist in achieving this goal, the GNWT has developed a Guideline of Ambient Air Quality Standards which can be enforced under the NWT EPA. Despite having the authority to enforce the NWT EPA and its associated guidelines throughout the NWT, the GNWT indicated that, given its limited resources, it has elected to exercise its authority on Commissioner’s Lands only (land over which the Commissioner of the Northwest Territories has administration and control). This represents a small percentage of the NWT’s total land area. The GNWT position is that the federal government has the regulatory authority over much of the NWT - it issues the permits and

licences for development activities (and reaps the financial benefits) - and therefore has the responsibility (and resources) to ensure that the byproducts (e.g., emissions) from these activities do not result in unacceptable impacts to air quality. The GNWT provides direct enforcement of the NWT EPA in the areas under its jurisdiction (i.e., Commissioner's Lands), and indirect enforcement on federally controlled areas through the provision of advice and recommendations to the appropriate federal regulatory agencies.

In an effort to address the absence of a fully implemented regulatory mechanism to protect air quality, alternative approaches are being used. For example, the National Energy Board (NEB) recently agreed to include air quality provisions based on the GNWT ambient air quality standards as a basis for permit conditions. While representing a positive development, this option is only available for oil and gas projects.

Recommendation 5: **Canada (including the NEB), the GNWT and LWBs need to reach an understanding on jurisdiction over air quality throughout the NWT. Based on this understanding, appropriate regulatory tools for the establishment and enforcement of air quality standards should be created and implemented.**

4.4.2 Water

Overall, an adequate regulatory framework to protect water quality and quantity has been established and is being used to prevent significant water quality impacts from new developments.

In the NWT, the protection of water[25] quality and quantity is explicitly regulated through the issuance of water licences. All steps in the MVRMA regulatory and environmental impact assessment processes were found to consider potential impacts on water and its use. Specific regulatory agencies also have responsibility for the protection of water quality. For example, depending on the nature of a proposed project, the Department of Fisheries and Oceans (DFO) and Environment Canada are responsible for the review of activities proposed to occur in and around water for compliance with the *Fisheries Act* (e.g., the application of the Metal Mining Effluent Regulations). DFO also administrates reviews on behalf of the Canadian Coast Guard for projects subject to the *Navigable Waters Protection Act*.

[25] Under the NWT Waters Act, water includes both surface water and groundwater.

While there are no NWT-specific surface water quality standards, federal water quality objectives such as those established by the Canadian Council of Ministers of the Environment (CCME) are being used as a tool to assist in setting effluent criteria. In addition, depending on the situation, site-specific water effluent and surface water quality criteria are also being applied.

We heard concerns that the licensing process should not be used as a means of establishing *de facto* sector standards. Similarly, the absence of clearly defined water standards has been cited as a cause of uncertainty in the approvals process. Neither of these issues is viewed by the Audit team as being problematic. It is not uncommon for regulatory agencies to establish consistent licensing limits for similar activities by way of precedence. Furthermore, even in the presence of established standards (e.g., the Metal Mining Effluent Regulations), other Canadian regulatory regimes often enforce more stringent standards to respond to site-specific issues.

Overall, we found that an adequate regulatory framework to protect water quality and quantity has been established and is being used to prevent significant water quality impacts from new developments. This framework, however, will benefit from the implementation of recommendations presented elsewhere in this report (e.g., cumulative impact monitoring and improvements to the public consultation process).

4.4.3 Wildlife

An adequate regulatory framework to protect wildlife has been established. Nonetheless, there are some concerns regarding the evolution and enforcement of the framework and potential influences that are beyond the control of the regulatory regime.

The NWT Department of Environment and Natural Resources (ENR) has primary responsibility for wildlife management in the NWT, with a mandate that includes the "coordinated management of the environment to protect the land, water and wildlife". Environment Canada (e.g., *Canada Wildlife Act*, *Species at Risk Act*, *Migratory Birds Convention Act*), the Department of Fisheries and Oceans (e.g., *Fisheries Act* and associated regulations and permit requirements) and Parks Canada (*Canada National Parks Act*) also play a role in wildlife management. Although government retains the jurisdiction over wildlife management and habitat, Aboriginal people have the right to harvest wildlife within the settlement areas, subject to any limitations set out in land claim agreements. Organizations have been established under land claims agreements to protect and sustain wildlife, including protection from wildlife harvest loss resulting from development and allocation of quotas. These organizations provide advice and comment at both the Board and regional levels.

The principle legislation for regulating wildlife is the *NWT Wildlife Act*. ENR has determined that this legislation, which was introduced more than 20 years ago, is out of date. A new *NWT Wildlife Act* is under development and will provide for wildlife harvesting and management systems that are consistent with land claims agreements. The Audit team heard comments

regarding the lack of opportunity to provide input into the development of the Act, and specific areas requiring modification were identified. In this regard, it is noted that the consultation process is continuing and, as such, will provide opportunities for these issues to be addressed.

The new *Wildlife Act* will continue to prohibit the unnecessary harassment of wildlife at any time, and will include guidelines for minimum flying altitudes to prevent harassment of wildlife by aircraft (note: the GNWT does not have the authority to regulate air traffic). The new Act will also make it possible for the GNWT to regulate activities affecting wildlife habitat. For example, the *Wildlife Act* could make it possible for the GNWT to prohibit off-road vehicles in certain areas or at certain times to prevent damage to habitat. In addition to revisions to the *NWT Wildlife Act*, the federal *Species at Risk Act* will provide a further mechanism to address significant concerns regarding the viability of wildlife populations.

The combination of Land Claims Agreements, federal acts and regulations, the *NWT Wildlife Act* and the provision of conditions in Land Use Permits and Water Licences for the protection of wildlife and fish habitat provide a comprehensive framework for the management and protection of wildlife resources. However, it has been reported that some aspects of the enforcement component of this framework have been challenging to implement for a variety of political and cultural reasons. In addition, there are external influences that may also be affecting wildlife which are beyond the control of the wildlife management regulatory system.

4.4.4 Socio-Economics and Culture

In the absence of clear MVRMA regulatory tools to assess, prevent and mitigate social, economic and cultural impacts from development, a variety of non-regulatory approaches are being used by government and industry. Nonetheless, we heard from many interested parties that such impacts are not being addressed to the same extent as biophysical impacts. We agree; however, we were unable to determine if this has resulted in significant adverse impacts that can reasonably be addressed by an environmental management regime.

As with other environmental components, project-specific socio-economic and cultural impacts need to be superimposed over existing baseline conditions and trends. Standard indicators of socio-economic and cultural vitality suggest that the baseline "wellness" of many Aboriginal communities is low in relation to other portions of the Canadian population.[26] While it is widely recognized that development activities can provide economic opportunities to Aboriginal communities, there is also a heightened awareness of potentially negative social and cultural impacts. At the same time, there needs to be an acknowledgement that many of the social and cultural challenges being experienced in the NWT are not solely attributable to development activities.

[26] Refer to Chapter 9 of this report and the Socio-Economic and Community Wellness section of the Status of the Environment companion document.

One of the guiding principles of the MVRMA is that it have regard to the protection of "the social, cultural and economic well-being of residents and communities in the Mackenzie Valley" (s. 115). Despite this requirement, the framework for MVRMA regulatory instruments focuses almost exclusively on biophysical impacts. Section 26 of the MVLUR, which defines allowable conditions in land use permits, is silent on socio-economic and cultural issues, except as these relate to physical features of the land. Section 15 of the *NWT Waters Act*, which defines allowable conditions in water licences, specifically addresses biophysical conditions, but does not preclude the potential for conditions related to socio-economic and cultural issues by virtue of the phrase "may include in a licence any conditions that it considers appropriate."

In the absence of appropriate regulatory instruments, legally binding contracts are currently being used as the primary tools to address potential socio-economic and cultural impacts of development. These contracts are not part of formal regulatory or EIA processes and may include: Access and Benefit Agreements, Impact Benefit Agreements, and Socio-economic Agreements. It should be noted that impacts are not necessarily avoided or mitigated through the application of these non-regulatory instruments. Instead, the contracts may specify the compensation or benefits that are to be provided to potentially affected parties.

Benefits Plans under the *Canada Oil and Gas Operations Act* (COGOA) specify what a developer will do to: inform and consult with northerners; maximize employment, train and provide business supply and service opportunities for northerners and northern businesses; provide compensation, as necessary, for damages attributable to resource harvesting; and report annually to INAC. The proponent submits the Benefits Plan to INAC for approval, unless the Minister has waived the requirement. An approved Benefits Plan is a prerequisite for issuance of any authorizations under COGOA by the National Energy Board.

Contractual agreements are also used to address potential socio-economic and cultural impacts associated with other types of development. In areas with settled land claims, Access and Benefit Agreements are often negotiated between claimant organizations and developers in advance of permitting/licensing processes. These agreements are mandatory, at the discretion of the land claimant organizations. By addressing impacts prior to the regulatory process, potential socio-economic and cultural concerns can be addressed while at the same time simplifying permitting and/or licensing.

In areas with unsettled land claims, Impact Benefit Agreements (IBAs) can be negotiated on a voluntary basis between a developer and communities. While these contractual agreements are confidential, we were informed that Aboriginal communities and developers have negotiated IBAs to include revenue sharing, environmental provisions, reclamation procedures, cross-cultural training, and dispute resolution. However, unlike Access and Benefit Agreements, there are no requirements for IBAs to be reached before permitting/licensing. As a consequence, regulatory processes in areas with unsettled land claims often occur prior to the resolution of community concerns related to socio-economics and culture. We found that this has led to a

situation in which the permitting and licensing process in areas with unsettled land claims may be faced with a wider range of potential impacts to address when compared to areas with settled land claims.

Non-regulatory instruments, such as Access and Benefit Agreements and IBAs, are typically confidential contracts between developers and communities. While we understand that these instruments focus primarily on socio-economic considerations and, to a lesser extent, on cultural issues, we did not have access to these confidential contracts to determine their effectiveness in mitigating significant impacts on the "human" component of the environment.

Another type of voluntary contractual arrangement, publicly accessible Socio-economic Agreements between governments, affected communities and developers, have also been used for larger projects (e.g., diamond mines). The implementation of Socio-economic Agreements is "monitored" by multi-party groups to ensure adherence to the terms of the agreements.

We heard from many interested parties that the social and cultural impacts of development are not being addressed to the same extent as biophysical impacts. While difficult to verify, the extensive use of non-regulatory instruments to deal with potential socio-economic and cultural impacts may be contributing to this situation. Specific concerns presented to us include:

- Non-regulatory approaches are developed on a case-by-case basis and, as such, it is difficult to promote consistency of application;
- Parties that are not signatories to confidential contracts have no means of determining their effectiveness;
- While conditions of the agreements are legally binding, they are not enforceable in a regulatory sense (i.e., they are not enforced or followed-up by legislation); and
- Uncertainty exists with respect to the consequences of failure to honour agreement commitments by any of the parties to an agreement.

One other concern we identified with respect to these agreements is the extent to which they may or may not address the post-project sustainability of communities. Without access to confidential contracts such as IBAs and Access and Benefit agreements, we cannot comment on this point.

Notwithstanding the potential shortcomings of non-regulatory instruments, based on the available information, no evidence was identified to suggest that the current MVRMA system has failed to prevent significant adverse socio-economic and cultural impacts *that might reasonably be addressed by an environmental management regime*.

This is not to suggest that sufficient effort is being directed towards the resolution of existing and future socio-economic and cultural challenges. To the contrary, immediate action is required. In our opinion, the responsibility for ensuring this occurs rests primarily with government agencies with health and social service mandates. Such agencies need to play a greater role in

evaluating, preventing and mitigating the wide array of social and cultural challenges faced by Aboriginal communities which are broader than those attributable solely to development activities.

Recommendation 6: **The GNWT should conduct an evaluation of the effectiveness of approaches that are being used to prevent or mitigate potential socio-economic and cultural impacts attributable to development. Findings of this evaluation should be given to other participants in the regulatory process to assist them in developing better tools for impact prevention and mitigation.**

4.4.5 Heritage Resources

An adequate regulatory framework to protect heritage resources has been established and implemented.

Protection of heritage resources in the NWT is achieved through: the Northwest Territories Archaeological Sites Regulations, pursuant to the *Northwest Territories Act*; the Mackenzie Valley Land Use Regulations; Canada Oil and Gas Geophysical Operations Regulations pursuant to the *Canada Oil and Gas Operations Act*; the NWT *Historical Resources Act* (pertains to Commissioner's land); Inuvialuit Lands Administration Rules and Procedures; and, the *Historic Sites and Monuments Act of Canada*.

Part 5 of the MVRMA requires the consideration of heritage resources when evaluating potential impacts from development. The Prince of Wales Northern Heritage Centre (PWNHC) oversees protection and management of heritage resources in the NWT, in partnership with land claim authorities, regulatory agencies, and the federal government. Upon notification of an application, the PWNHC identifies the need for impact assessment, makes recommendations to the regulatory agency involved, sets the terms of reference for any required study, authorizes and reviews field work and ensures that developers comply with mitigative measures recommended by the study.

No issues were noted by Audit participants with respect to the ability of the system to protect heritage resources. In fact, concerns related to heritage resources have been used as grounds for the referral of projects to Environmental Assessment. This is indicative that potential impacts on heritage resources are being considered during regulatory processes.

4.4.6 Land Resources

Overall, an adequate regulatory framework to protect land resources has been established and is being used to prevent significant impacts from new developments.

For the purposes of the Audit, Land Resources were considered to be all terrestrial biophysical components, excluding wildlife (e.g., soils, permafrost and vegetation). The MVRMA and MVLUR and the *NWT Waters Act* and regulations include adequate provisions for the imposition of permit and water licence conditions for the prevention and/or mitigation of impacts on land resources. Through the environmental screening and assessment process, projects having the potential to significantly impact the environment are identified along with measures to address operational impacts and restore development sites to their original land use or an acceptable alternative.

Overall, we found that an adequate regulatory framework to protect land resources has been established and is being used to prevent significant impacts from new developments. This process, however, will benefit from the implementation of recommendations presented elsewhere in this report (e.g., cumulative impact monitoring and improvements to the public consultation process).

4.5 RECLAMATION OF IMPACTED LANDS

An adequate regulatory framework to restore lands impacted by development activities has been established and implemented. Extensive efforts are being expended to address historic impacts.

The restoration of impacted lands is primarily addressed under s. 26 of the MVLUR which allows for the imposition of permit conditions for the restoration of lands. In addition to this provision, additional regulatory guidance and activities focus on minimizing potential impacts associated with historic activities.

INAC's Mine Site Reclamation Policy for the Northwest Territories is an example of the Government of Canada's current position on closure in the mining sector. Existing abandoned sites are addressed through the various initiatives including, but not limited to: the Federal Approach to Contaminated Sites; INAC's Contaminated Sites Management Policy; the Northern Affairs Program Contaminated Sites Management Policy; and, Treasury Board's Federal Contaminated Sites Management Policy suite. The primary responsibility for addressing these sites lies with INAC's Contaminants and Remediation Directorate (CARD) whose mandate is to minimize health and safety and environmental risks through the development and implementation of remediation plans that meet the needs and concerns of INAC, its First Nation partners, and all Northerners. Actions being taken to restore impacted lands are based on the magnitude of potential environmental and human health risks associated with specific sites.

Based on the extensive program and site efforts being expended on abandoned sites on a risk priority, we believe that existing impacted lands are being addressed in a systematic and appropriate manner.

4.6 CUMULATIVE EFFECTS

The absence of systematic approaches to identify, evaluate and respond to regional/territorial cumulative effects was identified as one of the most common reasons that projects are referred to Environmental Assessments. Regulatory decision-makers lack the tools necessary to make informed planning and approval decisions based on regional/territorial cumulative effects of projects. This gap is tied directly to both the absence of Land Use Plans and a fully implemented Cumulative Impacts Monitoring Program.

Environmental effects can occur at both the site-specific/project level (e.g., localized water and air quality impacts) and regional/territorial level (e.g., caribou herd migration, global warming). It was expected that information required to evaluate the former would be addressed on a project-specific basis by the developer and LWBs and that the latter would be addressed through land use planning and/or the Cumulative Impacts Monitoring Program.

The LWBs indicated that issues related to cumulative effects are becoming increasingly important to participants in the regulatory process. Despite this, the LWBs feel that the tools necessary to act on these regional/territorial issues have lagged behind. We agree that insufficient progress has been made to ensure that regional/territorial cumulative effects are given appropriate consideration during the land use planning and regulatory approvals processes. A more comprehensive discussion on this shortcoming is provided in Chapter 8. The MVLWB confirmed that it has referred projects in cases where it had insufficient information to determine if significant cumulative impacts might occur. This may be resulting in unnecessary delays in the approvals process.

We feel that the LWBs have the desire and intent to address cumulative impacts; however, the LWBs cannot fully address these impacts at present due to the absence of land use plans and data on regional/territorial cumulative impacts. Improved decision making may occur once these deficiencies, which are addressed elsewhere in this report, have been resolved.

4.7 SECURITY DEPOSITS

Mechanisms are available to ensure liabilities associated with licences and permits issued under the MVRMA can be managed in case of default of the developer.

The need for security deposits to ensure adequate restoration of the environment after the permitted land or water use has been completed is contemplated in s. 71 of the MVRMA, s. 32 of the Mackenzie Valley Land Use Regulations, s. 17 of the *NWT Waters Act* and s. 12 of the NWT Waters Regulations. While there is evidence that security deposit provisions are being used in regulatory instruments, concerns were expressed that in some cases they were not adequate and that in other cases they were excessive.

Inadequate security deposits may shift the responsibility for addressing environmental liabilities from the developer to the public. Notwithstanding obvious public policy considerations (e.g., the "polluter pays" tenet of environmental management) the Audit team feels that inadequate security deposits are unlikely to have a significant impact on the environment. Extensive work being undertaken by the Government of Canada to remediate and/or mitigate abandoned and contaminated sites supports this assertion; in situations where significant impacts have been identified, they are now being addressed in a systematic and appropriate manner. On the other hand, security requirements that are in excess of reasonably foreseeable mitigation and rehabilitation requirements can place an unfair burden on developers wishing to develop projects.

4.8 ACCOUNTABILITY AND FEEDBACK

The MVLWB and Gwich'in LWB are using disposition tables to systematically document and transparently respond to review comments. While the Sahtu LWB was tracking review comments, disposition of comments was not tracked on the summary tables.

LWBs draw on the resources of a wide array of organizations and specialists during the application review process. These resources provide information and advice to the LWBs on potential impacts and mitigative measures. This advice is to be taken into consideration by LWBs as they conduct Preliminary Screenings and issue decisions.

We expected the LWBs to have procedures to formally track and respond to information and advice they receive during the application review process (disposition process). Such procedures serve a number of functions: a) they allow the LWBs to document and consolidate reviewer input; b) they assist in considering input in a systematic, transparent and defensible manner; and c) they assist reviewers in determining if and how their contributions have been taken into consideration. We reviewed a sampling of recent MVLWB and the GLWB permit and licence files and found that appropriate dispositioning is occurring. Files provided by the Sahtu

LWB included correspondence on comments and a summary of comments received (Table of Referral Summary Comments); however, a single consolidated file record (e.g., a single disposition table) was not in place to summarize how comments received were handled and disposed.

Recommendation 7: **The Sahtu LWB should augment its current summary comment tables to include a column that shows how each application review comment has been addressed (e.g., one consolidated disposition table).**

4.9 MONITORING AND ENFORCEMENT

4.9.1 Responsibility for Enforcement

There are jurisdictional questions over the assumption of responsibility for enforcement of permit and licence conditions among INAC, GNWT, DFO, and Environment Canada resulting in gaps in the development of permit and licence conditions and in the monitoring and enforcement of land use permits and water licences.

The Gwich'in, Sahtu and Mackenzie Valley Land and Water Boards issue regulatory instruments and have the ability to cancel licences (e.g., where the cancellation of a water licence appears to the Board to be in the public interest). However, responsibility for enforcing conditions in permits and licences rests with applicable government agencies that have been empowered with appropriate legislation.

INAC has primary responsibility for ensuring compliance with the *Northwest Territories Waters Act, the Territorial Lands Act*, the *Mackenzie Valley Resource Management Act*, and the numerous regulations pursuant to these pieces of legislation. With this broad mandate, INAC serves as the primary enforcement agency for the terms and conditions of permits and licences issued by the LWBs; however, INAC inspectors indicated that they only inspect and enforce conditions that are directly associated with legislation for which the Minister of INAC has authority (e.g., INAC inspectors do not enforce fisheries or air quality aspects of permits or licences).

This situation has led to regulatory gaps in the enforcement process for land use permits and water licences, as evidenced by the following examples:

- NWT ENR has taken the position that the federal government has the regulatory authority over much of the NWT and the responsibility to ensure that the impacts from activities do not result in unacceptable impacts to the environment. The GNWT therefore does not enforce land use permit and water licence conditions.

- ENR Wildlife officers indicated that although they have the capacity to measure performance relative to specific wildlife monitoring programs/plans established as conditions of permits or licences, they do not have the legislative tools or authority to enforce these conditions. INAC inspectors, however, are not inspecting the wildlife monitoring programs/plans because they feel they lack the necessary jurisdiction.

In addition to INAC, other government agencies (e.g., DFO, Environment Canada, NWT ENR) are responsible for enforcing their respective environmental legislation and associated licences and permits, consistent with the approach adopted in other Canadian jurisdictions.

Also, as discussed earlier, there appears to be no regulatory mechanism by which environmental commitments made in non-regulatory instruments (e.g., Environmental Agreements, Socio-economic Agreements) can be enforced under the current regulatory framework. It is our understanding that any disagreements would be addressed through contract law.

Recommendation 8: **Federal and territorial departments should develop formal agreements and applicable training programs to ensure that *all* permit and licence conditions are subject to inspection and enforcement by appropriate *regulatory* authorities. As the lead department for the MVRMA, INAC should take the leadership role in ensuring this occurs.**

4.9.2 Inspection and Enforcement Processes

INAC's inspection process is based on a sound risk assessment approach, with inspection frequencies generally as often or more frequent than other Canadian jurisdictions.

Site inspections are one of the tools used by enforcement agencies to verify the extent to which developers are in compliance with regulatory instruments. INAC has developed a rational inspection regime based on a risk assessment approach. Using a series of benchmarks, the approach allocates a score to a specific permit or licence to identify an appropriate inspection frequency. The inspection frequency can be adjusted following each inspection to reflect any observed changes in the operation.

The intention of the risk assessment approach is to establish a balanced allocation of resources so that higher risk operations are inspected more frequently. As a minimum, Type A projects are inspected twice annually while Type B projects are inspected once annually. More frequent inspections are conducted on developments that are considered to pose a higher risk.

We heard concerns from a number of interested parties (e.g., public, Aboriginal groups, NGOs and some government agencies) that staffing levels are insufficient to allow INAC to conduct an

acceptable number of inspections. The GLUPB and SLWB also suggested that the number of inspections and extent of enforcement is inconsistent with the potentially adverse impacts of developments. However, in reviewing INAC's inspection process, it appears that inspection frequencies are generally consistent with, or in some cases exceed those, of other Canadian regulatory regimes. We have therefore concluded that staffing levels are not placing an unreasonable limitation on the frequency of inspections by INAC.

Enforcement officers interviewed by the Audit team indicated that the inspection and enforcement philosophy is one of cooperation and is seldom punitive. In general, the focus is on prevention with INAC engaging in proactive efforts to ensure developers are utilizing the most appropriate techniques for the activities they are undertaking. Licence suspensions, cancellations and court action are viewed as a last resort.

We feel that INAC's enforcement officers have the qualifications necessary to complete their assigned duties. Furthermore, based on a review of selected case studies and input provided by Audit participants, we identified no evidence to suggest that decisions or actions taken by enforcement staff have been inconsistent with the intent of the MVRMA and the IFA.

Other regulatory agencies generally inspect developments far less frequently than INAC. For example, the DIAVIK diamond mine is typically inspected according to the following approximate schedule:

- INAC – 12 inspections/year;
- DFO – 1 to 2 inspections/year;
- Environment Canada – 1 inspection/year; and,
- NWT ENR – no inspections.

Notwithstanding any other considerations, it is noted that the ease of inspections, and hence frequencies, may be influenced by the proximity and accessibility of developments from regional regulatory offices.

For an integrated system such as that envisioned under the MVRMA, it is also important that the various regulatory agencies responsible for enforcing conditions in permits and licences collaborate to the greatest degree possible. While an inspector from one agency might inform another agency of an infraction observed in the field, collaboration appears to be quite limited. Due to the logistical challenges and resource limitations associated with inspections in the NWT, the Audit team feels that an increased emphasis on the sharing of information, expertise and resources between regulatory agencies would result in a more effective and efficient system.

Recommendation 9: **Regulatory agencies should develop cooperative agreements to optimize the effectiveness and efficiency of inspection activities.**

4.9.3 Enforceable Permit and Licence Conditions

LWBs have not included all necessary conditions in permits and licences due to issues associated with the responsibility for enforcement of these conditions.

Conditions incorporated into permits, licences and other authorizations should be capable of avoiding or mitigating all potentially significant adverse impacts associated with a development. Each of these conditions should be fully enforced by inspectors with the authority to suspend or cancel the regulatory instrument if its conditions are not met. In cases where this does not occur, the fundamental objectives of the MVRMA have not been achieved.

This level of performance is not being met**.** We were advised of situations where regulatory authorities have not taken responsibility for enforcing conditions and others where conditions required to mitigate potential impacts were not included in permits or licences issued by Boards. This has been based on the interpretation that such conditions would not be enforced or were not enforceable (e.g., air quality, wildlife and socio-economics/culture). While alternative non-regulatory mechanisms are used on an ad-hoc basis to address these gaps (e.g., Environmental and Socio-Economic Agreements), regulatory inspection and enforcement of those mechanisms does not occur.

An additional concern, raised by INAC enforcement staff, was that permit and licence conditions are often unnecessarily prescriptive and focused on the "inner workings" of development operations. It was suggested that such conditions complicate the enforcement process without resulting in improvements to the overall environmental performance of developments. To address this situation, INAC enforcement staff recommended that permits and licences be more focused on performance-based conditions. We concur.

It was also reported that permits and licences occasionally imposed conditions on parties other than the developer. In our sampling of permits and licences, we found no examples of this practice; however, it is noted that the inclusion of these conditions would not be appropriate.

It was also reported by the MVLWB that the Board does not have access to leases issued by INAC. The MVLWB believes that any conditions included in leases should be taken into consideration when permits and licences are issued. We concur that it would be beneficial if all information related to environmental issues (i.e., restrictions or requirements for land use) was made available to LWBs to ensure consistency between leases and regulatory approvals. However, the Audit team recognizes that their may be contractual or privacy considerations limiting the full release of such information.

Recommendation 10: **LWBs should ensure that permit and licence conditions are written in such a manner as to be inclusive of all mitigative and monitoring requirements and to provide operational**

flexibility while being protective of the environment by establishing performance-based requirements.

Recommendation 11: **INAC should work with the LWBs to investigate means by which confidential terms and conditions relevant to the environmental management process can be provided to LWBs without compromising confidentiality requirements.**

4.9.4 Communications between Boards and INAC

Ideally, LWBs, the MVEIRB and enforcement agencies should work collaboratively to identify appropriate conditions and follow-up on the enforcement of those conditions. For example, LWBs should have access to the information necessary for them to confirm that conditions in permits are having their intended effect.

While open and proactive communication is preferred, it is noted that for land use permits, Boards are to be informed of, without delay, orders through s. 13 of the MVLUR. Boards can also use s. 28 of the MVLUR to monitor performance relative to permit conditions, as it allows the Boards to require "a permittee … [to] submit to the inspector or the Board, in a form and on a date satisfactory to the inspector or the Board, such reports as are requested by the inspector or the Board for the purpose of ascertaining the progress of the land-use operation."

Similar provisions for reporting water licence inspection results do not exist in the MVMRA or *NWT Waters Act* or their regulations; however, under s. 15(1) of the *NWT Waters Act*, the LWBs may include monitoring and reporting requirements for assessing conformance to licence conditions.

The SLWB and MVLWB indicated that in some circumstances information on permit and licence compliance (e.g., inspection reports) has not been made available to them, with this issue reported to be resolved at present for the SLWB. INAC has indicated that information on non-compliance is not provided to a LWB if that information is going to be the basis for charges or prosecution under the Act/Regulation.

More generally, while there appears to be limited collaboration between INAC inspectors and the MVLWB, examples of effective communication between INAC inspectors, the GLWB and the SLWB were noted. For example, INAC has invited the GLWB to attend site inspections. These communications, while not legally required, are viewed as a positive development and are encouraged.

Recommendation 12: **INAC and the LWBs should collaborate on the collection and sharing of information required for licensing, inspection and enforcement activities, without compromising potential prosecutions.**

4.9.5 Fines and Penalties

Fines and penalties under the MVMRA and *NWT Waters Act* are substantively lower than those under other federal and territorial environmental legislation.

Provisions for adequate fines and penalties are important deterrents to prevent non-compliance and to further environmental protection measures.

The fines and penalties provision of the MVRMA states that a person who contravenes any provision of the regulations, any condition of a permit or an order of an inspector is guilty of an offence and liable on summary conviction to a fine not exceeding $15,000 or to imprisonment for a term not exceeding six months, or to both, for each day on which the offence is committed or continued. Fines and penalties under the *NWT Waters Act* range up to $100,000, one year in prison, or both.

Potential fines and penalties under the *Canadian Environmental Protection Act*[27] (CEPA) and the *Fisheries Act* are substantially higher than those set in the MVRMA and *NWT Waters Act*. For example, for each day of offence under CEPA, fines can be as high as $1,000,000 and imprisonment terms are as long as five years. At the Territorial level, fines under the NWT *Environmental Protection Act*[28] (NWT EPA) range from $200,000 to $300,000 or up to six months imprisonment, or both, for a first offence and up to $1,000,000 and two years imprisonment, or both, for each day of the offence.

In addition to existing penalties, it has been suggested by some INAC inspectors that a system of monetary administrative penalties (e.g., summary conviction tickets) would serve as an effective tool to address permit and licence violations. While administrative penalties may assist in addressing relatively minor violations, the Audit team feels that such a system would be of limited value in efforts to prevent or resolve significant environmental impacts.

Recommendation 13: **The fines and penalties provisions of the MVRMA should be amended to be more consistent with CEPA, the *Fisheries Act* and the *NWT EPA*.**

[27] *Canadian Environmental Protection A*ct, 1999 S.C. 1999, c. 33
[28] *Environmental Protection Act* R.S.N.W.T. 1988, c. E-7

4.9.6 Environmental Monitors and Monitoring Agencies

Environmental Monitors and Monitoring Agencies assist the public to participate directly in environmental management. In addition to strengthening the enforcement function, their use has the potential to engender improved public confidence in the regime.

In addition to enforcement and inspection activities conducted by government agencies, some land claimant organizations (e.g., in the Inuvialuit, Gwich'in and Sahtu settlement regions) are implementing independent inspection regimes. This is accomplished through the use of "Environmental Monitors" that are on-site at various stages during the development process. The monitors are responsible for ensuring that best-practices are used by developers and enforcing specific conditions that are included in Access and Benefits agreements issued by regional Land Claim authorities in areas with settled claims. The monitors appear to be making positive contributions to environmental management processes by providing an additional level of oversight and facilitating a greater degree of community involvement. INAC has provided monitors with training to assist them in fulfilling this role.

"Environmental Agreements" are voluntary, legally binding contracts between companies and governments, typically for large developments (e.g., Diavik, Ekati and Snap Lake Diamond projects). Signatories can include developers, government and directly affected communities. The Agreements are negotiated on a case-by-case basis but have primarily focused on oversight, communication, security provisions and monitoring programs.

Non-regulatory Monitoring Agencies have been established under the Environmental Agreements to serve as environmental "watchdogs" for the Ekati, Diavik and Snap Lake diamond mines. In general, the objective of the Monitoring Agencies is to provide affected Aboriginal communities with an impartial, independent and knowledgeable third party to monitor the environmental management of the mines and to develop community capacity in the same area. Specific functions performed by the organizations can include:

- reviewing and commenting on the design of monitoring and management plans, and the results of these activities;
- supporting collaboration and information sharing amongst Parties to the Environmental Agreement;
- monitoring, and encouraging the integration of traditional knowledge of the nearby Aboriginal peoples into the environmental plans of the mines;
- acting as an intervenor in regulatory processes directly related to environmental matters involving the mines and their cumulative effects;
- bringing concerns of the Aboriginal peoples and the general public to developers and the government;
- writing annual reports with recommendations that require the response of the developers and/or government; and

- providing a publicly accessible repository of environmental data, studies, and reports relevant to the Monitoring Agencies' mandates.

While some initial start-up funding has been provided by the federal and territorial governments, monitoring agency costs are primarily the responsibility of the mine owners.

Based on insights collected from a variety of participants in the Audit process, the monitoring agencies appear to be making important contributions to environmental management by providing an additional opportunity for the identification of potential environmental impacts.[29] They are also facilitating a greater degree of community participation in environmental management processes. Notwithstanding these positive contributions, the Audit team feels that the monitoring agencies and the Environmental Agreements they oversee should not be used to fill regulatory gaps (e.g., air quality). While contractual agreements and non-regulatory agencies have an important role to play, they should, wherever possible, be backed by a comprehensive regulatory regime that protects all environmental components.

[29] It should be noted that Aboriginal community signatories to the Environmental Agreements did not participate in the Audit. As a consequence, we were unable to obtain their perspectives on the effectiveness of Environmental Agreements and monitoring agencies. A balanced evaluation requires such perspectives.

5.0 ENVIRONMENTAL IMPACT ASSESSMENT

5.1 EXPECTATIONS FOR ENVIRONMENTAL IMPACT ASSESSMENT

The EIA regulatory regime and associated processes are adequate to be protective of the environment within a consultative process. Where potentially significant concerns had been identified, these concerns were assessed in an appropriate manner, with the system deferring to a conservative approach in the event of uncertainty. Decisions have generally been protective, with the decision-making processes evolving in a positive direction. MVEIRB is commended for taking a leadership role in developing tools to ensure the effectiveness of the system.

The primary objective of environmental impact assessment (EIA) processes is to predict the environmental impacts of proposed initiatives before they are carried out. In cases where potential adverse effects are identified, the EIA process identifies measures to mitigate those effects. The results of these evaluations are used to make decisions regarding if, and under what circumstances, a project should be allowed to proceed.

5.2 OVERVIEW OF MACKENZIE VALLEY EIA PROCESS

Part 5 of the MVRMA designates the Mackenzie Valley Environmental Impact Review Board (MVEIRB) as the main instrument for the EIA process in the Mackenzie Valley.[30] The EIA process was established "*to ensure that the impact on the environment of proposed developments receives careful consideration before actions are taken in connection with them*" and "*to ensure that the concerns of aboriginal people and the general public are taken into account during that process"* (MVRMA s.114). The guiding principles for all parties to the EIA process are to have regard to:

a) *the protection of the environment from the significant adverse impacts of proposed developments; and*
b) *the protection of the social, cultural and economic well-being of residents and communities in the Mackenzie Valley.* (MVRMA s.115)

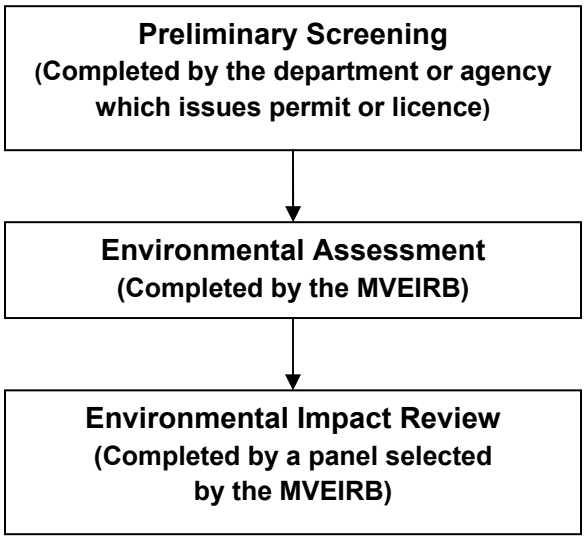
According to the MVEIRB's Environmental Impact Assessment Guidelines, the ultimate result of the EIA process is to support sustainable development. This is to be achieved by preventing unacceptable developments that are ecologically, socially or economically harmful or by

[30] The *Canadian Environmental Assessment Act (CEAA)* no longer applies in the Mackenzie Valley, except under very specific circumstances.

improving the design and environmental management of projects that may be acceptable if appropriate measures to avoid or mitigate impacts are applied.[31]

5.2.1 EIA Process Steps

The MVRMA provides for three distinct, and progressively more comprehensive, steps in the EIA process. All proposed activities requiring an authorization from a regulatory authority undergo a ***Preliminary Screening***. In most cases this is the first and last step in the EIA process. However, in situations where there might be a significant adverse environmental impact or might be a cause of public concern, a proposed development can be referred to the second step, ***Environmental Assessment*** (EA). Although a third step, ***Environmental Impact Review*** (EIR) exists, this step is a rarely used option in the EIA process.[32]



To ensure that evaluations of environmental impacts occur before a development's impacts happen, the MVRMA specifies that no licence, permit or other authorization required for the carrying out of a development may be issued under any federal or territorial law unless EIA requirements have been met. Further, where the Gwich'in or Sahtu First Nation, a local government or a department or agency of the federal or territorial government proposes to carry out a development that does not require a licence, permit or other authorization, these bodies must comply with the EIA requirements before taking any irrevocable action in relation to the development. Additional details on the three Mackenzie Valley EIA steps are provided in the sections that follow.

---

[31] MVEIRB Environmental Impact Assessment Guidelines, March 2004.

[32] To date, the only project that has been subjected to the EIR process is the Mackenzie Gas Project. This EIR is ongoing and is being conducted by a joint review panel under the MVRMA, the Canadian Environmental Assessment Act and the Inuvialuit Final Agreement.

5.2.2 Preliminary Screening Process

From the inception of the MVRMA through the fiscal year 2004-2005, there have been 1,004 preliminary screening assessments. Of these, 31 projects, or about 3%, were referred to the MVEIRB for Environmental Assessment.[33]

Referral mechanisms in s. 126 of the MVRMA provide additional checks and balances in addition to the initial screening process to foster protection of the environment.

Preliminary Screening is the initial examination of a development's potential for impact on the environment and the potential for public concern. This step in the process has a broad focus and usually does not involve in-depth study. Preliminary Screenings are triggered by an application for an authorization for a development unless the proposed activity is exempted under the MVRMA Exemption List Regulation[34]. Preliminary screenings are completed by the regulatory authority or a designated regulatory agency that receives the application for a licence, permit or other authorization required to carry out a proposed development. Land and Water Boards conduct the majority of Preliminary Screenings because most developments require land use permits or water licences. Other regulators may also conduct Preliminary Screenings including, but not limited to: the Department of Fisheries and Oceans; the GNWT's ENR; Environment Canada; Canadian Nuclear Safety Commission; Natural Resources Canada; Parks Canada; the GNWT's Municipal and Community Affairs; and, the National Energy Board.

The Preliminary Screening process is typically the shortest of the three EIA steps, usually taking less than 45 days. Once a Preliminary Screening is complete, a decision is made to allow the development to proceed or to refer it to Environmental Assessment. The criteria for determining whether a proposed undertaking should be referred to an EA are based on whether a development *might* have a significant adverse impact on the environment or *might* be a cause of public concern.[35] If either of the above criteria is met the proposed undertaking is referred to the MVEIRB for an EA. The determination of whether or not the "might" test has been met rests primarily with the Preliminary Screeners. According to the MVEIRB, this "*has proven problematic for Preliminary Screeners to apply, partly due to the subjective nature of the test…the professional judgment of the Preliminary Screener plays a vital role.*"[36]

Therefore, to perform the Preliminary Screening function in a transparent and consistent fashion that appropriately responds to potential environmental impacts and public concern, screening

---

33 Of the 31 referrals, 4 were withdrawn resulting in 27 environmental assessments.

34 Listed exemptions are similar to, but not identical to, those listed in the CEAA Exclusion List Regulations.

35 These are the referral criteria for projects outside municipal boundaries. The referral criterion within municipal boundaries is: "the development is likely to have a significant adverse impact on air, water or renewable resources or might be a cause of public concern".

36 MVEIRB EIA Guidelines (March, 2004)

authorities require guidance. Such guidance is provided in the *MVEIRB Environmental Impact Assessment Guidelines* (March, 2004).

Notwithstanding any determination by the screening authority, s. 126 of the MVRMA allows any Responsible Authority, Designated Regulatory Agency, Federal or Territorial Agency or Department, the Gwich'in or Sahtu First Nation (in defined situations) or any local government (in defined situations), to refer a proposed development to an Environmental Assessment.

Under the existing system, there is the potential for screening authorities to use EAs as a means of diverting responsibility for making decisions on challenging issues or to use EAs to accomplish objectives that are not related to environmental protection (e.g., to accomplish political objectives). This has not been the case to date in that the MVEIRB indicated that all EAs conducted have resulted in legitimate concerns being identified.

5.2.3 Environmental Assessment Process

More projects have been subject to Environmental Assessment under the MVRMA than before the legislation was passed. This is partly due to increases in development activity and partly due to smaller projects being subject to the process. Where smaller projects were subject to EA, these referrals appear to be warranted based on the identification of environmental concerns during the EA process.

Since the inception of the MVRMA, the Environmental Assessment process has improved significantly.

Environmental Assessments (EAs) involve in-depth study of the proposed development's potential for impacts on the environment. The process identifies, evaluates and reports potential ecological, social, cultural and economic impacts and the mitigation measures to reduce or avoid these impacts.

There are more Environmental Assessments in the Mackenzie Valley now than pre-MVRMA. The nature of developments that are being assessed shows that at least part of the increase stems from a broadening of the scope of developments undergoing assessment. Pre-MVRMA, only large projects were subjected to more than a Preliminary Screening. Today, some small projects are referred to Environmental Assessments as well. Examples include mineral exploration programs in the Drybones Bay area as well as oil and gas exploratory drilling in the Tulita area. Projects of this magnitude were typically not subjected to EA prior to the MVRMA.

5.2.3.1 Scoping

The MVEIRB has recently developed procedures to more effectively scope and streamline Environmental Assessments.

In combination with an effective referral process, early and effective scoping is required to ensure that resources and efforts are directed towards issues of significance. Broad scoping can result in significant issues not receiving the appropriate level of attention and create EAs which are unnecessarily complex. The MVEIRB is now placing more emphasis on scoping issues than it had in earlier Environmental Assessments. For example, MVEIRB now prepares a focused Terms of Reference and a Workplan that help to better outline what will be involved in the EA.

The Board has recently initiated a two-phase process to assist in the scoping of EA issues and processes for smaller developments. Phase one consists of a round of information requests and a public hearing to: clarify the scope of the development and the assessment; gauge the level of public concern and identify its sources; and to provide the Board with information to address the factors it must consider in every EA. Following the hearing, the MVEIRB decides whether sufficient evidence has been brought before it to make a decision. If the Board determines it has sufficient information, it closes the public record, enters its deliberations and issues a decision without entering Phase-Two.

In the event that the hearing and/or prior submissions do not provide the MVEIRB with sufficient information, the Board enters the second phase of the EA. The Phase-Two process, if necessary, is defined based on the outcome of Phase-One. For example, requirements could include an additional round of information requests only or may consist of a full EA process, as described in the EIA Guidelines. While the MVEIRB has limited operational experience in the application of the two-stage process, it appears to have the potential to facilitate efficient and focused EAs.

5.2.3.2 EA Decisions

The MVEIRB issues its decision in a Report on Environmental Assessment (REA). The decision provides the MVEIRB's recommendation regarding the proposed development. For example, if the MVEIRB finds that the development is likely to cause significant adverse impacts, it may determine that an EIR is necessary or it may recommend mitigation measures[37] to prevent the significant adverse impacts. In addition to mitigation measures, the Review Board may offer non-binding suggestions for good environmental management. If the MVEIRB finds that the development is likely to cause significant public concern, it will require that an EIR be conducted. The Board may also recommend that the proposal be rejected with no further assessment.

[37] Measures were known as "Recommendations" until 2005.

Once the MVEIRB has completed its deliberations and issued the REA, that report is sent to the Minister of INAC (and to the National Energy Board in certain cases) who then distributes it to every responsible minister. On receiving the REA (which includes the MVEIRB's recommendation), the Minister of INAC and the responsible ministers collectively make a decision on the course of action that will be followed. The options available to the ministers are limited to: a) adopting the MVEIRB's recommendation; b) refering it back to the MVEIRB for further consideration; c) consulting the MVEIRB and then adopting the recommendation with modification; or d) consulting the MVEIRB and then rejecting the reasons for decision and ordering an EIR.

5.2.3.3 Mitigative Measures

MVEIRB's Environmental Assessment reports have improved since the Board's inception and now provide a clearer link between potential significant adverse impacts on the environment and recommended mitigation measures.

As a condition of EA approval, the MVEIRB may require that a developer implement "measures" to prevent significant adverse impacts on the environment. Some interested parties have criticized the MVEIRB for EA decisions which failed to clearly identify linkages between recommended mitigation measures and potential impacts. The MVEIRB concurred that early EAs recommended measures to protect the environment without clearly specifying the impact on the environment that it was intended to prevent. Recent REAs issued by the MVEIRB were found to be more logical and understandable in discussions relative to specific impacts and recommended mitigation measures.

In the Board's view, once its REA is accepted, all measures contained in it must be implemented and enforced. If this does not occur, the MVEIRB asserts that its determination that the development should proceed is no longer valid as each mitigation measure is designed to prevent a specific, potentially significant impact.

Many of the MVEIRB's measures direct regulatory authorities to insert conditions into permits or licences; however other measures may be directed to the developer or a non-regulatory agency or organization. The MVEIRB's submission to the Audit indicated that the enforcement of measures that are not directly linked to a specific regulatory instrument has resulted in "orphaned" measures:

> *"To date no level of government appears to accept responsibility for the enforcement of measures that are not directly linked to a specific regulatory instrument ... Similarly the Board's suggestions, which tend to be more general in nature, are often not implemented by any level of government."*

Discussions with regulatory authorities corroborated this assertion; government regulatory agencies focus almost exclusively on the enforcement of measures that relate specifically to

their legislation. This concern is similar to that noted for Land and Water Boards (see Section 4.2.6.4)

5.2.3.4 Feedback on Mitigation Measures

The MVRMA EIA process lacks a feedback mechanism to confirm the implementation and effectiveness of impact mitigation measures.

To operate in an integrated fashion with the other components of the MVRMA, the MVEIRB requires a "feedback loop" to verify: a) the extent to which measures are being implemented; and b) the effectiveness of measures in mitigating potential impacts. This information is required to confirm that commitments are being honoured and to assist in determining whether identified mitigation measures are appropriate. The MVRMA system contains no such feedback mechanism.

In an effort to address this gap, the MVEIRB recently initiated a process to verify the implementation of its mitigation measures. Since its inception, the Board has recommended 115 measures, 46% of which have been fully implemented, 10% partially implemented, 9% not implemented, 6% not verifiable and 30% not yet verified. The above analysis includes non-binding suggestions which were not distinguished from binding measures in early EAs conducted by the Board.[38] Since the MVEIRB began separating out suggestions, there have been 28 measures identified. Of these, 43% have been fully implemented, 4% partially implemented, 18% not implemented, 14% not verifiable and 21% not yet verified. Statistics show that implementation rates improved for measures recommended in 2003 (71% implemented, 14% partially implemented and 14% not yet verified, with no measures identified as not being implemented or not being verifiable) versus those made in previous years. MVEIRB indicated to the Audit team that measures aimed at Land and Water Boards are largely being implemented, with the challenge related to measures where there is no regulatory body directly responsible.

Environmental assessment and regulatory legislation of many jurisdictions includes provisions for follow-up programs to verify the implementation and effectiveness of EA measures. In some circumstances, Environmental Agreements, Socio-Economic Agreements and independent monitoring agencies have been used to partially fulfill this function. However, these approaches have generally been used only for larger undertakings (e.g., the diamond mines).

[38] The MVEIRB now separates between binding "measures" and non-binding "suggestions". A "measure" is a mitigation measure to prevent a specific significant impact that in the Board's opinion is likely to occur. A "suggestion" is a way to further reduce the overall environmental impact of a project or future projects in the same area.

Recommendation 14: **Institutionalized mechanisms to perform follow-up on the implementation of EA measures, particularly those which are not tied directly to a regulatory instrument, would provide an important improvement to the EA and regulatory system. To this end, it is recommended that the MVEIRB develop follow-up programs for Environmental Assessments, where appropriate.**

5.2.3.5 Social, Economic and Cultural Issues

MVEIRB is following the guiding principles outlined by the MVRMA by endeavouring to give thorough consideration to bio-physical, socio-economic and cultural aspects of the environment; however, governmental agencies party to the EA process continue to focus primarily on biophysical aspects of the environment.

Environmental Assessment tools for social and cultural impact assessment are generally far less developed than those used to determine biophysical impacts. This situation is not unique to the Mackenzie Valley.

Prior to the implementation of the MVRMA, the social and economic aspects of development could only trigger an Environmental Assessment if they were a product of a change to the biophysical environment. This is no longer the case; direct impacts to social, economic and cultural components of the environment are within the scope of the MVRMA and its EIA process.

We were informed by many organizations and individuals that community concerns related to development projects are often focused on cultural, social and economic issues. Our review of recent EAs corroborated this conclusion. Not only are socio-economic and cultural concerns being raised, the MVEIRB is clearly attempting to address them. We were impressed at the diversity of socio-economic and cultural considerations (e.g., health issues, harvester compensation, community benefits agreements, etc.) incorporated into the MVEIRB's decisions.

Despite progress being made by the MVEIRB, significant deficiencies in the consideration of socio-economic and cultural factors remain. First, the tools available for social and cultural impact assessment are generally far less developed than those used to determine biophysical impacts. The MVEIRB is endeavouring to address this gap by developing guidelines for socio-economic assessment. Second, good baseline information necessary to support informed decision-making on issues related to socio-economics and culture is limited (see CIMP chapter). Last, while we acknowledge that government departments with socio-economic and cultural mandates contribute to EA processes, government participation appears to be focused on considerations related to biophysical impacts. The MVEIRB has also indicated that, in some cases, governments have suggested the removal of all measures related to social and economic issues contained in Reports on Environmental Assessment.

Recommendation 15: **The MVEIRB should continue to develop tools for completing social and cultural impact assessment, and monitor developments in this area in other jurisdictions.**

Recommendation 16: **In situations where measures dealing with socio-economic impacts are made in EIA decisions and there is no associated regulation, governments should develop and use policy instruments to facilitate the implementation of the measures.**[39]

Recommendation 17: **Relevant government agencies need to place increased emphasis on the social, economic and cultural aspects of their mandates during EIA processes.**

5.2.3.6 Traditional Knowledge

As with other components of the MVRMA system, traditional knowledge (TK) is to be used in EA decision making. Most recently "Guidelines for Incorporating Traditional Knowledge in EIA" have been issued by the MVEIRB. A discussion of TK, including its use in the EA process, is provided in Chapter 7.

5.2.3.7 Climate Change

The MVEIRB and government agencies are giving insufficient consideration to the potential impacts of climate change.

We expected that climate change would figure prominently in the MVRMA EIA process as there is widespread consensus among the scientific community that climate change will result in significant impacts on northern environments. This includes potential impacts on existing and proposed developments. For example, structures that have been designed based on current climatic data may be compromised as conditions change. The retreat of permafrost and its importance to the integrity of containment structures such as tailings dams is a key consideration in this regard.

The MVEIRB indicated that climate change considerations have not been given appropriate attention in EAs. Based on a review of documentation from selected EAs, we concur.

---

[39] See Ontario Environmental Assessment Board, Reasons for Decision and Decision, Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario, specifically Term and Condition #77 which directed the Ontario Ministry of Natural Resources to conduct negotiations in order to identify and implement ways of achieving a more equal participation by Aboriginal peoples in forest management and the forest industry.

Recommendation 18: **The MVEIRB and relevant government agencies should more thoroughly assess climate change impacts, mitigation and adaptation in EAs, where appropriate for the nature of the project.**

5.2.3.8 Cumulative Effects

The MVEIRB has clearly demonstrated that it understands the critical role that cumulative effects must play in decision-making; however, required information on regional and territorial impacts (e.g., from the CIMP) is not readily available to the Board.

As indicated in section 117 of the MVRMA, every EA and EIR is to include an evaluation of the cumulative impacts associated with the proposed development in combination with other developments. The MVEIRB indicated that it has identified a gradual rise in concern over cumulative effects, both in terms of biophysical and social, cultural and economic impacts. Concern over cumulative effects has been cited frequently in referral decisions and several recent EAs (e.g., Paramount Cameron Hills Extension), have focused on cumulative effects. The view that cumulative effects are becoming of greater importance to decision making was also raised by other participants in the Audit process.

The MVEIRB has demonstrated that it understands the critical role that cumulative effects must play in decision-making, as evidenced by measures recommended by the Board in its *Report of Assessment for the DeBeers Snap Lake Diamond Project*. The MVEIRB recommended that "the Government of Canada take the lead in implementing a regionalized, multi-party response to the monitoring for and management of cumulative effects in the Slave Geological Province". It further recommended that the government of Canada take "immediate action to implement the Blueprint for the Cumulative Effects Assessment and Management Strategy and Framework in the NWT and its Regions" including the allocation of stable long term funding.

Increased concern associated with cumulative effects has not been matched by a corresponding increase in the quantity and quality of relevant information provided to the EA process. The CIMP is intended to play a major role in resolving existing information deficiencies. As discussed in Chapter 8, the CIMP is not yet operational.

The MVEIRB indicated that the lack of easily accessible comprehensive information on cumulative effects has limited the Board's ability to determine the significance of cumulative impacts during EAs. Recognizing the importance of cumulative effects, the MVEIRB has, in selected cases, commissioned studies to evaluate cumulative effects. While the MVEIRB frequently retains outside resources to help interpret information, the Board feels that it should not have to resort to collecting its own evidence. We concur and believe that developers should be responsible for providing evidence on site-specific cumulative impacts while the CIMP should be responsible for providing information on regional and territorial cumulative impacts.

Our recommendations related to cumulative impacts are provided in Chapter 8.

5.2.3.9 Participation of Government in Environmental Assessment

The one-window approach used by INAC and the GNWT for interfacing with the MVEIRB is placing challenges on the effective and free flow of information between these organizations.

The process that governments use to contribute to EAs is important to note. INAC and the GNWT both utilize a "one-window" approach in which a single point of contact communicates with the MVEIRB during EA proceedings. While there are operational and institutional advantages to this approach, it has limited the MVEIRB's ability to obtain support directly from relevant government experts within INAC and the GNWT. For example, according to the MVEIRB, Enforcement Officers from INAC are "…probably the single most knowledgeable group of people regarding the situation on the ground". Enforcement Officers are familiar with the operational impacts and practicalities of implementing measures and, as a result, their direct participation would be invaluable to the process. We feel that EA decisions and measures would greatly benefit if the MVEIRB had direct access to the appropriate expertise within government departments.

Members of the public as well as representatives of Aboriginal and community organizations have raised concerns about a lack of government presence in community hearings or public information sessions. Others may view this participation as interference in the process. Generally, government departments indicated that they did not actively participate in certain EAs because their department had no issues or concerns with the proposed development. While it may be unnecessary for certain government agencies or departments to intervene in proceedings, transparency of the process may be enhanced if governmental departmental representatives provide reasons for not participating in a particular EA, community hearing or public information session.

Recommendation 19: **The MVEIRB should have direct access to relevant government expertise at all stages in the EIA process.**

Recommendation 20: **It may be beneficial for government agencies and departments to develop policy guidelines to communicate the rationale for when departmental participation is or is not deemed to be required at community hearings and public information sessions.**

5.2.4 Environmental Impact Review

There have been no environmental impact reviews completed to date under the MVRMA.

Environmental Impact Review is a possible third and final step in the Mackenzie Valley EIA process and builds on work completed at the EA step. EIRs are to involve a detailed review by a panel of technical experts and/or individuals representing jurisdictions potentially affected by the development. Once the Review is completed a decision is made as to whether the project can proceed or not. At the time of the Audit, no EIRs had been completed by the MVEIRB; however, the Mackenzie Gas Project was being evaluated by a joint review panel which is required to fulfill the EIR requirements of the MVRMA process, as well as applicable requirements under the *Canadian Environmental Assessment Act* and the Inuvialuit Final Agreement.

5.3 INUVIALUIT SETTLEMENT REGION EIA PROCESS

Within the ISR, the EIA process has been divided into two phases: Environmental Impact Screening (Screening) and Environmental Impact Review (Review). In broad terms, the Screening phase involves a preliminary assessment of development projects to determine whether there is a potential for significant negative environmental impact. Depending on the outcome of the screening phase, a Review may be required to further evaluate the identified impacts.

The IFA established two co-management bodies to implement the Inuvialuit EIA process: the Environmental Impact Screening Committee (EISC) and the Environmental Impact Review Board (EIRB). Similar to the MVRMA boards, the co-management bodies in the ISR are comprised of members nominated by the land claim area, the territorial governments[40] and the federal government.

No regulatory approvals are to be issued authorizing a proposed development to proceed until the Screening and Review provisions of the IFA have been met. Nothing in the IFA restricts the power or obligation of Canada to carry out environmental impact assessment and review under federal laws and policies.

[40] In the Inuvialuit Settlement Region, co-management bodies include territorial nominees from the NWT and the Yukon as the claim is located in both of these jurisdictions.

5.3.1 Process Overview

5.3.1.1 Environmental Impact Screening

Environmental impact screenings are required under the following circumstances:

- Developments of consequence to the ISR likely to have a negative environmental impact. The EISC makes this determination;
- Developments in the ISR where Inuvialuit request a Screening; and
- Developments where traditional harvest of the Dene/Métis may be adversely affected (on request of the Dene/Métis or Inuvialuit).[41]

Prior to submitting a project description to the EISC, developers are encouraged to complete a community consultation program to identify and deal with local concerns and potential conflicts. Based on the content of the project description, the EISC determines whether or not a Screening is required. If required, the EISC draws on information from a broad variety of sources to make its determination including: the developer's submission, Hunters and Trappers committees, Inuvialuit Community Conservation Plans, Wildlife Management Plans, Inuvialuit Harvest Studies, other resource management groups, government wildlife managers and the public.

The EISC evaluates all information including any advice it receives from third-party reviewers and issues a Screening decision, usually within 60 days of a project description being submitted. In issuing its decision, the EISC can determine that:

1) The development will have no significant negative impact and may proceed without further environmental impact assessment and review. Under such circumstances, the EISC may recommend environmental terms and conditions to reduce impacts and these measures are to be considered by regulatory authorities as they develop permit/licence conditions;
2) The development could have significant negative environmental impact and must be subject to further environmental impact assessment and review; and
3) The development proposal has deficiencies of a nature that warrant a termination of its consideration by the EISC and the submission of another project description.

[41] This is subject to agreement between the Dene/Métis and Inuvialuit.

5.3.1.2 Environmental Impact Review

If the EISC refers a project to the EIRB, the EIRB establishes a Review panel from its members. This review is carried out in public and any organization or individual with an interest in the Review is given the opportunity to comment before the panel. The panel seeks technical advice from third-party consultants and makes that advice public. It may also ask the developer and government regulatory agencies to explain and justify procedures and practices that would be used to address potential impacts.

On the basis of the evidence, the panel recommends whether the development should proceed and, if so, on what terms and conditions. The panel may also recommend that the development be subjected to further assessment and review. The decisions containing the recommendations of the EIRB are provided to regulatory authorities that have jurisdiction to authorize the development (e.g., INAC). Taking the recommendations of the EIRB into consideration, the regulatory authorities are to determine if, on the basis of potential environmental impacts, the development should proceed. Authorizations that are issued are to include conditions specifying required mitigation measures, if any.

If the regulatory authorities are unwilling or unable to accept the EIRB's recommendations, reasons are to be given to the EIRB. The EIRB expressed the opinion that generally, recommended measures were being implemented.

5.3.2 Effectiveness of the Process

Participants in the EIA process under the IFA generally feel that the process is effective in avoiding/mitigating potentially significant adverse impacts. This is explained, in large part, by the collaborative nature of resource management institutions and the fact that the EIA process has had almost 20 years to mature.

This is not to suggest that challenges related to the performance of the EIA process in the ISR do not exist. Many Inuvialuit and non-Inuvialuit interviewed voiced concerns regarding environmental change. While some changes in the region are attributable to activities external to the ISR (e.g., climate change and long-range contaminant transport), others were within the jurisdiction of the EIA process. The following descriptions provide an overview of notable aspects of the process.

5.3.2.1 Inuvialuit Participation and Traditional Knowledge

The EISC and EIRB appear to be highly effective in ensuring that environmental and resource management decisions reflect Inuvialuit values. These values and Inuvialuit knowledge of the land are integral components of the Screening and Review process and provide for a more balanced development regime that is based on principles of wildlife conservation and

sustainable use. The process has brought the traditional knowledge and perspectives of Inuvialuit concerning the environment to the attention of developers, regulators and researchers.

5.3.2.2 Socio-Economic and Cultural Considerations

The EIA process in the ISR focuses almost exclusively on biophysical impacts. With the exception of situations in which biophysical impacts might affect the human population (e.g., harvesting), socio-economic and cultural considerations are not addressed in the process. However, other Inuvialuit organizations and processes are actively involved in addressing socio-economic and cultural issues of projects (e.g., Access and Benefits Agreements). See Section 4.4.4 for a discussion on the use of these Agreements.

5.3.2.3 Cumulative Effects

Similar to the Mackenzie Valley, many environmental concerns in the ISR relate to cumulative effects. Renewed interest in natural resources located in the ISR, particularly natural gas and oil, is prompting heightened concern regarding such effects. The EISC and EIRB are both aware of the importance of cumulative effects and require that they be addressed in EIA processes. They have also initiated a number of proactive initiatives aimed at improving cumulative effects assessment in the region. This has included the preparation of guidelines for developers and reviewers. We commend the EISC and EIRB for their proactive efforts in this area. However, as noted by both the EISC and EIRB, the effective application of these guidelines has been significantly compromised by a lack of data and other information on existing cumulative effects. This issue is addressed in greater detail in Chapter 8.

6.0 CROSS-CUTTING THEMES

Throughout the environmental and resource management regime we encountered common themes and cross-cutting issues impacting many aspects of the overall process. These themes and issues are considered to be systemic challenges to the effective implementation of the environmental management regimes in the Mackenzie Valley and ISR. While many of the themes have been introduced in earlier sections of this report, they are discussed here in more detail to provide overall insights into the extent to which the regimes are achieving their goals and to identify areas which require additional effort. The major themes covered in this Chapter include:

- Board governance and operations
- Timeliness
- Capacity
- Public consultation
- Funding

6.1 BOARD GOVERNANCE AND OPERATIONS

The ability of the Boards to exercise their responsibilities in a timely and effective manner has been hampered by delays in a complicated and protracted nomination and appointment process. Permit and licence applications have been subject to delays and uncertainty has arisen due to these shortcomings.

Resource management Boards are intended to be the focal point of environmental and resource management in the NWT. To varying degrees, the Boards exercise legal authorities and make decisions which affect both public and private interests. The Boards also strive to protect the environment from significant adverse impacts. In this regard, the Boards have been assigned a fundamental role in determining the course of the NWT.

6.1.1 Board Appointments and Quorum

Failure to maintain quorum has impacted the ability of the Boards to conduct business and discharge their mandated responsibilities.

We expected to find an effective, timely and transparent nominations and appointment process. Based on our review, the current system falls short of meeting these requirements. Specifically, Boards were regularly below quorum and, as a result, have at times been unable to pass decisions and discharge responsibilities. At various stages during the Audit, three of the six MVRMA Boards were out of quorum. In addition, virtually all other Boards interviewed indicated that they had been out of quorum due to delays in the nominations and appointment process.

Interrelationships between the MVRMA Boards are such that one Board out of quorum has the potential to affect other components of the system. For example, during the Audit, the GLUPB fell out of quorum and was unable to approve an exception to the Gwich'in Land Use Plan. In the absence of the required exception, the GLWB was unable to issue a permit.

For the Boards to work as intended, members must be nominated and appointed in a timely fashion. We found the Board nominations and appointment process to be extremely complicated and protracted. The process involves a large number of participants and can take more than a year to complete. There are two major stages in the overall process: 1) nominations; and 2) appointments. Challenges are occurring at both of these stages.

Board Nominations Process

Aboriginal, territorial and federal nominating agencies have all contributed to delays during the nominations stage.

Recently, efforts have been made to facilitate the nominations process, notably through INAC's Board Relations Secretariat (BRS), based in Yellowknife. The BRS initiates the nominations process approximately eight months prior to the expiry of a member's term of office. For a variety of reasons, at times unrelated to the nomination process, nominating parties often take an extended period of time to respond to the request. Until the nominating party has identified a nominee, no other part of the process can proceed. According to the BRS, the nominations process takes, on average, four to six months from the time of an initial request until the receipt of a nomination.

To improve the nominating process, the BRS actively works with nominating parties to ensure qualified individuals are identified in advance. While INAC can facilitate the nominations process, each of the nominating parties is ultimately responsible for ensuring their nominations are submitted in a timely fashion.

Recommendation 21: **Nominating parties should submit nominees no later than four months prior to the expiry of a sitting member's term of office.**

Board Appointments Process

The Board member appointment process is overly complicated and slow.

Once a nominee's name has been submitted by the nominating party, INAC is responsible for the appointments process. This process is extremely complicated, as indicated in a recent internal study conducted by INAC Headquarters:

> *"…. as it stands today, … [the process] involves each nomination package passing through a minimum of 24 pairs of hands in five different government operating units*

> *before Ministerial approval is finalized. In total, the current process requires more than fifty discrete activities and steps. Appointments that do not follow the "standard" process invariably pass through additional steps and hands."*[42]

The report noted that the average length of Board vacancies is 8.4 months with the longest outstanding vacancy being 55 months. This is contrasted with an average "working time" to process a Board appointment of less than eight hours.[43]

Due to time and resource limitations, we did not conduct a detailed assessment of the appointments process. We have, however, identified a number of potential issues. Firstly, there appears to be lack of agreement within INAC on the duration of the appointments phase. The INAC report suggests that appointments typically occur within six to eight weeks of nominations being received. The BRS, on the other hand, estimated that the appointment process takes an average of four months. Similarly, the INAC report concluded that "the most significant delays occur at the outset, during the nomination process". This statement is inconsistent with the views of most affected parties and the information we received.

We also found that INAC has made limited efforts to explain the appointments process to nominating organizations, nominees, Boards and other interested parties. Further, no effective mechanisms were identified for interested parties to determine the status of a nomination. Despite its importance, the appointment process remains a "black box". Many of the Boards indicated that the lack of clarity regarding the Ministerial appointment process was a source of significant frustration.

We were also informed that, in situations where nominees are not accepted by the Minister of INAC, rationale for the rejection is not provided to the nominating party. While it is recognized that there may be situations in which complete disclosure of reasons for rejection may not be possible (e.g., information related to security status), the process would benefit from increased transparency.

Recommendation 22: **INAC should complete its work with Boards on developing a better defined and transparent appointments process from the soliciting of nominees through to appointment by the Minister. Within this process, INAC should create a mechanism that allows nominating parties to track the status of nominees in the appointments process.**

Recommendation 23: **INAC should streamline the appointments process and commit to completing the process within two months of a nomination being submitted.**

---

42 Ministerial Appointments Process Review. Draft Report V3.1, March 2005.
43 Ibid.

Recommendation 24: **To the extent possible, the Minister of INAC should provide nominating parties with clear rationale for the rejection of nominees.**

6.1.2 Term of Board Appointments

Section 14 of the MVRMA specifies that Board appointments are for a period of three years. Most of the Boards indicated to the Audit team that there is a considerable "learning curve" before a Board member becomes fully knowledgeable and conversant with his/her roles and responsibilities. Several Boards suggested that a three-year term is insufficient for a new appointee to become a fully contributing member. We concur. Given the small pool of individuals that possess the requisite expertise within the Mackenzie Valley, it is critical that the LWBs take full advantage of trained and competent individuals.

Recommendation 25: **The appointment period for Board members should be extended from the current 3 year term to a 5 year term. Where possible, appointments should be staggered to minimize the risk of failing to meet quorum.**

6.1.3 Board Member Criteria

There are currently no guidelines or criteria to assist nominating parties in selecting prospective Board members.

Ideally, Board members should collectively possess the full breadth of skills and balance of perspectives required by their Board. With members being nominated from a variety of backgrounds and organizations, this may be difficult to achieve. At the time of the Audit; there were no established guidelines, criteria or other means available for a nominating party to determine if their nominee possesses the attributes that are required by a specific Board. MVEIRB is developing an Orientation Manual and Process which will provide information about the nature of the job of Board Member. This information could be helpful to prospective nominees and nominating organizations.

Recommendation 26: **Similar to the MVEIRB, other Boards should prepare guidance regarding the job functions and expectations of Board members. This guidance should be provided to nominating organizations.**

6.1.4 Board Training

Limited training/orientation has been provided to Board members.

We expected to find systematic orientation and training programs to assist Board members understand their responsibilities and Board processes, including: knowledge of northern environmental management; understanding of resource development and its associated impacts and constraints; legal mandate; technical and process level requirements; administrative law; decision writing; development of rules of procedure and bylaws; and, other corporate governance issues. While some Boards have independently attempted to address these needs (e.g., the MVEIRB), INAC has not provided sufficient support to the Boards to ensure they are adequately prepared to fully discharge their responsibilities. To our knowledge, only limited training has been provided through the support of the BRS.

Recommendation 27: **With full support from INAC, the Boards should lead the development and implementation of comprehensive training for Board members.**

6.1.5 Board Performance Monitoring

Boards are not providing sufficient information to monitor their performance. Reporting has focused on fiscal matters with limited performance and accountability information being provided.

Evidence of satisfactory Board performance is essential to maintain public trust. Towards this end, we expected that the Boards would be required to produce periodic reports that clearly identify the extent to which they had fulfilled their respective mandates. Such reports would help demonstrate that the Boards are publicly accountable and would provide a basis to assess Board performance.

Section 28 of the MVRMA requires Boards to submit an annual report to the Minister of INAC. The Minister has the authority to specify the content of these reports, including performance requirements. To date, the Minister of INAC has not exercised this authority, with Board reports limited to financial considerations and high-level information such as the number of applications processed. In the absence of other forms of accountability reporting, audits under Part 6 of the MVRMA are the primary mechanism by which Board performance can be evaluated. Occurring once every five years, MVRMA audits would greatly benefit from more regular, detailed reporting on Board performance.

On its own initiative, the MVEIRB is developing a strategic plan that includes possible performance measures and that recognizes the need to develop service standards. The Board is also using a number of tools to identify aspects of the EIA process that need to be improved, including: internal process “audits” following each EA; interviews, surveys and workshops to

prepare "Lessons Learned" documents from each EA. The Board's annual business plan identifies goals for areas of improvement within the organization and a Governance Committee has been established to guide members and the Board in developing appropriate accountability mechanisms. We commend the MVEIRB for these efforts.

With the exception of the MVEIRB, none of the Boards have made progress in establishing performance-based standards to determine if they are managing their responsibilities in the best interests of the residents of the Mackenzie Valley and all Canadians, a requirement under s. 58 of the MVRMA.

Recommendation 28: INAC should work with Boards to develop and implement a public accountability reporting process with clearly identified standards, including performance relative to s. 58 of the MVRMA.[44]

6.2 TIMELINESS

Administrative and procedural issues have, at times, resulted in unnecessary delays in environmental management processes.

6.2.1 Regulatory Process

Several representatives of industry voiced concerns regarding the length of the regulatory process and the associated lack of certainty. These themes are a source of great frustration for many project developers and supporters of development. Criticisms have focused on a variety of issues including: the number of regulatory and advisory bodies; the continually evolving nature of the regulatory process; consultation obligations that are perceived to be undefined; apparent ambiguity over the definition of "public concern"; and use of the regulatory process to achieve goals that are not related to environmental management.

Industry representatives provided us with a number of examples that they felt demonstrated that the system takes too long and lacks a reasonable degree of certainty. Our review noted that there were a variety of reasons for the delays including administrative, jurisdictional, technical and legal issues. Key issues affecting the time required to review proposed developments included: transitional permitting issues (i.e., pre- and post-MVRMA applications); unsettled claim areas; and the absence of land use plans. While we believe that many of these issues will be resolved as the system matures, and have provided recommendations to address specific deficiencies elsewhere in this report (e.g., land use plans need to be developed), it is incumbent upon Boards and regulators to take all reasonable steps to process applications expeditiously.

[44] A similar recommendation was made in the Auditor General of Canada's April 2005 report on Indian and Northern Affairs Canada — Development of Non-Renewable Resources in the Northwest Territories.

6.2.2 Environmental Impact Assessment Process

6.2.2.1 Preliminary Screenings

The MVLUR requires decisions on land use permits be made within 42 days (similar timelines are not placed on water licences). To ensure that Board staff has sufficient time to prepare reports and complete any necessary follow-up, the LWBs typically provide approximately 21 days for input on Preliminary Screenings. In some situations this has proven to be a tight timeline given the limitations of northern communication (e.g., where letter mail is the only option, packages often take as long as 14 days to reach remote destinations). In some cases this has made it difficult to meet s. 3 of the MVRMA which specifies that "a reasonable period of time" should be provided for parties to be consulted.

Based on interviews with the LWBs and other participants in the process, the limited capacity of some Aboriginal communities and other participants, can make providing meaningful responses within allotted times very difficult (see Section 6.3.2 for a discussion of capacity issues in Aboriginal communities). Further, some of the Interim Measures Agreements specify that the MVLWB must provide Aboriginal Communities 30 days to consider an application. The MVLWB indicated that, in some cases, preparation of reports has been challenging given consultation requirements and time limits on file processing.

Recommendation 29: Consideration should be given to extending the Preliminary Screening review timeframe beyond the current 42 days to facilitate community input.

6.2.2.2 Environmental Assessments

The length of the pre-REA process is within a reasonable range. There may be opportunities to reduce the amount of time being taken by INAC and other Responsible Ministers to disposition EA reports.

The MVRMA states that the EIA process is to be "carried out in a timely and expeditious manner" (s.115). This requirement must be met without compromising the fundamental objectives of "ensur[ing] that the impact on the environment of proposed developments receives careful consideration" and "ensur[ing] that the concerns of aboriginal people and the general public are taken into account" (s. 114).

The timeliness of the EA process was an often cited issue. Developers tended to criticize the EA process for taking too long. At the same time, some EA participants, particularly communities, routinely criticize the MVEIRB for moving too fast, not providing them with enough time to respond, and thus putting undue strain on their resources. Government tends to remain neutral in this discussion.

In broad terms, the EA process can be divided into two categories: 1) the Pre Report on Environmental Assessment Phase (Pre-REA) which includes all activities up until the submission of the MVEIRB's recommendation to the Minister of INAC; and 2) the Post Report on Environmental Assessment Phase (Post REA) in which the Minister of INAC and other responsible ministers respond to the MVEIRB's recommendation.

Pre-REA Phase

MVEIRB has analyzed the majority of EAs it has conducted (21) to determine the timeliness of the process. On average, the pre-REA phase took 9.7 months, ranging from 2 months (Explor Data - Oil and Gas Exploration) to 21 months (BHP Ekati expansion).

The ability of developers to take advantage of short northern field seasons and respond to other industry realities can be significantly affected by delays in EA processes. The role that industry can play to avoid such situations is important. Advance planning, early consultation and built-in timing contingencies are a few of the approaches that can assist developers in reducing the impacts of delays that might occur during the pre-REA stage of the process.

Timing challenges faced by other participants in the process must also be acknowledged. In particular, we repeatedly heard that the EA process is too fast to allow for effective Aboriginal involvement. Inadequate communication infrastructure and numerous other commitments/priorities are often cited as factors that limit the timely participation of Aboriginal communities. While these factors undoubtedly contribute to delays, it is our conclusion that human resource capacity is the single greatest factor limiting the ability of communities to contribute to the EA process in a timely and meaningful way. In this context, a longer EA process is not expected to significantly improve Aboriginal participation. Improved capacity, on the other hand, would. This issue is discussed more thoroughly in Section 6.3.2.

While the Audit team agrees that unnecessary delays should be avoided, we feel that many of the delays experienced during the pre-REA phase are justifiable given the MVRMA's consultation requirements, capacity challenges of participants and difficult logistics inherent to the NWT. With these considerations in mind, we have concluded that the length of the pre-REA process is within the range of appropriate. While there may be ways to accelerate the process to eliminate a month or two, the potential risks of doing so may outweigh the benefits.

Post-REA Phase

The Minister of INAC and Responsible Ministers have a number of options for responding to MVEIRB EA reports (set out in sections 130, 131, 135 and 137 of the MVRMA) ranging from acceptance to rejection of MVEIRB recommendations.

During the pre-REA phase, regulatory authorities are given multiple opportunities to provide information and seek clarification on pertinent issues. They are not, however, given an

opportunity to comment on measures identified by the MVEIRB to mitigate potentially significant impacts. As a consequence, the measures contained in REAs issued by the MVEIRB have, in some cases, been viewed by the Responsible Ministers to be inappropriate (e.g., not enforceable). This often triggers the "Consult to Modify" process as a means to identify measures that are acceptable to both the MVEIRB and the Responsible Ministers.

By providing an opportunity to develop measures that are appropriate, enforceable and responsive to broader public policy issues, the post-REA process plays an important role. However, it is critical that the original intent of the MVEIRB's measures (i.e., the avoidance of specific potentially significant impacts) is not lost in the process. In evaluating this requirement, we have noted that all completed post-REA processes have ultimately yielded measures that were acceptable to both the MVEIRB and the Responsible Ministers.[45] On this basis, we have concluded that the original intent of the MVEIRB's measures is not being compromised by the post-REA process.

Notwithstanding our conclusion that the post-REA phase appears to be yielding balanced and effective results, some Audit participants indicated that the process is too long.[46] It is our understanding that one of the key factors contributing to the length of the post-REA phase is the fact that Responsible Ministers are unaware of the MVEIRB's proposed measures until the REA is submitted. The Responsible Ministers are then required to determine the appropriateness of the measures, some of which have precedent and public policy implications requiring thorough consideration.

It has been suggested that if opportunities were provided for Responsible Ministers to review and comment on mitigation measures prior to the submission of REAs, the post-REA phase would likely be shortened. While this may not reduce the overall length of the EA process (i.e., the pre-REA stage might be lengthened), we believe this suggestion has merit as it would assist in the development of measures that are appropriate and understood by both the MVEIRB and the Responsible Ministers. Any increase in dialogue would, however, need to be achieved without jeopardizing the independence of the MVEIRB. The Audit team believes that this is possible.

In addition, concerns were also expressed about the lack of transparency in the post REA period. It was noted that organizations and individuals not directly involved in this process, including the MVEIRB, are unable to determine the status of deliberations and the processes used to come to decisions. Without transparency, it is difficult to respond to the criticism that the post-REA process takes too long and may be subject to politicization. In general, it is our feeling that the post REA stage of the process would benefit from increased transparency.

---

[45] At the time of the Audit final decisions on several EAs were pending.

[46] According to the MVEIRB, the post-REA phase lasts, on average, 6.7 months. For at least five EAs, the duration of the post-REA phase exceeded that of the pre-REA phase.

Recommendation 30: **Prior to the submission of REAs, the MVEIRB should provide opportunities for Responsible Ministers to review and comment on proposed mitigation measures.**

Recommendation 31: **INAC should develop and implement procedures to encourage a more transparent and accountable post-REA process.**

6.3 CAPACITY

We have identified two broad organizational categories to describe capacity challenges. These are: 1) Boards and 2) Aboriginal communities.

6.3.1 Board Capacity and Resources

Taking into consideration systemic northern challenges, Boards, with some exceptions, are managing their internal capacity issues reasonably well.

The capacities of Boards (members and staff) need to be commensurate with the significant responsibilities that have been assigned to them. The LWBs must be capable of operating on a level playing field with industry proponents and government agencies, both of which can draw upon substantial human and financial resources.

In addition to Board members and staff, the MVRMA and IFA Boards rely heavily on external human resources. These resources come primarily from government agencies that provide independent technical support to Boards to allow informed and balanced decisions to be made. In this context, the capacity issues facing the Boards are both internal and external.

In simple terms, the internal capacity issues of Boards relate primarily to attracting, training and retaining competent Board members and staff. In some instances, this has proven to be a difficult task due to a wide variety of challenges, many of which are unique to the north including:

a) The small human resource pool, both in terms of total population and the number of individuals with the requisite skills and experience;
b) Strong competition for human resources from other sectors, particularly industry and government; and
c) Difficulty attracting and retaining skilled expertise from outside the NWT.

We found that, subject to the above constraints, the Boards are generally managing their internal capacity issues reasonably well.

External Board capacity is provided primarily by government agencies with specialized technical expertise. Limitations in government capacity can therefore affect the ability of Boards to draw upon the independent technical resources required. Some government agencies indicated that they are not always able to provide the level of support that is expected of them by other participants in EA processes. Competing demands, unstable budgets, inexperienced staff and high turnover rates were all cited as important contributing factors; however, we also heard from numerous interested parties, including senior government representatives, that bureaucratic processes are the greatest stumbling block to optimizing efficient government participation in the EA processes. We believe that both positions have some validity.

In evaluating external capacity issues, the multiple roles played by government departments and staff must also be taken into account. We initially found it difficult to define the role of government in the EA process. This is attributable partially to the unique structure of the MVRMA system, but also due to the fact that some government departments have multiple mandates. For example, INAC may participate in the process as an expert advisor, an intervener and final decision maker as to whether a development should proceed. The same department often acts as the land owner and, in some cases, can be the proponent (e.g., contaminated site reclamation). INAC is also responsible for allocating the budget of the Boards and appointing Board members. While undertaking all of these duties, the Department is charged with promoting social and economic development in the NWT. Last, and importantly, INAC is to serve as Canada's agent in the fulfilment of constitutionally protected Land Claims Agreements and fiduciary responsibilities with respect to Aboriginal peoples. Similar to INAC, the GNWT is also charged with a wide array of mandates.

The difficulty associated with multiple mandates is that this could be subject to criticisms that government advice is influenced by factors that are unrelated to responsible environmental decision-making. We identified no evidence to suggest that this is occurring; however, some senior government officials indicated that, based on their experience, there are insufficient "firewalls" between the multiple mandates of government. We did not focus on the internal operations of these agencies and cannot determine whether sufficient separation of multiple mandates exists.

An additional challenge faced by the MVEIRB and other Boards is that western scientific expertise of government agencies is highly fragmented throughout the NWT (see Chapter 7 for discussion of TK considerations). This dispersed expertise has likely impacted on the effectiveness and efficiency of the regulatory process. Collectively, expertise held by government is significant; however, none of the institutions individually has the capacity to address the full range of complex environmental management issues associated with large-scale resource development that is occurring and is likely to continue for years to come. This will require ongoing co-operative efforts between these agencies. In an effort to address this challenge, an NWT Environmental Sciences Centre (ESC) has been proposed by the Renewable Resources and Environmental Directorate of INAC's NWT Region.

Recommendation 32: **The next NWT Audit should evaluate whether adequate firewalls exist between the different mandates of regulatory authorities, particularly within INAC and the GNWT.**

Recommendation 33: **Government departments should identify and evaluate mechanisms to optimize the use of existing technical expertise, including collaborative measures between various levels of government.**

6.3.2 Capacity of Aboriginal Communities

One of the most commonly cited and forcefully stated challenges facing the NWT regulatory process was that Aboriginal communities lack the capacity to participate in environmental management processes in a meaningful way.

One of the primary purposes of the MVRMA and IFA systems is to ensure that the concerns of northerners, particularly Aboriginal people, are taken into account during decision-making. Aboriginal people possess valuable knowledge that is required to make informed decisions about the environment. It is, therefore, critical that Aboriginal people have the institutional, human and financial capacity required to contribute to decision-making in a meaningful way.

Throughout the Audit we repeatedly heard that Aboriginal communities are facing a wide array of capacity challenges that limit their ability to effectively participate in environmental management processes. Lack of scientific expertise, excessively complex processes, competing demands, high development activity, insufficient time and a lack of funds are a few of the more common explanations. Evaluations conducted by others have reached similar conclusions. The National Roundtable on the Environment and the Economy (NRTEE), for example, has determined that "…capacity building is the most important challenge facing Aboriginal communities in the north."[47]

The capacity challenges facing Aboriginal communities are extremely complicated and extend to issues unrelated to environmental management. Despite our efforts to understand some of these challenges, the time and resources available to the Audit team were insufficient to conduct an adequate evaluation of this important issue. With this in mind, we have refrained from presenting specific recommendations. Instead, we recommend that an appropriate evaluation of the issue be performed as soon as possible. Furthermore, we recommend that action be taken to address the findings of the evaluation. The NRTEE's report *Aboriginal Communities and Non-Renewable Resource Development* should serve as the starting point for this exercise.

[47] NRTEE, 2001: Aboriginal Communities and Non-Renewable Resource Development.

Recommendation 34: **Building on previous work undertaken by the National Roundtable on the Environment and the Economy, INAC should fund an independent evaluation of the capacity of Aboriginal communities to participate in environmental and resource management processes. The findings and recommendations of this evaluation should be acted on.**

6.4 PUBLIC CONSULTATION

Public information and consultation has increased dramatically in the NWT. This is an outcome of both the regulatory regime that demands it happen and the increase in development activity. Despite improvements in community involvement and consultation, room for improvement remains. Challenges include: differing expectations for public consultation; effective communication; and, management of the consultation process within communities themselves. The extensive amount of information distributed during review processes has overloaded the capacity of local communities to participate in a meaningful manner.

Within the NWT, public involvement in decision-making processes begins with the establishment of resource management boards which are intended to enable residents of the NWT to participate in the management of its resources. Public consultation is also envisioned at a wider level. For example, Part 5 (s.114(c)) of the MVRMA states that one of the purposes of the EIA process is "to ensure that the concerns of aboriginal people and the general public are taken into account in that process."

Within this framework, public consultation should occur early in the project proposal life cycle, and if the project has the potential for significant impact or public concern, through the Environmental Assessment process. In the former case, the LUPBs and LWBs are to provide leadership to the process, while in the latter case the MVEIRB is to provide leadership.

We heard that the level of public involvement significantly exceeds the pre-MVRMA period, with an increase in the extent to which EAs are used being one contributing factor. In addition, requirements for public consultation within the EIA process itself are more comprehensive. For example, virtually all Environmental Assessments in recent years have involved public hearings and informal community hearings.

For each permit or licence application, LWBs distribute a package that includes not only the application itself, but also all supporting technical documentation. This process is intended to provide communities, organizations and agencies with an opportunity to provide input into the process and assist the LWB in identifying potential impacts and mitigating conditions that could be attached to a specific permit and/or licence. However, we received feedback indicating that the extent of application information being distributed (numbers and content) was overwhelming

to many of the recipients, particularly communities. An absence of adequate communication infrastructure in some communities (e.g., internet) has also frustrated the process. As a result, consultation efforts, while well intentioned, are often ineffective or provide little value for both the developer and communities due to the nature of the information itself and the lack of capacity (e.g., expertise, sufficient time, etc.) or communication within the community.

Based on our review, the Boards are ensuring that procedural steps to inform and consult the wider public are being completed. However, this should not be construed to mean that communities are effectively participating in the process. We heard from numerous interested parties that consultation processes are not ensuring that the interests of communities are adequately accounted for in decision-making.

Guidance on the conduct of public consultation is available. The MVLWB's "Public Involvement Guidelines" (October, 2003) provide an overview of the consultation approaches that should be used by permit and licence applicants. Basic guidance on community consultation has also been developed by the SLWB and GLWB as part of their general applications information. The MVEIRB's Environmental Impact Assessment Guidelines (March, 2004) also provide relatively comprehensive guidance on public consultation requirements and recommended procedures. We have concluded that these documents are sufficient to provide participants in the process with an appropriate level of guidance.

In addition to consultations conducted by developers, the MVEIRB conducts community consultations as part of its Environmental Assessment process. The Board has also undertaken a number of initiatives to improve the effectiveness of the public involvement process. For example, the Board has provided training for translators to facilitate the participation of Aboriginal language speakers. The hiring of a community liaison officer by the MVEIRB is another Board initiative that is intended to facilitate two-way communication with communities.

Despite efforts that have been taken to encourage community involvement and consultation, room for improvement remains. First, there is a lack of consensus between developers and communities on what constitutes adequate public participation and consultation. Similarly, differences in the perspectives and value systems of participants have, in cases, made communication extremely difficult and have aggravated the process of identifying key issues of concern. In addition to language challenges, the communication of technical issues to lay audiences using western communication techniques has proven challenging. Within this context, a lack of trust among Aboriginal people, industry and government has greatly frustrated efforts to stimulate open dialogue.

In a review of selected case studies, we found that the response rate of Aboriginal communities during the permit/licence application review process is very low. Where responses are received, they often indicated that the Aboriginal communities lack the capacity to conduct an informed review of the application. Without being able to conduct an appropriate review, some

respondents have indicated that they are unsupportive of a project or have identified potential public concerns, thereby requiring that the project be referred to an Environmental Assessment.

Notwithstanding the difficulties mentioned above, there are examples of effective community consultation. Furthermore, there is evidence to suggest that this involvement is influencing decision-making. Examples where public input has had an impact on the content, pace and outcome of EAs include mineral exploration in the Drybones Bay area and geotechnical investigations in the Dehcho.

In addition to influencing decision-making, consultation has also been used to effectively facilitate the EA process itself. Notable examples include the Dehcho bridge and the remediation of the Colomac mine. In both cases, early engagement between proponents and communities assisted the participants to effectively identify and resolve issues of concern outside of formal regulatory and EIA processes. Through constructive and proactive dialogue, the needs of the proponent and communities were met.

Some communities are also playing a more proactive role in ensuring that consultation occurs in an effective fashion. Notably, the community of Lutselk'e has prepared a "Protocol for Resource Development" that defines procedures that are to be used during the review of applications and EAs. The plan also describes what type of consultation is expected of proponents.

While developers should play a dominant role in the consultation process, the responsibilities of other participants, particularly government, requires clarification. A November 2004 Supreme Court of Canada[48] ruling on cases in British Columbia (Haida and Taku River) clarified the role of government by concluding that the Crown alone is legally responsible for consultation with affected Aboriginal interests where Aboriginal rights and title are asserted and unresolved (i.e., unsettled claims areas).[49] This ruling has direct relevance to the EIA and regulatory processes in unsettled areas of the NWT and may influence future consultation processes.

Recommendation 35: **INAC should review the November 2004 Supreme Court ruling and assess whether there are any implications to the consultation process under the MVRMA for areas with unsettled land claims. The findings of this review should be shared with other participants in the NWT's environmental management regime.**

Recommendation 36: **INAC should lead a study to specifically assess the consultation process to identify those aspects that are**

[48] http://www.blakes.com/english/publications/bdr/November2004/Nov2004.asp

[49] While the Crown is legally responsible for consultation, the procedural aspects of consultation may be delegated to other parties.

working well and result in public satisfaction, and those areas that are ineffective and need revision.

Recommendation 37: **Notwithstanding the outcome of Recommendation 36, Boards should develop a streamlined notifications and consultation process that reduces the potential to overwhelm the resources of interested parties (e.g., initial notice of projects to make interested parties aware of the permit/licence application, with delivery of full documentation only to those parties that request this information based on their assessment of the initial notice of project).**

6.5 FUNDING

Federal funding mechanisms are placing an administrative burden on many of the organizations that are responsible for environmental management in the NWT. This has distracted efforts that would be better directed towards environmental management activities. Federal budget allocations and funding processes fail to recognize the unique temporal requirements and limitations of the north. Commitment obligations and funding are in some cases incompatible. As development activities fluctuate, funding agreements must have mechanisms to reflect the associated fluctuating needs of the regulatory system.

While the NWT Audit was not intended to assess the financial systems or their operating effectiveness, some feedback on funding is provided insofar as we feel it is relevant to achieving effective environmental management. This feedback is based on impressions from discussions with Audit participants and not from an exhaustive analysis of program funding or financial statements as this was beyond the scope of the Audit.

6.5.1 Board Funding

Board funding levels appear to be adequate but lack the flexibility necessary to respond to changes in development activity.

The Implementation Plans attached to the Sahtu and Gwich'in Agreements set out the annual funding levels for the MVEIRB, GLUBP, GLWB, SLUPB and SLWB. This funding mechanism provides the Boards with a degree of long-term funding stability and certainty as the funding levels are set out for a period of 10-years. Based on our discussions with these Boards, annual funding was generally felt to be adequate and did not represent a major limitation to the Boards discharging their responsibilities. Notwithstanding this, it was noted by the Boards that funding processes are incapable of responding to changes in development activity. Specifically, concerns were expressed that current funding allocations didn't anticipate projected activity levels and, as such, may be insufficient.

Unlike other MVRMA Boards, funding for the MVLWB does not come through a claims mechanism. Funding is obtained through a variety of contribution agreements (nine during the current fiscal year) and changes annually. The MVLWB indicated that funding has historically been sufficient to fulfill its core functions. However, funding stability, timing and certainty has been a chronic challenge.

Unlike the Canadian Environmental Assessment Act (CEAA), there are no provisions in the MVRMA for developers to contribute to the costs of EA processes. The incorporation of a cost-recovery mechanism into the MVRMA could provide the MVEIRB with a funding mechanism capable of responding to changes in development activity.

Recommendation 38: INAC should investigate approaches that could be used to ensure Board funding is capable of responding to changes in workload.

6.5.2 Participant Funding

A participant funding mechanism for Environmental Assessments and other regulatory public hearing processes would improve the ability of the MVRMA regime to ensure effective participation of interested parties.

Public participation in EIA processes helps to ensure that a broad range of views are considered when developments are evaluated. To this end, participant or intervener funding can be an important tool to ensure that Environmental Assessments are more rigorous, comprehensive, open, and fair. The federal government has enshrined the principle of intervener funding in CEAA mediations, panel reviews and, more recently, in comprehensive studies. This is achieved through a Participant Funding Program which supports individuals and non-profit organizations interested in participating in Environmental Assessments.

With the exception of Environmental Impact Reviews, no similar provisions for participant funding are available under the MVRMA. Specifically, funding is not available to participants in EA or regulatory public hearing processes. It should be noted that many EAs under the MVRMA regime are comparable in complexity to CEAA comprehensive studies and, in some cases, panel reviews. The absence of a comparable mechanism under the MVRMA is a deficiency. A participant funding mechanism for EAs and other public hearing processes would improve the ability of the MVRMA regime to ensure the meaningful involvement of concerned parties in environmental decision-making.

The MVEIRB has indicated on several occasions that a mechanism should be identified to provide funding to participants in EA processes. Most recently, the Board conducted three EAs for mineral exploration in the Drybones Bay area of Great Slave Lake and, in each case, provided the following suggestion:

"The Government of Canada should at an early date develop and institute a method to provide participant funding at the EA level under the MVRMA to be equivalent to the Comprehensive Study Review funding practices under CEAA."

During the Audit, the MVEIRB indicated that Aboriginal communities and "not for profit" interveners stand out in terms of their limited financial capacity to contribute to EAs in a timely and effective manner. This is consistent with sentiments expressed by numerous organizations and individuals that participated in the Audit process. Senior officials from INAC indicated that efforts are being made within the department to address this issue but that progress has been slow.

Specific recommendations and suggestions regarding the need for a participant funding program tied to the MVRMA date back several years. In 1998, the National Round Table on the Environment and the Economy (NRTEE) launched a program to explore the relationship between Aboriginal communities and non-renewable resource development from the perspective of sustainability. The report, released in 2001, recommended that the Government of Canada allocate $500,000 per year to a participant funding program. An additional recommendation of the report was that the MVRMA be amended to include a specific requirement for participant funding.

Recommendation 39: **A participant funding program should be established for Environmental Assessments and regulatory processes involving public hearings under the MVRMA.**

6.5.3 INAC Funding

INAC is a major participant in many environmental management activities in the NWT. As noted previously, the department's roles include, amongst others, those of leadership, support, management, implementation, advisor, and intervener. INAC is also faced with the challenge of carrying out its responsibilities in the context of the unique northern setting and timelines associated therewith. From our review, we note that the current method of funding appears to be out of sync with many of these demands, and that there is a disconnect between the commitments made during the claims agreement process and funding provided to those with implementation responsibilities.

We also heard from several government departments that the stable component of INACs funding (commonly referred to as "A base") has been reduced substantially over time and that significant administrative effort and uncertainty are associated with the current process. Furthermore, it was noted that federal funding timelines and budgets are often incompatible with the physical realities of the north (e.g., by the time budgets are approved it is too late to carry out work within short field seasons). In addition, in many cases budgeting timelines prevent program synergies from occurring with other federal or territorial departments (e.g., DFO or ENR) or Aboriginal communities.

Recommendation 40: **INAC should receive long term stable "A base" funding commensurate with its roles and responsibilities under the MVRMA. A review should be undertaken to assess appropriate funding mechanisms that will provide the funds in a timeframe linked to the constraints of the unique northern setting and institutional context.**

7.0 Traditional Knowledge

7.1 INTRODUCTION

Traditional knowledge can make a variety of important contributions in environmental decision-making. Resource management institutions, government agencies, Aboriginal groups and communities of the NWT are gradually transitioning to a system that makes more effective use of this knowledge.

Traditionally, the survival of Aboriginal people living in the NWT has depended on their knowledge and understanding of the environment. This traditional knowledge (TK) has been passed on from one generation to the next and is based on thousands of years of observation and validation. Despite the wide-spread cultural, societal and technological changes that have occurred during the modern era, TK continues to serve as an invaluable resource to Aboriginal people that maintain a strong connection to the land. This knowledge also has the potential to provide information and perspectives that can improve decisions made by institutions responsible for managing the environment and its resources. Furthermore, there are secondary benefits associated with the effective and respectful use of TK. These include capacity building in Aboriginal communities and helping to create an awareness of, and appreciation for, TK by non-Aboriginal communities.

Consideration of TK has been written into the regulatory framework of the NWT, which is a departure from most jurisdictions in which "western" science and organizational structures form the basis of environmental management systems; one of the primary objectives of the *Mackenzie Valley Resource Management Act* (MVRMA) and its related institutions is to ensure that TK is used effectively in the decision-making process.

While the NWT is at the forefront of efforts to integrate TK into formal environmental decision-making, it is a relatively new process that continues to evolve. Resource management institutions, government agencies, Aboriginal groups and communities of the NWT are gradually transitioning to a system that makes effective use of TK in environmental decision-making. This chapter provides an overview of that process.

7.2 SCOPE AND METHODOLOGY

Individuals involved in environmental and resource management have typically been most interested in TK that focuses on the physical environment. It should be noted, however, that this knowledge is part of a larger body of understanding that encompasses topics such as culture, social interactions, economics and spirituality. While the contribution that TK makes to these topics is clearly of importance, this chapter deals with the use of TK to make sound decisions about the environment and resource use. Particular attention has been paid to the contribution that TK makes to formal processes such as land use planning, regulatory permitting, environmental impact assessment, and monitoring. This focus is guided by the

Terms of Reference for the NWT Environmental Audit and does not diminish the value of TK for other purposes such as Aboriginal empowerment and cultural preservation.

The review did not involve the collection of TK. Instead, it focused on collecting the perspectives of individuals and organizations that actively participate in the process. These included representatives from resource management boards, Aboriginal organizations[50], the Territorial and Federal governments, industry and non-governmental organizations. Input from the general public was also solicited through community meetings in Tuktoyaktuk, Aklavik, Inuvik, Norman Wells, Fort Good Hope, and Yellowknife.[51] In addition to interviews, a review of TK literature, protocols, guidelines and legislation was undertaken. Documentation from land use planning processes, environmental impact assessments and regulatory instruments was also reviewed.

With the exception of discussions with attendees at community meetings, the Audit scope did not permit first-hand interviews with TK holders such as Elders. While the perspectives of these individuals were not collected directly, many of our sources have consulted extensively with Elders and communities from the NWT. Through their input, we expect that some of the perspectives of TK holders have been indirectly incorporated into this assessment.

Finally, an exhaustive and in-depth review of all aspects of TK was not within the scope of our evaluation. Instead, attention has been directed towards identifying the fundamentals of TK use and the key areas that have been cited by others as requiring attention.

7.3 DEFINING TK

While there is no common definition for TK, this has not had a significant impact on its effective use in decision-making.

Within the NWT there is no single institutional body responsible for collecting and using TK. This has resulted in a situation in which the term “traditional knowledge” has been defined differently by Boards, cultural institutes, Aboriginal groups and government programs. The absence of a single, universally accepted definition for TK is often cited as an explanation for some of the challenges that are experienced in its application. However, notwithstanding differences, we found that TK definitions are generally consistent with the following example which is sufficiently generic to include the biophysical, cultural and spiritual dimensions of TK:

---

[50] While Aboriginal leadership and environmental/resource management organizations from each of the claim regions of the NWT were invited to participate in the NWT Environmental Audit, not all of the claim regions provided input.

[51] Out of respect for the various positions held by regional groups, community meetings were only held in regions where leadership had agreed to participate in the Audit.

> *Traditional knowledge is broadly defined as a cumulative, collective body of knowledge, experience, and values held by societies with a history of subsistence.*[52]

Despite the variety of definitions that exist, we found that most participants in NWT environmental management processes have a common understanding that TK includes the full range of knowledge, experience and values possessed by Aboriginal people. On this basis, we have concluded that the lack of a specific TK definition is not having a significant impact on its effective use in decision-making.

7.4 CLASSIFYING TK

As a new field with significant potential to influence and improve decisions that affect the environment, efforts have been made to understand and classify TK. Consistent with western analytical approaches, this has included breaking TK into categories to assist users in identifying what type of knowledge they require under different circumstances. Most recently, the MVEIRB's *Guidelines for Incorporating Traditional Knowledge in Environmental Impact Assessment* have identified three broad categories of TK:

Knowledge about the environment

This is factual or "rational" knowledge about the environment. It includes specific observations, knowledge of associations or patterns of biophysical, social and cultural phenomena, inferences, or statements about cause and effect, and impact predictions. All are based on direct observation and experience, shared information within the community and over generations. According to Usher[53] (2000), this category of TK is often amenable to environmental decision-making because it deals with observations and predictions of cause and effect in a manner similar to western science.

Knowledge about use of the environment

This is the knowledge that people have about how they use the environment and about how they manage their relationship with it. Examples include knowledge about cultural practices and social activities, land use patterns, archeological sites, harvesting practices, and harvesting levels, both past and current. Potential applications for this category of TK include land claims negotiation, land use planning and wildlife management.

---

[52] Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

[53] Usher, P. 2000. Traditional Ecological Knowledge in Environmental Assessment and Management. Arctic. 53(2)

Values about the environment

This knowledge consists of peoples' values and preferences, what they consider "significant" or valued components of the environment, and what they feel is the "significance" of impacts on those valued components. Aboriginal spirituality and culture play a strong role in determining such values. This category of TK can prove challenging to incorporate into environmental management systems for a variety of reasons. Specifically, it is often qualitative and, as such, it has been difficult to integrate into western decision-making models which tend to rely on quantitative evidence. Similarly, value-based TK has proven difficult to verify through science-based decision models.

7.5 REQUIREMENTS TO USE TK

Within the MVRMA, examples of requirements to consider TK include:

> *In exercising its powers, the (MVEIRB) shall consider any traditional knowledge and scientific information that is made available to it (s. 115.1).*
>
> *The responsible authority shall, subject to the regulations, analyze data collected by it, scientific data, Traditional Knowledge and other pertinent information (s. 146).*
>
> *The Governor in Council may…make regulations… respecting the collection of data and the analysis of data so collected and scientific data, Traditional Knowledge and other information (s. 150 (a)).*

In addition, all comprehensive land claim agreements in the NWT stipulate that Aboriginal beneficiaries are to be involved directly in wildlife management. For example, the IFA states as a principle that:

> *The relevant knowledge and experience of both the Inuvialuit and the scientific communities should be employed in order to achieve conservation (s. 14.5).*

Operationally, the incorporation of TK into environmental decision-making is formally required in a number of ways. Firstly, NWT environmental management regimes (i.e., those associated with the MVRMA and IFA) require that approximately one-half of the membership of each Board be comprised of nominees from Aboriginal claimant areas. These requirements are intended to assist in ensuring that Aboriginal perspectives and knowledge, including TK, are presented and given appropriate consideration. While it is true that Aboriginal nominees are not necessarily TK holders (a designation usually reserved for Elders), their position allows them to promote and facilitate the use of TK in board decisions. Furthermore, mandatory consultation at all stages in the environmental management process is intended to provide community members with an opportunity to voice concerns related to proposed developments and to facilitate the collection of relevant TK which can help inform decision-makers.

7.6 POLICIES AND GUIDANCE

Until recently, limited guidance has been available to assist participants in the environmental management process in using TK effectively. Progress is being made to resolve the issue.

While the legislative framework for the NWT clearly requires the consideration of TK, governments have made limited progress in ensuring participants in the environmental management process are provided guidance required to effectively use TK. In 1993, the GNWT adopted what was probably the first formal policy committing to the use of TK in Canada;[54] however, this policy failed to provide direction on how TK should be applied in the decision-making process. Various federal departments and programs have similar policy statements supporting the use of TK but fail to provide guidance in its use. Further, the Federal Government has not prepared regulations for the purpose of collecting TK, an option provided for in the MVRMA (s. 150 (a)).

Boards have made progress in developing TK guidance. Specifically, the MVEIRB recently produced *Guidelines for Incorporating Traditional Knowledge into the Environmental Impact Assessment Process (May, 2005)*. The Guidelines outline the expectations and processes for the incorporation of TK in the EIA process. While too early to determine the effectiveness of the guidelines, their development is viewed as a positive step.

Several Aboriginal organizations are also taking steps to clarify how TK should be collected and used. The Gwich'in Traditional Knowledge Policy aims to ensure that the collection, use and dissemination of TK is conducted ethically and respects the Gwich'in as its holders. Similarly, the Dehcho TK Policy assists in clarifying issues such as ownership, confidentiality and other potential requirements. Additional guidance is provided in the Dehcho TK Research Protocol which is intended to guide TK holders in their dealings with researchers and others.

7.7 TK AVAILABILITY

The quantity of TK available has likely declined in recent decades. The absence of a fully developed CIMP has been detrimental to collection and preservation of remaining TK.

Use of TK in environmental decision-making is influenced by its availability. TK can be made available directly from the knowledge holder (i.e., "Original TK") or from sources that have attempted to document it.

[54] Abele, Frances 1997. Traditional Knowledge in Practice. Arctic, v. 50, no.4

Original TK

Unless knowledge of TK holders is taught to others and/or effectively documented, original TK may be lost.

TK holders, Elders and other individuals who continue to spend large portions of their time interacting with and observing the environment, lived traditional lifestyles and were recipients of TK that was passed down from previous generations. These individuals collectively possess an enormous body of knowledge. Unless their knowledge is taught to others and/or effectively documented, some of this collective wisdom may be lost.

While many Aboriginal people maintain a strong connection to the land, in comparison to previous generations, there has been a gradual shift away from traditional lifestyles. Intuitively, it is anticipated that this shift has resulted in a reduction of the TK that an "average" individual has of the natural environment. The implication of this assumption is that less information is available for environmental decision-making.

Documented TK

A vast amount of TK remains undocumented, with documentation of TK typically associated with areas of high development activity. This has left large geographic gaps in the TK record.

Until European contact, TK was transmitted exclusively through oral communication. While oral tradition continues to play an important role in communicating and preserving TK, a variety of factors, including increased use in environmental decision-making and the passing of Elders, have stimulated interest in TK documentation.

Some Aboriginal groups are taking a proactive role in documenting their TK. For example, the Gwich'in Social and Cultural Institute (GSCI) is making important advances in the documentation of Gwich'in culture, language and heritage resources. TK documentation is also occurring through the preparation of land use plans which draw on information about traditional land use and observations of the environment. Regional initiatives such as the West Kitikmeot Slave Study (WKSS) also have the potential to serve as important sources of documented TK.

The quantity of TK that has been collected in recent decades is significant and will continue to serve as a resource for the future; however, a vast amount of TK remains undocumented. In general, TK collection is driven by development interests and, as such, documented TK is typically associated with areas of high development activity. This has left large geographic gaps in the TK record. Similarly, TK documentation has focused on actively harvested species such as caribou, with less emphasis on other ecosystem components. An additional challenge is that TK documentation is conducted by and dispersed among numerous Aboriginal groups, resource

management institutions, government agencies, academic institutions and independent researchers. While TK documentation may exist, it can be difficult to identify and obtain.

The NWT Cumulative Impact Monitoring Program (CIMP) is intended to consolidate existing information and to identify and fill knowledge gaps that may exist, including TK. CIMP should also serve as a central "clearing house" for individuals wanting access to traditional knowledge. The CIMP has not been implemented and, as a consequence, it has not fulfilled its mandate to assist in the documentation and use of TK. A detailed discussion of the CIMP is provided in Chapter 8 of this report.

7.8 APPROACHES TO TK COLLECTION AND DOCUMENTATION

We found that TK is being formally collected for environmental decision-making in the NWT. In some cases this TK may provide the only available environmental data in a region. Examples include: patterns of flooding in rivers and creeks; the location of significant wildlife habitats; the health of wildlife; the locations of gravesites and cultural sites of spiritual significance; and Aboriginal values regarding the land.

A variety of approaches are drawn upon to collect and document TK. While the preferred approach depends on considerations such as the end objective, available resources and requirements of participants, some of the options include: interviews; site visits; photo records; videotaping; story telling; writing workshops; and, drawings. TK is almost always recorded electronically as knowledge holders often speak in Aboriginal languages with tapes transcribed and documented.

Traditional knowledge collection methods regularly use maps as a recall and recording aids because the information is geographically specific. Geographic information systems (GIS) are also becoming a chosen method for TK documentation and resource management as they facilitate the visualization and comparison of different types of information. Many of the organizations responsible for environmental management in the NWT (e.g., land use planning boards, Aboriginal land management bodies and governments) are directing significant resources towards the preparation and maintenance of GIS systems.

7.9 PERCEIVED VALUE AND ROLE OF TK

Most participants in NWT environmental processes appear to recognize TK as a potentially important source of information for decision-making.

We found that most Aboriginal people, scientists, Boards and governments agree that the consideration of TK in the environmental decision-making process is desirable. The depth of information and the more holistic approach associated with TK are viewed to be important in understanding environmental relationships and potential impacts from development. In

combination with western science, TK is considered by many to have the potential to contribute to better environmental decision-making.

Our impressions of how TK is perceived by the various categories of groups that possess, collect and use it are summarized below. These qualitative generalizations are based on evidence collected and may not be representative of all individuals and organizations within each category. It should also be noted that an organization's commitment to incorporate TK and its effectiveness in doing so are separate issues. The extent to which TK is used effectively is discussed later in this chapter.

Aboriginal People

While some Aboriginal people and groups have voiced concern regarding approaches that have been used to collect and use TK, there appears to be a high level of support for giving TK a prominent role in decision-making. TK is recognized by many Aboriginal people as a source of extensive information including environmental observations that often exceed the temporal and spatial limitations of conventional science. There is also an awareness of the role that TK used in environmental management can have in empowering Aboriginal peoples. Until the advent of co-management institutions, government bureaucrats and managers trained in the scientific tradition relied on scientific data to make decisions about the environment. Today, requirements to use and consider TK are viewed as a positive reversal from a long history in which Aboriginal participation, knowledge and experience were not part of environmental management processes.[55]

Scientists

Scientific research often involves information needs that can only be met through long-term observation, detailed familiarity with the environment, capacity to recognize changes and abnormalities, and continued sampling and monitoring. For Western science, the collection of this type of information in the North is typically costly, logistically difficult and time-consuming. In this context, TK developed through the accumulation of generations of year-round observations combined with an intimate familiarity of the local environment has been recognized as valuable by many scientists. In many cases where there is a complete absence of scientific information, TK can be used to fill in gaps. Furthermore, "observational" TK can be particularly useful to scientists since it is often verifiable and consistent with scientific observations.

The following two quotes from biologists who regularly work in the NWT provide an indication of how TK is viewed by some members of the scientific community:

[55] Usher, P. 2000. Traditional Ecological Knowledge in Environmental Assessment and Management. Arctic. 53(2)

When I do field studies on caribou or other wildlife I always talk to the locals about where the herd is, how healthy they are, etc., to determine their status before a study. This is just common sense to me since the hunters are out looking at the resource more often than I am.[56]

Because the older hunters depended on hunting success for their survival, their observations and recount accuracy are very reliable. While their observations are seldom wrong, their interpretation of those observations is not always correct, just as a scientist can misinterpret data[57]

Resource Management Boards

In addition to being fully aware of legislated requirements to consider TK, we found that resource management boards are practically and ideologically committed to using TK to make informed decisions. Supporting evidence includes:

- Land use planning boards relying heavily on TK for the development of land use plans;
- Land and water boards requiring developers to conduct TK studies;
- Referrals to Environmental Assessment based on TK evidence;
- TK requirements of Environmental Assessments (e.g., terms of reference requirements and public hearings); and
- TK being cited as primary evidence for Environmental Assessment decisions.

On the basis of these examples and other information, TK appears to be valued by the NWT's resource management boards.

Government of Canada

In signing land claims agreements and creating legislation that is supportive of the use of TK (e.g., the MVRMA), the Government of Canada has confirmed its commitment to the value of TK in environmental decision-making. In support of this commitment, the Government has promoted TK-related initiatives such as programs to collect TK (e.g., West Kitikmeot Slave Study) and the integration of TK into government programs/activities (e.g., the Northern Contaminants Program, clean-up of the Colomac Mine site and the Déline oral histories initiative in support of assessments for the remediation of the former Port Radium Mine site).

[56] Dr. Colin Macdonald, Personal communication
[57] Dr. Bruce Stewart, Personal Communication

Government of the NWT

As stated in its Traditional Knowledge Policy (1993), the Government of the NWT (GNWT) recognizes that:

> *Aboriginal traditional knowledge is a valid and essential source of information about the natural environment and its resources, the use of natural resources, and the relationship of people to the land and to each other, and will incorporate traditional knowledge into Government decisions and actions where appropriate.*

We were informed that GNWT staff consider TK when evaluating environmental conditions and potential impacts from development.

Industry

Companies with recent experience working in the NWT are generally familiar with regulatory requirements to consider TK. Some of these companies have used TK to influence project designs and activities.[58] Such decisions have been motivated by a variety of factors including specific regulatory requirements and a recognition of the intrinsic value of TK. Generally, the perceived value of TK is dependent on the degree to which it provides specific information with clear linkages to the project.

7.10 TRADITIONAL KNOWLEDGE AND ENVIRONMENTAL DECISION-MAKING

> **Significant efforts have been made to collect and consider TK during environmental decision-making processes. These efforts have been affected by a number of challenges.**

Traditional knowledge is used at each of the major steps in the NWT's environmental management processes: land use planning, regulation, environmental impact assessment, and monitoring. TK integration into each of these steps is discussed below.

[58] Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

7.10.1 Land Use Planning

TK has played an important and, in some cases, central role in NWT land use planning. Active participation of TK holders in land use planning exercises has assisted in ensuring that TK is used and interpreted properly.

Fundamentally, land use planning establishes the "ground rules" for the protection and development of lands. TK can play a critical role in the preparation of land use plans by providing information on a wide variety of relevant topics such as species, habitats, traditional land use, cultural heritage and resource potential.

Conservation Plans have been prepared for each of the communities in the Inuvialuit Settlement Region (ISR). Developed through a process that included extensive participation of individuals such as Elders and harvesters, the Community Conservation Plans draw heavily on TK. According to various groups that participate in environmental decision-making in the ISR, the value of the Community Conservation Plans is largely attributable to their TK content.

Within the Mackenzie Valley, only the Gwich'in Settlement Area has an approved and enforceable land use plan. During the preparation of the plan, an extensive consultation program facilitated the collection and consideration of TK. In addition to providing their knowledge, active participation of TK holders throughout the plan development process helped to ensure that TK was used appropriately. Areas in which TK provided vital input included evaluations of archaeological significance, traditional trail use, fisheries, wildlife, harvesting activities and unique landscape features.

Consultation with and participation of TK holders is also an integral part of the on-going land use planning process for the Sahtu Settlement Area. Draft plans have relied heavily on information and guidance provided by TK holders. Current activities of the SLUPB suggest that the final plan will be based largely on TK.

Other land use planning exercises in the NWT are making extensive use of TK. For example, under the Dehcho land use planning process, land use designations are based on traditional use and occupancy information received from more than 300 Dehcho harvesters. The process uses the traditional land use and occupancy mapping completed by the Dehcho First Nations as a critical information layer in determining where development should and should not occur. The process has identified Dene Laws, Values and Principles which have become the foundation of the Land Use Plan, and identified ways to apply these principles to non-traditional land uses like non-renewable resource development.

Several initiatives directed towards preserving areas of environmental and cultural significance have also relied on TK. The Thelon Wildlife Sanctuary is an example of an environmentally significant protected area while the Sahoyúé-§ehdacho National Historic Site of Canada has been recognized for its cultural importance.

7.10.2 Permits and Licences

Efforts are made to consider TK when it is available to regulatory decision-makers.

As described in Chapter 4, land use permits and water licences are the primary instruments of environmental regulation in the NWT. There are several mechanisms through which TK can inform and influence the regulatory process.

Prior to submitting an application for a permit or licence, developers are required to inform communities about their proposed projects. This involvement helps to ensure that community concerns and TK have been identified and taken into consideration in project design. Applications for larger projects (i.e., Type "A") must also explicitly address traditional land use areas and archaeological resources. Completed applications are distributed to Aboriginal communities and any feedback received, including TK, is to be factored into regulatory decisions. Developers may also be required to submit TK studies that address specific issues identified during the application review process.

In cases where TK or other information suggests that a project might cause significant environmental impacts or public concern, the project is to be referred to EA for a more detailed evaluation. Although difficult to verify, there is evidence of cases where referral decisions appear to have been based on TK.

7.10.3 Environmental Impact Assessment

TK has played an integral role in some EIA decisions. EIA boards are making a genuine effort to ensure that TK is considered during their processes.

The consideration of TK is a requirement of environmental impact assessment (EIA) processes in the Mackenzie Valley and the ISR. Primary responsibility for overseeing EIA processes rests with the MVEIRB (for projects in the Mackenzie Valley) and the EIRB (for projects in the ISR), collectively referred to as EIA boards below.

EIA Scoping and Terms of Reference

EIA boards use information from a variety of sources, including TK, to determine the scope of the project and the scope of the assessment. For example, community scoping hearings have been held by the EIA boards to assist in identifying key issues associated with proposed projects. Based on input received during scoping exercises, Terms of Reference (TORs) are prepared to guide the review. In addition to direction provided in general EIA guidance (e.g., the MVEIRB's TK in EIA Guidelines), TORs may specify steps that a developer must take to ensure

TK is given appropriate consideration by the assessment. For example, in the TOR for the Environmental Assessment of the Snap Lake Diamond Mine, the MVEIRB required that:

> *De Beers shall make all reasonable effort to collect and facilitate the collection of traditional knowledge relative to the proposed development, for integration into the environmental assessment report in collaboration with Aboriginal communities and organizations. De Beers shall describe where and how traditional knowledge was used and the effect that it had on predicting impacts and determining mitigation. Where traditional knowledge is not available, or not provided to De Beers in a timely manner despite appropriate diligence, De Beers shall describe efforts taken to obtain it. Traditional Knowledge is given full and equal consideration to that of western science.*

EIA boards typically perform a conformity check to verify that all conditions of the TOR (including those related to TK) have been met. In situations where significant deficiencies are identified, the EIA boards can request that additional information, including TK, be provided.

TK Consultation by Boards

In addition to requiring developers to use TK and to consult with communities, the EIA boards themselves perform consultation to ensure that interested parties are given an opportunity to communicate their positions on proposed developments. This process assists EIA boards in collecting additional TK that may be relevant to their decisions.

A variety of approaches are used by the EIA boards to collect TK. At several stages in the EIA process, potentially affected parties, including representatives of TK holders (e.g., land claimant organizations, hunters and trappers organizations, and band councils), receive EIA documentation and are requested to provide feedback to the boards. If deemed necessary, this is followed-up by hearings to collect further information and perspectives from the developer, communities and other interested parties. Any individual or organization can also submit evidence (including TK) to the public record for consideration by the EIA boards.

EIA Decisions

In rendering decisions on proposed projects, EIA boards are to consider the full body of information presented to them, including TK. Evidence clearly demonstrates that TK has played a significant role in some decisions reached by EIA boards. Notably, the recent MVEIRB decision to recommend the rejection of a proposed development in the Drybones Bay area (New Shoshoni Ventures) was based primarily on TK evidence presented to the Board.

Upon reviewing the MVEIRB's recommendation to reject the project, the Responsible Ministers with jurisdiction for the development (i.e., INAC, ENR, DFO and Environment Canada) concluded that:

> *The Review Board did not fully and clearly outline its analysis that led to the recommendation to reject this proposed development.*[59]

On these grounds, the Responsible Ministers referred the recommendation back to the MVEIRB for further consideration and clarification on the reasons for the decision. While a final decision on the proposed undertaking has not yet been reached, this example demonstrates that a fundamental challenge of TK use is the incorporation of qualitative evidence into a process that has typically relied on quantitative assessment.

7.11 CHALLENGES ASSOCIATED WITH TK USE

> **There are numerous challenges associated with the collection and use of TK including: reconciling traditional and scientific approaches to understanding the environment; understanding what knowledge to solicit and incorporate; building the capacity to collect and explain TK in a meaningful manner; reconciling questions of ownership of TK; providing TK experts with appropriate compensation and acknowledgment; documenting TK so that it is accessible to future users; incorporating TK at an appropriate time in the decision-making process; involving both Aboriginal men and women in the TK gathering process; overcoming language issues and constraints to effective communications; and gaining acceptance of TK as valid information amongst end users.**

As indicated in Section 7.9, the various organizations responsible for environmental management in the NWT appear to be committed to using TK in environmental decision-making. Furthermore, as described in Section 7.10, there is a large body of evidence to support the conclusion that significant efforts have been made to integrate TK into the various components of the NWT's environmental management regimes. Notwithstanding these conclusions, we heard criticisms that a variety of challenges have limited the effective and respectful use of TK. We also found that much of the literature evaluating the application of TK in decision-making has reached similar conclusions.

7.11.1 Two Paradigms

Attempts to explain the difficulties associated with incorporating TK into formal environmental decision-making often draw attention to apparently fundamental differences between "traditional" and "scientific" knowledge systems. The following statement from the Dene Nation summarizes many of the differences that are commonly cited:

[59] Indian and Northern Affairs Canada (INAC) 2005. Letter from the Minister of INAC to the Chair of the Mackenzie Valley Environmental Impact Review Board. April 13th.

> *Science aims to explain things by breaking them down into parts. In the holistic view of TK, everything is interconnected and every action affects the entire ecosystem. The time frame of scientific observations is defined and brief compared with TK observations which span a person's lifetime and even generations. Science and TK both have a special language, so that information can be lost in translation. A difference is that scientific observations are quantifiable and recorded in writing, whereas TK is oral and qualitative.*[60]

Reconciling traditional and scientific approaches to understanding the environment is challenging and has been based largely on trial and error; efforts to integrate TK and science are relatively new and there are few practical models to guide the process. In general, the process has been more successful in situations where TK could be presented in formats consistent with and verifiable by science (e.g., wildlife migration patterns). Other forms of TK, including myths, values and beliefs tend to be discarded because the knowledge is subjective, fails to meet accepted scientific criteria (e.g., rigor and repeatability) and, in some cases, disagrees with the scientific model.[61] At the same time, some indigenous peoples are reluctant to accept western science because of its apparent need to control and interfere with nature.[62]

Challenges incorporating TK and science run much deeper than the knowledge itself. While environmental management processes in the NWT are to draw upon TK, the characteristics of these processes, including institutional structures and procedures, are predominantly "western". This context is often unfamiliar to TK holders and, as a consequence, can impede their ability and willingness to contribute to the process.

> *Environmental governance in the NWT is typically discussed at meetings and workshops organized by boards and committees. Language in these meetings and workshops can be rife with technical and scientific terms … Such discussions, based on written documents and correspondence in English, have few analogues within cultures immersed in traditional knowledge, where oral communication in native languages is the norm. The decisions they produce are often based upon Euro-Canadian value systems and scientific evidence, whereas in traditional-knowledge cultures, they are often based on experience… Consequently, traditional knowledge experts (often elders) rarely have much understanding of environmental decision-making procedures, let alone the material discussed as evidence in meetings and workshops, which limits their ability to contribute meaningfully.* [63]

---

60 Dene Nation 1999. TK for Dummies. The Dene Nation Guide to Traditional Knowledge. Prepared by M. Tyson for the Dene Nation.

61 Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

62 Johnson, M. Dene Traditional Knowledge. http://carc.org/pubs/v20no1.dene.htm

63 Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

Despite significant challenges, the cultural, conceptual and attitudinal barriers between TK and scientific knowledge systems can be overcome. The case of the Colomac Mine remediation project is an excellent example of effective and respectful collaboration between TK holders and scientists. By placing considerable emphasis on building relationships between otherwise divergent participants, the Colomac process was able to bring traditional and scientific knowledge together in a complementary fashion. Aspects of the final remediation strategy were clearly influenced by a willingness of Aboriginal and scientific participants to consider the knowledge and perspectives of the other group. Another example of a similar cooperative process is the Port Radium Mine remediation project which has brought together scientists, government representatives and members of the Déline Dene community in investigations of site conditions, identification of site uses and development of site remediation plans.

Other initiatives have also made important steps in bridging the gap between the two systems. The WKSS used advisory teams of scientists and Aboriginal people when guiding and conducting environmental research. The CIMP will use a similar model in which teams will be composed of individuals with expertise in science and TK for the various VCs, including representatives from government departments, Aboriginal governments, resource management bodies, academia, industry, and environmental non-government organizations.

7.11.2 Lack of Common Understanding

Many of the challenges associated with incorporating TK into environmental decision-making relate to a lack of common understanding between participants in the process. In combination with the extremely broad subject area encompassed by TK, the absence of standardized process protocols has frustrated attempts to collect and use TK. Challenges appear to be primarily associated with differing interpretations regarding what aspects of TK should be considered and what constitutes adequate consultation. A report submitted to the NWT CEAM Program clearly describes this challenge:

> Those groups trying to incorporate TK have been unclear on what knowledge to incorporate and community members have been unsure of what knowledge is needed. To address this problem organizations and communities need to agree on the type of knowledge needed and set the parameters on that body of knowledge so that everyone is better informed on what is needed and who will provide it.[64]

[64] Clarkson, P. and D. Andre 2002. Communities, Their Knowledge and Participation. Prepared for the Gwich'in Renewable Resource Board and Gwich'in Tribal Council.

We anticipate that the MVEIRB's recently released TK in EIA Guidelines will play an important role in promoting a common understanding of expectations.

Recommendation 41: MVEIRB's TK in EIA Guidelines should be reviewed by all participants in the environmental management process to assess their broader applicability.

7.11.3 Capacity

There are several aspects of capacity that are relevant to effective TK use. First, capacity is required to transfer TK from the knowledge holder to a format amenable for consideration by decision-makers. Once TK has been collected, someone has to write up the findings in a way that is meaningful for the project in question. This requires not just report writing skills but also the ability to interpret the TK in a way that can lead to recommendations for good environmental management. Many communities have a shortage of people who can play this role. This lack of community capacity can be a problem for developers and regulators who have a legislated requirement to access TK but may find the community they are working with unable to play their role in the process.

Second, as discussed previously, environmental management in the NWT is based, in large part, on western institutional models and processes. The contribution that individuals can make to decision-making is, therefore, directly related to their ability to function within this framework. This has inclined Aboriginal governments to designate individuals versed in these concepts and methods as their representatives in environmental governance.[65] While the number of Aboriginal individuals possessing the requisite skills is quite limited, fewer still are also able to provide extensive insight into TK.[66] In situations where technically competent Aboriginal representatives are unavailable, non-Aboriginal scientists are often hired as representatives. These factors may have the effect of limiting the ability of resource management boards and other institutions to effectively consider TK.

There are also important capacity deficiencies within scientific and regulatory communities that need to be resolved. In particular, emphasis needs to be placed on ensuring that members of resource management boards and government staff are better equipped to understand meanings and nuances that can be embedded in TK language and concepts. A seemingly obscure TK observation or conclusion may, for example, provide important insight into environmental interrelationships.

---

[65] Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

[66] Barnaby, J., Emery, A., Legat, A. 2003. A. Needs assessment study to identify the knowledge and skills required to fully utilize the strengths of Traditional Knowledge and Western Science in the Management of Northern Resources.

Notwithstanding ongoing challenges, the ability of Aboriginal people, boards and government agencies to incorporate TK into environmental decision-making has increased significantly in recent decades. To some extent this trend is expected to continue as the process evolves and participants gain additional practical experience. In addition, a variety of workshops and training initiatives have occurred in the recent past to stimulate discussions on how to use TK more effectively.

Recommendation 42: **If requested, government agencies should assist Aboriginal communities in their efforts to collect and compile TK in a way that is amenable to use in environmental decision-making.**

Recommendation 43: **All boards and government agencies involved in environmental management should ensure that relevant staff members are capable of understanding basic principles of TK collection and use. Training should be provided to individuals that lack this capacity.**

7.11.4 Ownership

Historically, ownership of TK was not an issue as people were expected to share their knowledge and respect the knowledge of others.[67] While there remains a desire to see TK used, some Aboriginal people have expressed a concern that in doing so, knowledge may be used for purposes that are not in the best interest of Aboriginal communities. There is also apprehension that, taken out of context, knowledge may be misinterpreted and/or applied inappropriately. Additional explanations of why some Aboriginal people may be reluctant to share TK include:

- *Some areas are sacred and are considered deeply personal.*
- *Traditional knowledge has become a continued source of revenue for communities as new developments are required to include traditional knowledge in their assessment reports.*
- *Not everyone has mapped their traditional use. Areas shown having low use may be considered "open season" for development when in fact, the area just hasn't been mapped yet.*
- *Information includes the location of valuable resources for the local community such as traditional medicines.* [68]

---

[67] Clarkson, P. and D. Andre 2002. Communities, Their Knowledge and Participation. Prepared for the Gwich'in Renewable Resource Board and Gwich'in Tribal Council.

[68] Deh Cho Land Use Planning Committee 2003. Common Questions and Answers on Land Use Planning in the Dehcho Territory. http://www.dehcholands.org/common_questions.htm

For these and other reasons, several Aboriginal groups have endeavored to ensure that communities and individuals are recognized as the owners of their knowledge. The ownership issue has prompted considerable debate regarding the legal legitimacy of intellectual property claims to TK.[69] To assist in clarifying potential conflicts, some Aboriginal groups have established protocols to guide the collection and release of information (e.g., the Dehcho First Nations TK Research Protocol).

Researchers have also attempted to address the issue by openly communicating the objectives of their work to communities, encouraging their participation, obtaining formal consent and entering into agreements regarding ownership.[70] Such agreements could assist in removing ambiguity on a variety of issues such as confidentiality and third-party access. Nonetheless, there remains a risk that concerns over the appropriation and misuse of TK will prompt some individuals and communities to withhold information that may be valuable for environmental decision-making.

Recommendation 44: Regional Aboriginal leadership should develop guidance that clearly defines expectations regarding the collection, release and use of TK.

7.11.5 Compensation and Acknowledgment

A considerable expenditure of time and energy is required to become a TK holder. For this reason, many feel that TK holders, like scientists and other experts, should be remunerated for their contributions to decision-making. In most cases, knowledge holders are now compensated with honoraria and travel expenses for their participation in TK studies and regulatory/EIA processes. However, inconsistent practices between regions and organizations have historically been problematic. Policies to ensure that knowledge holders are compensated in a way that respects their contributions are likely to play an important role in addressing this challenge (e.g., the Dehcho First Nations TK Research Protocol).

While financial remuneration may be an important consideration, we heard from many individuals that insufficient attention is being given to acknowledging the contributions of TK holders.

[69] Usher, P. 2000. Traditional Ecological Knowledge in Environmental Assessment and Management. Arctic. 53(2)
[70] Usher, P. 2000. Traditional Ecological Knowledge in Environmental Assessment and Management. Arctic. 53(2)

> *A lot of research has been done with our people. Our people have been giving and giving information and we were never given anything back…There is not enough recognition for the knowledge given by Elders.*[71]

While the TK that contributes to environmental decision-making is provided by TK holders, the individuals responsible for "researching" that knowledge are, with few exceptions, non-Aboriginal. Tasks undertaken by these "TK experts" can include designing research programs, conducting and/or managing the information collection process, analyzing the information and reporting on results. By virtue of their role as intermediaries in the process and authors of many of the products produced in TK studies, non-Aboriginal researchers often receive much of the credit for research conducted in Aboriginal communities.[72] Despite efforts by many non-Aboriginal researchers to give appropriate credit to TK holders, this situation appears to be affecting the willingness of some Aboriginal communities to provide their knowledge.

Recommendation 45: The participants in the system should review the issues associated with the compensation and acknowledgement related to the collection of original TK.

7.11.6 Documenting and Accessing TK

Traditional knowledge is strongly rooted in oral tradition and, for this reason, is considered by many to be inseparable from the original context in which it is presented. By its very nature, TK documentation cannot capture the important subtleties that linguistic, cultural and temporal variables can have on the meaning of information.[73] Community hearings and project-specific TK field studies are two methods that are used to supplement and corroborate any TK documentation that may be available.

---

71 Dene Nation 1999. TK for Dummies. The Dene Nation Guide to Traditional Knowledge. Prepared by M. Tyson for the Dene Nation.

72 Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

73 Dene Nation 1999. TK for Dummies. The Dene Nation Guide to Traditional Knowledge. Prepared by M. Tyson for the Dene Nation.

Once TK has been documented, the next challenge is ensuring that it is available for use. There are no centralized sources of documented TK in the NWT. Much of the TK that has been documented is dispersed between communities, government departments, libraries, industry, cultural archives, and academic institutions. This situation has made accessing TK studies difficult and presents a significant risk that important information will not be taken into consideration when decisions are made. There is also a possibility that already limited resources will be directed towards duplicative TK studies. The Cumulative Impact Monitoring Program is intended to assist in collecting TK and infilling gaps. A discussion of this program and appropriate recommendations are provided in Chapter 8.

7.11.7 Timing

We heard that industry and regulatory schedules sometimes fail to provide the time required to identify appropriate TK holders, build relationships and draw upon their TK. Turn-around times are often considered to be unrealistic, thereby risking a lack of adequate information and analysis. For example, in the New Shoshoni Report on Environmental Assessment (2004), Aboriginal participants expressed concern that short timeframes limited their ability to contribute effectively to the process.

Some of the difficulties experienced in incorporating TK appear to relate to the fact that it is typically introduced late in the decision-making process. Presently the perception is that TK is often introduced for the first time during Environmental Assessments. However the regulatory framework allows for input from Aboriginal communities at the screening level. This allows for the introduction of TK if concerns are evident during screening. Further, as the body of TK knowledge expands, developers will have access to this to facilitate the inclusion of TK in the application development process. Ideally, input from TK holders should be involved earlier in the process (e.g., during the conceptual design of a project) so that they can assist in the identification and understanding of issues. The decision-making process for the remediation of the Colomac Mine demonstrates the benefits associated with early TK engagement.[74] The recommendation presented in section 7.11.1 also applies to this challenge.

7.11.8 Gender and TK

As with many societies, gender plays an important role in determining the traditional activities undertaken by individuals in Aboriginal communities. One consequence of gender-based specialization is that it has resulted in different types of TK being held by women and men. For instance, men are often able to provide valuable insights into the movements and behaviour of harvest species, while women can make astute observations of species biology and physiology

[74] Pearse, T., and G. Lafferty 2005. Closure of the Colomac Mine – A Success Story for Collaborative Planning. Presented at Assessment and Remediation of Contaminated Sites in Arctic and Cold Climates Conference, May 8-10, 2005. Edmonton.

due to their involvement in food processing.[75] Although some researchers have recognized the importance of TK held by Aboriginal women, the process of collecting that knowledge can be challenging. In particular, the typically dominant role of men in public meetings (where TK is often collected) has at times curtailed efforts to obtain input from Aboriginal women. This is not to suggest that all attempts to involve women have been unsuccessful. For example, a recent TK study conducted in support of the Great Bear Lake Watershed Management Plan separated TK holders into focus groups of Elder men, Elder women, active harvester men, and active harvester women. Despite the positive example of this and other recent studies, continued attention is required to ensure that women are actively and effectively engaged in TK processes.

Recommendation 46: Efforts to collect and use TK should include gender-specific considerations.

7.11.9 Language and Communication

While English is the language of most environmental management processes, many TK holders are comfortable and adept communicating only in their native languages. As a result, much of the dialogue between TK holders, scientists and other non-Aboriginal decision-makers takes place via interpreters. To be effective, interpreters must have a facility to communicate effectively in English and the relevant Aboriginal language. They also need to be capable of understanding and translating the unique vocabularies and concepts of science and TK. For example, difficulties translating a term like “eutrophication” to an Aboriginal language are comparable to challenges faced in describing Aboriginal concepts such as the spiritual interrelationships between humans and animals to an English audience.

Translators with the requisite skills are rare.[76] The MVEIRB is now attempting to address this challenge by conducting training workshops for language interpreters so they can correctly translate Aboriginal languages into scientific terminology and scientific terminology into Aboriginal languages. Additional initiatives taken by the MVEIRB include hiring a TK co-ordinator and developing technical/scientific glossaries in the Chipewyan, Dogrib, Gwich’in, North Slavey and South Slavey languages.

Recommendation 47: INAC should establish and support forums for ongoing training and education to improve the common understanding of scientific and traditional knowledge terminology, issues and approaches. While these forums should build on existing project-specific initiatives, they should be free-standing, long-term initiatives.

---

[75] Bruce Stewart, Personal Communication

[76] Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.Ellis 2005

7.11.10 Burden of Proof

The decisions and recommendations made by EIA boards and other regulatory bodies must be based on verifiable information, defensible hypotheses and transparent processes. Lack of attention to each of these requirements can undermine public confidence in the fairness of the system and the legitimacy of any decisions that are reached. Traditional knowledge must, therefore, be scrutinized to determine if it is acceptable for consideration in environmental decision-making processes. In some situations, the acceptability of TK can be verified through multiple sources, corroborated by other evidence and tested for universality. However, in many cases, validation has proven difficult to achieve. Traditional knowledge often takes the form of stories, opinions and perceptions of value that can be challenging to differentiate from anecdote. In some circumstances this has raised questions regarding the legitimacy of TK evidence.

> *Traditional knowledge contributions are commonly rejected in environmental decision-making proceedings because they are deemed anecdotal, and therefore non-replicable and non-universal.*[77]

Notwithstanding the need and benefits of validating TK, the process must be approached with sensitivity to the knowledge holder. Failure to respectfully address validation requirements can bring the integrity and competency of the knowledge holder into question, thereby deterring future participation in similar processes.

Recommendation 48: Verification of TK used in environmental decision-making should be carried out in a respectful manner.

[77] Ellis, S.C. 2005. Meaningful Consideration? A Review of Traditional Knowledge in Environmental Decision Making. Arctic, v. 58, no.1.

Part B: CUMULATIVE IMPACT MONITORING PROGRAM

8.0 CUMULATIVE IMPACT MONITORING PROGRAM

8.1 EXPECTATIONS FOR CUMULATIVE IMPACT MONITORING

In 1992, the Government of Canada committed to the Gwich'in that a method to monitor cumulative impacts would be provided. Since then, similar commitments have been made to the Sahtu, Tlicho and, through the MVRMA, to all residents of the Mackenzie Valley. Today, thirteen years after the implementation of the Gwich'in claim, despite years of planning, a comprehensive cumulative impacts monitoring program has not been implemented and limited environmental baseline and cumulative impact data are available to decision makers in the NWT. During the same period, the level of development activity in the NWT has grown significantly and current trends are expected to continue well into the future.

The combined effects[78] of multiple activities are referred to as cumulative effects or impacts. These combined impacts may be significant even though the individual impacts of each action, when evaluated independently, are considered insignificant. Cumulative impacts therefore represent the most appropriate measure as to whether or not subsequent activities should be allowed to occur.

Although the incorporation of cumulative impacts is a relatively new development in regulatory processes, the concept is strongly integrated into the holistic environmental thinking of Aboriginal people. Such thinking places an emphasis on the sustainability of the total environment and on each of its interconnected parts.

The NWT Cumulative Impact Monitoring Program (CIMP) and Audit – An Environmental Monitoring Program and Audit for the NWT, Revised Draft Five-Year Work Plan indicated that:

> *NWT residents and other interested parties have long-standing concerns about the potential cumulative effects of resource development activities on the environment of the NWT. Many of these concerns relate to uncertainties about the effectiveness of government monitoring and management of natural resources, and the lack of coordination among existing environmental research and monitoring programs*[79].

[78] The terms impact and effect are used interchangeably

[79] NWT CIMP and Audit Working Group, *2005 NWT Cumulative Impact Monitoring Program (CIMP) and Audit – An Environmental Monitoring Program and Audit for the NWT Revised Draft Five-Year Work Plan.* March 16, 2005

Responsible environmental decision-making requires that projects be evaluated in the context of other past, current and reasonably foreseeable activities (i.e., the cumulative impacts of projects). This is recognized by the Land Claims Agreements and the MVRMA which require cumulative impacts on the environment to be monitored and to be considered in Environmental Assessments and Environmental Impact Reviews. Fulfillment of this requirement necessitates adequate resources, a detailed implementation strategy and a firm commitment to act on that strategy.

The need to consider cumulative impacts is heightened by current development pressures throughout the NWT. In particular, interest in mining has focused on diamonds in the eastern regions, while oil and gas activities, including a proposed gas pipeline, are dominant in the west. Furthermore, it is important to consider that existing and proposed developments are unevenly distributed throughout the territory. Exploration and development activity for oil and natural gas in the Cameron Hills, diamonds in the Slave Geological Province as well as natural gas near Colville Lake and in the Mackenzie Delta all represent examples of increased development density. However, progress in implementing cumulative impact monitoring programs in the NWT has been slow.

The foundation of cumulative impacts assessment is information which allows for the definition of a historic or current set of baseline conditions, and which includes regular observations to determine changes in those conditions. Monitoring may occur at a number of different levels (e.g., project-specific, local/community, regional, territorial, national, international) and for a number of different purposes[80]. This information needs to be of sufficient quality and quantity to support decisions about cumulative impacts with a reasonable degree of certainty. It also needs to be readily accessible for analysis and decision-making.

The Preliminary State of Knowledge Report[81] confirmed that there was little or no scientific baseline data in many cases. While there is a great deal of traditional knowledge about Valued Components (VCs), much of it is not recorded and it is not always used effectively in decision-making.[82]

[80] NWT CIMP and Audit Working Group, 2005 NWT Cumulative Impact Monitoring Program (CIMP) and Audit – An Environmental Monitoring Program and Audit for the NWT Revised Draft Five-Year Work Plan. March 16, 2005

[81] DIAND, 2005, A Preliminary State of Knowledge of Valued Components for the NWT Cumulative Impact Monitoring Program (NWT CIMP) and Audit. Final Draft, February 1, 2002, Updated February, 2005.

[82] NWT CIMP and Audit Working Group, 2005 NWT Cumulative Impact Monitoring Program (CIMP) and Audit – An Environmental Monitoring Program and Audit for the NWT Revised Draft Five-Year Work Plan. March 16, 2005

8.2 LEGAL BASIS FOR THE CIMP

Requirements for a method to monitor cumulative impacts are defined in the Land Claims Agreements and the MVRMA. In the case of the settled Land Claims Agreements, the terminology of the commitments is identical:[83]

> *The legislation … shall provide for a method of monitoring the cumulative impact of land and water uses on the environment in the Mackenzie Valley* [84]

In accordance with these commitments, a provision was included in the MVRMA (s. 146) for "the responsible authority…, subject to the regulations, [to] analyze data collected by it, scientific data, traditional knowledge and other pertinent information for the purpose of monitoring the cumulative impact on the environment of concurrent and sequential uses of land and water and deposits of waste in the Mackenzie Valley".

By law, the NWT CIMP is to apply to the Mackenzie Valley as defined in the MVRMA. By design, the CIMP also includes the Inuvialuit Settlement Region[85] and the NWT portion of Wood Buffalo National Park. CIMP is to use a broad definition of the environment including biophysical, social, economic and cultural aspects of the NWT environment.

Section 150 of the MVRMA provides authority to the Governor in Council to make regulations respecting the collection and analysis of cumulative impacts information. To date, no regulations have been developed. The CIMP Secretariat has indicated that the intent is to have the CIMP fully implemented and working well before drafting such regulations. The 5-Year Work Plan for the CIMP and Audit identified the preparation of draft regulations as a task that will be conducted in the period between 2005 and 2010. Until such regulations come into force, INAC retains the role of Responsible Authority and is charged with ensuring the CIMP is designed and implemented in accordance with the Land Claim Agreements and the MVRMA. This absence of regulations was not viewed as impeding the CIMP implementation process.

---

[83] It is anticipated that final agreements for unsettled claims in the NWT will include similar clauses.

[84] 24.1.4 - Gwich'in Comprehensive Land Claim Agreement (in effect 1992)
25.1.4 - Sahtu Dene and Metís Comprehensive Land Claim Agreement in effect 1994)
22.1.10 - Tlicho Agreement: Land Claim and Self-Government Agreement (in effect 2005)

[85] The Inuvialuit Final Agreement (IFA) does not specifically address cumulative impact monitoring and the MVRMA does not cover the IFA. Section 4 of the IFA does, however, state that the Inuvialuit are entitled to the rights and benefits of other citizens under any legislation, and that "where restructuring of the public institutions of government is considered for the Western Arctic Region, the Inuvialuit shall not be treated less favourably than any other native groups or native people with respect to the governmental powers and authority conferred on them." On this basis, Inuvialuit participate as full members in the CIMP, as formalized in a Memorandum of Understanding signed in November 2003.

8.3 CIMP PARTICIPANTS

Key interested parties have been involved in the development of the CIMP, consistent with requirements under the MVRMA and the Land Claims Agreements that the process be consultative and participatory.

Planning activities directed towards the fulfillment of cumulative impact monitoring commitments specified in the Gwich'in Claim occurred between 1993 and 1998. Participants in these planning activities included representatives from the Gwich'in Tribal Council, INAC and the Government of the NWT. Following the enactment of the MVRMA, a "trans-regional" approach to cumulative impacts was adopted and, in early 1999, a CIMP "Working Group" was established. The Working Group is now composed of representatives from the Dehcho, Gwich'in, Inuvialuit[86], Sahtu, Tlicho, North Slave Metís Alliance, NWT Metís Nation, INAC and the Government of the NWT. The Akaitcho are not currently participating on the Working Group, but are copied on all correspondence related to the program. In addition to the members identified above, organizations with technical or operational interests and expertise in cumulative impact monitoring have been invited to join the Working Group as observers. Environment Canada, the Department of Fisheries and Oceans, and the MVEIRB have accepted such invitations.

Within INAC, the Environment and Conservation Division has assumed the lead role of the CIMP Program Coordinator. This division provides the CIMP Secretariat which supports the CIMP Working Group.

The Working Group concept is consistent with the co-management philosophy and the spirit of participation embodied in the MVRMA and the Land Claims Agreements which call for a "meaningful role" for Aboriginal people in any body established by legislation to carry out cumulative impacts monitoring. In this regard, the Working Group has a broad membership drawn from Aboriginal claimant groups, either as participants, or observers (Regional Aboriginal organizations choose whether to participate as members or observers), including Aboriginal groups in the Mackenzie Valley not presently party to a Land Claims Agreement and those not subject to the MVRMA (e.g., Inuvialuit). The design of the CIMP has been guided by the Working Group, incorporating feedback from various community consultations. Working Group decisions are made by consensus.

---

[86] The Inuvialuit Final Agreement (IFA) does not specifically address cumulative impact monitoring and the MVRMA does not cover the IFA. Section 4 of the IFA does, however, state that the Inuvialuit are entitled to the rights and benefits of other citizens under any legislation, and that "where restructuring of the public institutions of government is considered for the Western Arctic Region, the Inuvialuit shall not be treated less favourably than any other native groups or native people with respect to the governmental powers and authority conferred on them." On this basis, Inuvialuit participate as full members in the CIMP, as formalized in a Memorandum of Understanding signed in November 2003.

The approach used by the Working Group has been highly collaborative. This process is inherently positive in that it facilitates the incorporation of a wide variety of perspectives, particularly those provided by Regional Aboriginal representatives.

8.4 OVERVIEW OF CIMP ACTIVITIES

With the exception of a relatively modest investment in monitoring and capacity-building projects, the majority of effort and financial resources expended by the CIMP Working Group have been directed towards program development, not program implementation. As a decision-support and feedback mechanism, the absence of a fully implemented CIMP compromises the ability of participants in the system to make informed environmental management decisions.

The CIMP Working Group has met on more than 45 occasions over the past 6 years via teleconference or in face-to-face meetings. During this time, the majority of effort appears to have been directed towards collaborative activities such as meetings, workshops and planning sessions intended to support the development of a consensus, community-based monitoring program. Investments have also been directed towards consultants to assist in the design of the program.[87] The value of these efforts and investments must ultimately be measured by the extent to which they have contributed to the design of an effective program.

Since its inception in 1999, the Working Group has focused on the design of the NWT CIMP and Audit[88]. Towards this end, the Working Group has conducted or funded a number of related activities, including:

- draft five-year work plan for the NWT CIMP and Audit;
- final Terms of Reference for the NWT Audit;
- discussion of the principles to be addressed in drafting regulations under section 150 of the MVRMA and development of a draft implementation framework;
- regional and community consultations;
- identification of priority Valued Components and development of draft state of knowledge reports;
- background research on monitoring and auditing programs;
- support for monitoring and capacity-building projects;

---

[87] The costs incurred by the CIMP program are supportive of this assertion. Between 2000 and 2004, approximately 70% of the expenditures on the CIMP were directed towards Working Group costs (meetings, travel, regional consultations and communication) and consultants. This estimate does not include the costs incurred by INAC through the CIMP Secretariat (approximately two full-time equivalents). It should, however, be noted that the estimate includes Working Group expenditures that were directed towards the development of the CIMP and the NWT Environmental Audit (e.g., developing the Terms of Reference for the Audit).

[88] The preparation of the Terms of Reference for the NWT Environmental Audit, selection of the independent auditor and Audit facilitation has been undertaken by a Sub-Committee of the CIMP Working Group.

- Information Management System Options Study;
- the NWT CIMP - Tariuq (Ocean) Monitoring Inventory;
- liaison with related research and monitoring programs, including presentations and briefings; and,
- development of communications materials and workshops.

Despite these activities, thirteen years after the signing of the Gwich'in claim and seven years after the MVRMA came into force, there is limited evidence to suggest that the CIMP is fulfilling its primary objective of ensuring that information necessary to make informed decisions on cumulative impacts is available. With the exception of a relatively modest investment in monitoring and capacity-building projects, the majority of effort and financial resources expended by the Working Group have been directed towards program development. The monitoring and capacity building projects that have occurred to date have fulfilled only a very small portion of the identified need[89, 90].

This is a critical shortcoming. The CIMP is an "essential component of the integrated resource management system established by the MVRMA".[91] As a decision-support and feedback mechanism, the absence of a fully implemented CIMP compromises the ability of participants in the system to make informed decisions about resource use and environmental management. In general, the lack of an implemented CIMP impacts the effectiveness of decision-making processes as well as the decisions themselves.

During Audit meetings, representatives from claimant organizations, communities, Boards, government, NGOs and industry all expressed support for a program that serves as a focal point for the collection and analysis of information on cumulative impacts. However, this support is accompanied by a widespread frustration in the lack of progress that has been made in the implementation of the CIMP. In particular, lack of progress in implementing the CIMP has been, and continues to be of concern to Aboriginal groups:

> *In the five-year review of the Gwich'in land claim implementation agreement, lack of progress on the development and implementation of the CIMP was identified as a concern (1997). The Gwich'in review noted that "The GTC and GNWT have expressed concern with communications on CIMP to date. Delay in CIMP development from DIAND may impose costs to the regulatory regime in the GSA [Gwich'in Settlement Area] once MVRMA legislation is passed." Gwich'in and Sahtu organizations continue to express*

---

89 Over the past five years, approximately one-third of the total CIMP Working Group budget has been directed towards a total of 55 monitoring and capacity building initiatives (excluding the implementation of the 2005 Audit). Average funding per initiative was approximately $12,000.

90 Once fully implemented, projected CIMP spending for monitoring and capacity building is approximately 17 times its current level.

91 NWT CIMP and Audit Working Group, *2005 NWT Cumulative Impact Monitoring Program (CIMP) and Audit – An Environmental Monitoring Program and Audit for the NWT Revised Draft Five-Year Work Plan.* March 16, 2005

their view of the need for sufficient funding for the development and timely implementation of the NWT CIMP and Audit (e.g., in the annual reports for 2001/2002 and 2002/2003 on claims implementation).[92]

8.5 CIMP IMPLEMENTATION CONSIDERATIONS

The current 5-Year Draft Work Plan provides a high-level vision for the CIMP and presents a framework of what it will do; however, it needs to more specifically address how the program will be implemented. In the absence of a detailed, operational plan, it is difficult to ascertain the extent to which the Draft Work Plan is capable of fulfilling its mandate.

While the Land Claims Agreements and the MVRMA require the monitoring of cumulative impacts, these documents are silent on the processes that are to be used to meet this need. Guidance would be beneficial in fulfilling these requirements. In undertaking our review, we expected appropriate guidance would be provided by: 1) a strategic vision; and 2) a detailed implementation plan. Responsibility for these critical CIMP components rests with the Working Group.

In addition to other activities, a major focus of the Working Group has been the preparation of a Work Plan for the CIMP. This plan is presented in the "Revised Draft Five-Year Work Plan" for the CIMP and Audit (March, 2005). The 5-Year Work Plan presents a strategic vision for the CIMP which, on review, was found to be consistent with requirements under the MVRMA and Land Claims:

When implemented, the NWT CIMP will provide resources to help fill gaps in current environmental monitoring, report on the state of the NWT environment and the cumulative impacts of land and water uses and deposits of waste and encourage community-based monitoring and capacity building.[93] *– emphasis added*

The goal for the CIMP is admittedly challenging; the geographic scope of the NWT, the breadth of the environmental components and the complex regime within which it is to operate must all be taken into account. To effectively respond to these challenges, a comprehensive, clearly articulated plan that provides detailed operational strategies is necessary.

A functional operational plan for the CIMP should describe in detail the analytical, decision-making and data management processes that will be used to undertake a wide variety of tasks. Based on the scope and importance of the CIMP, we expected that the Work Plan would provide a comprehensive, "ready to implement" strategy that is capable of addressing considerations such as:

---

92 Ibid
93 Ibid

- Interface between the CIMP and other components of the MVRMA system;
- The systematic selection of valued components;
- Logical processes to identify program priorities and allocate available resources;
- The design, population and use of a comprehensive data management system;[94]
- Tracking and incorporating information from existing studies;
- Systematic identification of data gaps;
- Quality assurance, quality control and selection of performance criteria;
- Routine and systematic analysis of data, identification of cumulative impacts and evaluation of trends;
- Identification of programmatic resource gaps;
- Establishing guidelines for CIMP contributors and users;
- Program performance assessment and revision;
- Communications and reporting.

The Working Group has done an effective job in identifying these requirements in the Revised Draft Five-Year Work Plan; however, the current Work Plan offers very limited guidance on how these requirements will be met. In this regard, the Work Plan constitutes a high-level planning document and not an operational plan. While the Work Plan provides a vision for the CIMP and describes a conceptual framework of what it will do, it fails to answer the more difficult question of how the program will be implemented. In the absence of a detailed plan, it is difficult to ascertain the extent to which the Work Plan is capable of fulfilling its mandate.

While it is acknowledged that one of the operational principles of the CIMP Working Group, as specified in its Terms of Reference, was to "Go slow" to ensure that the CIMP is capable of meeting the needs and expectations of all participants, the length of the collaborative process has come at a cost. Specifically, during the period in which the Working Group was preparing its Work Plan, numerous projects were approved without the benefit of a systematic evaluation of cumulative impacts. Similarly, based on the current status of the CIMP and its Work Plan, we have limited confidence that the program will be capable of providing useful input to the MVRMA system within the next several years.

Recommendation 49: **The Working Group should make the development and implementation of a detailed, operational work plan, which clearly identifies and addresses monitoring needs, an immediate priority. The preparation of the plan should provide for involvement of interested parties without unduly delaying the process; plan preparation and review should**

[94] It is noted that a 'data warehouse' (Information Management System) is currently being designed through the NWT CEAM Strategy and Framework initiative.

occur in tandem. The implementation plan should be subjected to periodic reviews and amendments as operational experience is obtained.

8.6 FUNDING OF CIMP

While 5-year funding needs have been estimated by the CIMP Working Group, the adequacy of this funding can be fully assessed only in the course of program implementation.

Funding for implementation of the CIMP has been allocated within the "Claims Envelope" but accessing these funds through the Treasury Board for a five-year period has, according to the CIMP Secretariat, proved to be challenging. The funding process and lack of long-term, multi-year funding was also described as a limiting factor in the ability of the CIMP Working Group to support activities that require advance planning and continuity (e.g., field studies). The submission of an application for long-term program implementation funding is, we are told, imminent:

> *… the Federal government's obligations regarding the NWT CIMP and Audit extend in perpetuity, and ongoing long-term funding will be necessary.*[95]

The Draft Five-Year Work Plan has assumed for discussion purposes that $3.1 million per year for Years 1 through 3, $3.7 million for Year 4 (Audit Year) and $3.1 million for Year 5 is needed for implementation of the NWT CIMP (total of $16.1 million for the entire NWT); however, given the lack of specific monitoring requirements within the CIMP Work Plans, no assessment can be made on the adequacy of the identified budget estimate or for long-term funding needs.

Recommendation 50: **Given that CIMP activities will extend in perpetuity, a source of long-term, stable funding will be required, with periodic reviews to account for changing program needs.**

[95] NWT CIMP and Audit Working Group, 2005 NWT Cumulative Impact Monitoring Program (CIMP) and Audit – An Environmental Monitoring Program and Audit for the NWT Revised Draft Five-Year Work Plan. March 16, 2005

8.7 OTHER CONSIDERATIONS

The CEAM Strategy, Framework and Blueprint have the potential to make valuable contributions to the evaluation of cumulative effects. However, the absence of land use plans and the CIMP are significant gaps in the CEAM Strategy and Framework. This is limiting the ability of participants in environmental management processes to effectively consider and act on issues involving cumulative effects.

Once implemented, information provided by the CIMP will play an important role in decision-making involving cumulative impacts. In addition, there are other components of the environmental management regime that also need to be in place and effectively coordinated to ensure cumulative impacts are given appropriate consideration. The Cumulative Effects Assessment Management (CEAM) Blueprint is intended to provide a coordinated approach between these components.

The CEAM Strategy and Framework process was led by a steering committee made up of representatives from Aboriginal organizations, industry, environmental non-governmental organizations, the federal and territorial governments and the Mackenzie Valley Environmental Impact Review Board. The steering committee's plan for the implementation of the CEAM Strategy and Framework is outlined in its document: "A Blueprint for Implementing the Cumulative Effects Assessment and Management Strategy and Framework in the NWT and its Regions" (July 2004).

It should be noted that the CEAM Strategy and Framework is not specifically required by legislation but instead was an initiative spurred by the Diavik Comprehensive Study Report. It consolidates the existing components and activities of the environmental management regime that relate to cumulative impacts and attempts to fill the gaps.

The CEAM Framework consists of nine components that capture the key functions necessary for the integrated evaluation of cumulative impacts. These components are: Vision and Objectives; Land Use Planning; Baseline Studies and Environmental Monitoring; Research; Audit and Reporting; Project-Specific Screening; Environmental Assessment and Review; Regulation and Enforcement; Information Management; and Coordination. Many of these components are addressed elsewhere in this document (e.g., CIMP, land use planning, Environmental Assessment, regulation and enforcement). For this reason, we have limited our discussion of the CEAM Strategy and Framework to a high level review.

The CEAM Blueprint has the potential to be effective in that it clearly identifies the "Specific Actions" that need to be taken to ensure the environmental management regime adequately considers cumulative impacts. It also assigns lead organizations to the implementation of each action. If fully implemented, the Blueprint appears to be sufficiently comprehensive and detailed to achieve its desired objective.

Progress is being made on some of the actions identified in the Blueprint but many important initiatives have lagged behind. Specifically, the absence of land use plans and the CIMP are significant deficiencies that are compromising the ability of the parties to effectively consider and act on issues involving cumulative effects. Discussions and recommendations related to these deficiencies have been provided elsewhere in this report.

PART C: STATUS OF THE ENVIRONMENT

9.0 STATUS OF THE ENVIRONMENT

9.1 INTRODUCTION

A major component of the Audit was an evaluation of information on the environment in order to determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends. The detailed findings of this evaluation are presented in a separate companion document entitled "***NWT Environmental Audit 2005 – Supplementary Report on the Status of the Environment***". This chapter provides a high-level overview of the Status of the Environment (SOE) report.

The term "environment" is broadly defined as follows:

> *"The components of the Earth and includes:*
> *a) land, water and air, including all layers of the atmosphere;*
> *b) all organic and inorganic matter and living organisms; and,*
> *c) the interacting natural systems that include components referred to in paragraphs (a) and (b)."*

Given the above context, this first ever SOE report covers seven major components of the NWT environment:

- atmospheric environment (including air quality, climate and climate change);
- freshwater aquatic environment;
- marine environment;
- terrestrial environment;
- permafrost, ground ice and snow;
- human health; and,
- socio-economic and community wellness.

9.2 OVERVIEW OF APPROACH

As a starting point in conducting the SOE assessment, the valued components (VCs) identified in the INAC report, *A Preliminary State of Knowledge of Valued Components for the NWT Cumulative Impact Monitoring Program* (NWT CIMP) *and Audit* were selected. Key indicators of change for the selected VCs were then identified and carried forward through the study. For these key indicators of change, trends in environmental quality were assessed for the Mackenzie Valley, the Inuvialuit Settlement Region and the NWT as a whole.

To assess current conditions and trends, previously completed studies were relied upon extensively, particularly where these studies had assessed trends in environmental quality. Where required, these studies were supplemented with original data analysis; however, conducting original research was not within the scope of the SOE assessment. For each of the key indicators, available data were analyzed and assessed to identify: trends; potential contributing factors to any changes in the environment; the significance of any trends identified; the likely impact of the trends; activities to mitigate the factors/emissions that are causing the observed trends, and, data gaps. Table 9.1 provides an overall summary of the results of the SOE assessment.

9.3 SUMMARY OF SIGNIFICANT TRENDS

Overall, environmental quality in the NWT was found to be favourable for most components. In some cases it was difficult to determine the current condition of an environmental component or evaluate trends due to a lack of adequate baseline data for the NWT. However, where data were sufficient, several instances of unfavourable conditions and deteriorating trends were identified. The two most disturbing of these are: the recent large decreases recorded for the size of caribou herds that Aboriginal people living in the NWT rely on as a major source of subsistence; and, the need for action in the area of socio-economics and community wellness.

With changes to the environment from climate change and the potential for increasing development near calving grounds, the need for accurate data on the status of the individual caribou herds and their habitat is becoming increasingly important.

With respect to socio-economics and community wellness, while traditional economic indicators show that the NWT population and economy are growing, there is no commensurate progress in community wellness with numerous measures of social well-being being found to be less favourable than national averages. The social problems identified appear even more pronounced in the NWT smaller communities and are more associated with the Aboriginal population. This situation requires action by government agencies that have health and social service mandates.

Looking forward, climate change is expected to have a profound effect on the Canadian North. The potential effects extend to all components of the environment ranging from: loss of permafrost conditions in some parts of the NWT; increased erosion of river banks and shorelines; changes in the duration, extent, and quality of sea ice cover; changes in vegetation coverage and animal habitat; increased mobility of nutrients and organic and inorganic contaminants; and, changes in the quality and availability of traditional foods. Additional research is required in a number of areas to improve the understanding of the effects of climate change on all components of the environment.

PART D: CONSIDERATIONS FOR FUTURE AUDITS

10.0 CONSIDERATIONS FOR FUTURE AUDITS

The Audit Terms of Reference and available resources should be aligned with the expected outcomes. The duration of the Audit should allow sufficient time for multiple contacts with each of the interested parties. Future Audits would benefit from heightened awareness of the Audit well in advance of its implementation. ASC support to the logistics of the Audit should be strengthened.

This report presents the results of the first NWT Audit conducted under the MVRMA. It is our hope that the results of the Audit will provide constructive information to those involved in the challenge of managing and protecting the environment of the NWT.

At the outset, the Audit had been acknowledged by many to be an extremely challenging assignment. Our experience has confirmed this. As the first Audit, each stage in its implementation was accompanied by a wide array of "lessons learned". Building on these lessons, we have identified the following considerations for future Audits.

1. Prior to the Audit, the ASC and the Audit team indicated that the scope of the Audit had the potential to be greater than the allocated budget. This assumption has proven to be accurate; the amount of effort expended by the Audit team was significantly greater than the funding that was provided. For future Audits, there should to be a closer alignment of the Terms of Reference (i.e., Audit expectations) and budget.

2. To obtain a balanced view of the regulatory regime we contacted a wide array of interested parties and recommend that future Auditors do the same. Given the breadth of the Audit, the wide geographic distribution of interested parties and the quantity of evidence that needed to be identified, sampled, verified and substantiated, the original timeframe allotted to the Audit was insufficient. Additional visits and meetings would have been of value but could not be undertaken within the time available. We recommend that the duration of future Audits be adjusted accordingly.

3. We were constrained in the formal start of the Audit due to timing issues with the Audit award and formal Audit announcement. This impacted our ability in the Audit planning phase to complete interviews with key participants to identify strengths and weaknesses of the system to allow for more focused lines of inquiry during the Audit Phase. The Audit award and announcement should be aligned.

4. Awareness of the Audit amongst those being contacted ranged from very high to non-existent. Furthermore, some of the Aboriginal groups that were contacted chose not to participate or indicated that they lacked the time necessary to engage in the process. In the

future, heightened awareness of the Audit prior to its actual implementation would assist participants in developing a better understanding of the Audit, and provide them with the time to prepare in advance. We suggest that communication initiatives both within the regulatory regime and with the broader NWT community be implemented well in advance of the next Audit.

5. Prior to the Audit the ASC directed substantial efforts towards the identification of audit criteria. The Audit team also dedicated significant resources to the development of a comprehensive set of audit criteria, considerations and lines of inquiry. It is expected that the ASC and future Auditors will benefit by using these criteria and audit planning documents as a starting point for future NWT Audits.

6. We were challenged to quickly and fully understand the interrelationships between all participants in the system. Future Auditors may benefit from the ASC facilitating an initial overview of the process, its participants and their roles and responsibilities.

7. We were often challenged to identify resources at the community level to assist in facilitating the Audit process and serve as a local liaison. It is recommended that the ASC identify such resources and endeavour to ensure their availability during the Audit planning and implementation phases.

8. Under the CIMP, the “responsible authority” is to analyze data collected by it, scientific data, traditional knowledge and other pertinent information for the purpose of monitoring the cumulative impact on the environment. The lack of progress in CIMP substantively increased the work of the Audit team in conducting the Status of the Environment evaluation. If the CIMP is not fully implemented by the next NWT Audit, additional funding should be allocated to this component of the Audit or the evaluation should be deferred.

9. Audit evidence has led us to conclude that the level of performance of the various components of the regulatory regime was generally directly related to the maturity of the established systems. Therefore, the use of the NWT Audit as a means of improving the regulatory regime and its ability to protect the environment would be enhanced by a focus on less mature elements of the regulatory regime.

10. For a period of time, an Office of the Auditor General audit of INAC ran concurrent with the NWT Audit. We found that this led to auditee confusion. We suggest that the NWT Audit be undertaken at a time when similar audits are not in progress.