



**Beverly and Qamanirjuaq
Caribou**

Management Plan
2005 – 2012





Produced by the Beverly and Qamanirjuaq Caribou Management Board

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Summary

This management plan is for the Beverly and the Qamanirjuaq herds of barren-ground caribou. These herds are migratory and are hunted by Dene, Inuit, Métis, Cree and non-aboriginal people from about 20 communities across four jurisdictions (Saskatchewan, Manitoba, Nunavut and the Northwest Territories). The economic value of the total Beverly and Qamanirjuaq caribou harvest is at least \$17 million annually, and the social and cultural importance of caribou to residents of caribou range communities is immense.

The Beverly and Qamanirjuaq Caribou Management Board (BQCMB) has worked since 1982 to promote the wise use of caribou to prevent population decline and safeguard the needs of traditional hunters and others. The BQCMB has developed 13 principles for caribou conservation that are followed when developing Board plans and programs, and making recommendations to governments and communities.

The primary goals of the management plan relate to co-operative management; the provision of information, education and communications about caribou ecology and conservation; population management; and protection of caribou herds and their ranges. These goals provide the foundation for the action plans, which will outline what needs to be done and who will be responsible for conducting the programs and projects required to ensure that healthy caribou herds and ranges are maintained.

Increasing community involvement in caribou management programs is a high priority of the BQCMB. Other priorities are:

- monitoring caribou herds and ranges
- protecting caribou herds and ranges
- environmental assessment of proposed development activities on the caribou ranges

- incorporating local and traditional knowledge into caribou management programs
- school programs about caribou ecology and conservation
- communications.

The use of caribou continues to be a challenge to the Board. To ensure that caribou are available to people from caribou-range communities, the Board has developed categories for allocating caribou harvest, with traditional domestic use given highest priority. The value of collecting harvest data and the sensitivities involved must be impressed upon governments and communities alike.

Three management strategies will be used in relation to caribou herd size and trend.

- A. Core management – population is increasing or stable and above existing commercial, resident and subsistence harvesting needs.
- B. Enhanced management – population is declining or has decreased below existing commercial, resident and subsistence harvesting needs.
- C. Critical threshold management – population size is below the subsistence needs level.

The extent of management effort required will be lowest for core management and greatest for critical threshold management activities.

Effective caribou management will require teamwork and commitment among communities, scientists, government and non-government agencies. All stakeholders must work together to attain consistent, effective and relevant data and information programs, with a focus on community involvement. The BQCMB will continue to urge governments to fulfill their responsibilities for management while investigating and pursuing partnerships for co-operative programs. The Board expects all organizations to make their best efforts to prioritize, partner and implement the plan.

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1.0 Introduction

The heritage and traditions of many northern peoples have been shaped to a large extent by the availability and abundance of caribou. As well, the existence of large, free-ranging barren-ground caribou herds goes hand-in-hand with the vision of this country's natural heritage, a vision that is held not only by Canadians but by people around the world.

The changes and complexities of the modern world bring increasing challenges to caribou conservation. Today's challenges for management of the Beverly and Qamanirjuaq barren-ground caribou herds range from local to global issues. Roads, mineral exploration and mines pose threats to both herds, with proposed hydro-electric developments creating potential additional obstacles. Greater access to the herds provided by new roads tops the list of concerns because of the resulting increased pressure on the herds from non-resident hunters. Global matters, such as the effects of climate change, are key issues for caribou herds and their habitats in Canada's North.

The number of residents on the caribou ranges is increasing, and the use of caribou is diversifying from subsistence hunting to a mix of uses, including traditional pursuits, outfitting, commercial meat sales, meat processing and eco-tourism. The growing and varied demands for caribou require informed and co-operative decision-making.

Effective teamwork, government commitment and patience – challenging as they are to deliver – are required more than ever among communities, scientists, governments and non-government agencies. Issues involving natural resource management, traditional and aboriginal rights, community economic development, the integration of scientific and traditional knowledge, and self-

government point to a need for co-management solutions.

There is growing public concern and awareness of the precious caribou resource. This awareness, combined with co-management working relationships, achievements and trust – rather than confrontation – are the ingredients that must continue to work to protect the caribou herds and their habitats.

2.0 The Beverly and Qamanirjuaq Barren-Ground Caribou Herds and Their Ranges

This management plan is for two large herds of barren-ground caribou: the Beverly and the Qamanirjuaq. These herds are migratory and are hunted by Dene, Inuit, Métis, Cree and non-aboriginal people from about 20 communities across four jurisdictions (Saskatchewan, Manitoba, Nunavut and the Northwest Territories, or NWT; Figure 1).

Over decades, these caribou herds may increase and decrease in size as a result of normal fluctuations. They may also undergo small or large shifts in distribution. Such changes could result from natural events and human activities.

2.1 The Caribou Ranges

Each herd migrates from winter range, much of which is south of the treeline, to traditional calving grounds on the tundra in the Kivalliq region of Nunavut (Figure 1). After calving in early June, the herds generally travel southward, reaching treeline for the rut in October. Then they enter the forested regions, where they winter.

The Beverly caribou have migrated across the northern Canadian landscape for thousands of years, with each caribou travelling up to 2,000 kilometres each year. They traverse extensive

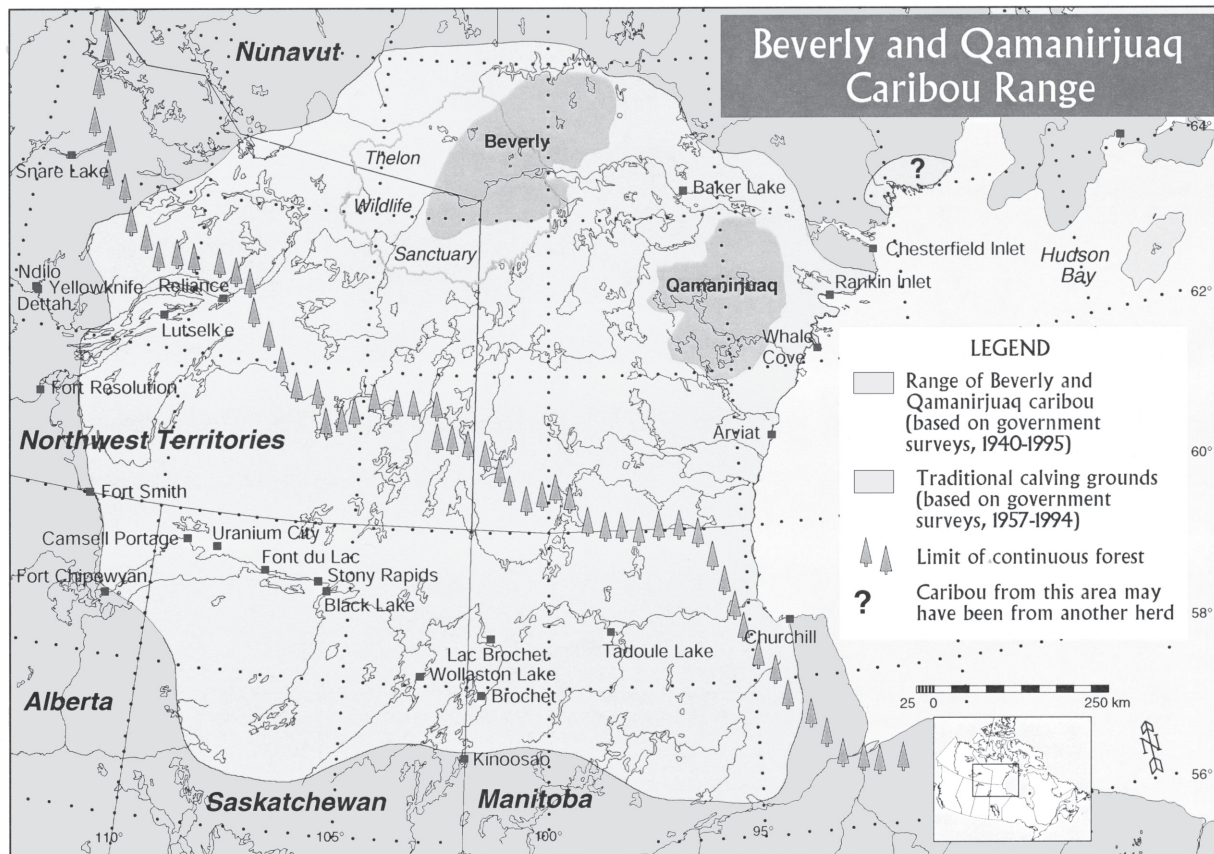


Figure 1. The Beverly and Qamanirjuaq caribou ranges

wilderness areas, including hundreds of wild rivers and lakes, and one of the largest protected natural areas in North America, the Thelon Wildlife Sanctuary. Unlike all other mainland barren-ground caribou herds, which spend part of their annual cycle in coastal areas, Beverly caribou remain inland year-round, travelling up to 1,000 kilometres between their calving grounds west of Baker Lake to winter range in southeastern NWT and northern Saskatchewan. Beverly caribou range is at least 600 kilometres from west to east, from Great Slave Lake, NWT, to somewhere east of Dubawnt Lake, Nunavut, and from the Slave River in Alberta across northern Saskatchewan to somewhere near Nueltin Lake in Manitoba.

The annual journey of some Qamanirjuaq caribou also spans more than 2,000 kilometres, taking the caribou from their calving and post-calving areas west of Rankin Inlet, Nunavut, up to

1,000 kilometres south to their wintering grounds, which can extend in some years into northcentral Manitoba. Some parts of the herd remain on the tundra year-round. The herd's range stretches about 500 kilometres east to west, from the west coast of Hudson Bay inland across the southern Kivalliq region of Nunavut and northern Manitoba. The range includes part of southeastern NWT and northeastern Saskatchewan.

2.2 The Value of Caribou

About 13,250¹ aboriginal people live on or near the range of the Beverly and Qamanirjuaq caribou herds, and depend on them for economic, social and cultural needs. According to statistics compiled in 2001, the total harvest of caribou by these communities for domestic and commercial use, including outfitting, was approximately 18,500 animals, representing over 850,000 kg of meat.

¹ Census Canada 2001; and Registered Indian population by sex and residence, Indian and Northern Affairs Canada, 2001 Ottawa.

This meat would cost over \$20/kg in the range communities to replace with beef. The economic value of the total caribou harvest by communities that harvest Beverly and Qamanirjuaq caribou is estimated to be approximately \$17 million each year.

This is the minimum annual gross economic value estimated, using a minimum harvest rate. The economic potential of the resource is considerably larger when meat processing and uses such as outfitting for non-residents are considered (up to \$3,400² per animal harvested). For example, it is estimated that the profit to outfitters from the 1,050 caribou allocated for non-resident hunting adds approximately \$1 million to the economic value of the two caribou herds.

Lodges and outfitting can supply both jobs and business opportunities for residents of communities on the caribou ranges. Additional economic values are derived from the use of skins for clothing and bedding, and bones and antlers for handicrafts. Along with the economic value, the social and cultural importance of caribou to residents of caribou-range communities is immense.

3.0 The Caribou Management Board

3.1 History of the Board and the Caribou Management Agreement

In 1981, representatives of aboriginal organizations and governments agreed to work together to achieve common goals. This led to the creation of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB) in 1982.

In the early years, the Board discussed the problems of caribou management and pinned down possible solutions. By summarizing those discussions, the first management plan – published

in 1987 – aimed to provide a logical framework within which the Board could function. The plan was, of necessity, dynamic and took anticipated changes in knowledge and the environment into account.

Since then, the Board has reviewed and revised the management plan on a periodic basis to record progress and reassign responsibilities for specific tasks. It has made recommendations on programs, budgets, policies and regulations in the context of the management plan, and implemented various action plans.

In 1992 and in 2001, independent evaluations concluded that the Board had been successful and effective in providing a co-ordinating function for governments and a single forum for the management of an important renewable resource. Both evaluations recommended that the Board's mandate be renewed for a further 10 years. The recommendations were endorsed by the communities and accepted by governments.

The Board is now in its third mandate, extending to 2012. The intergovernmental *Beverly and Qamanirjuaq Barren Ground Caribou Management Agreement* was signed by the governments of Manitoba, Saskatchewan, the Northwest Territories, Nunavut and Canada (Appendix 1).

3.2 The Role of the Board

The Board's mission:

To ensure the long-term conservation of the Beverly and Qamanirjuaq caribou herds for Aboriginal communities who wish to maintain a lifestyle that includes the use of caribou, as well as for all Canadians and people of other nations.

The Board's responsibilities include monitoring caribou habitat, identifying research needs, supporting research, compiling information about the caribou herds and making it accessible, and making recommendations about management and conservation of caribou and their habitats.

² Ashley, Bruce. 2000. Economic benefits of outfitted hunts for barren-ground caribou in the Northwest Territories, File Report No. 129, Department of Resources, Wildlife and Economic Development, Government of the NWT, Yellowknife, NWT.

The Board also communicates its actions to communities on the caribou range and beyond by means of a website (www.arctic-caribou.com) and a biannual newsletter (*Caribou News in Brief*), co-ordinates efforts among various governments and relevant wildlife organizations, and assesses all matters referred to it. Moreover, the Board recognizes the importance and value of local and traditional knowledge and will develop action plans to incorporate this knowledge into caribou management programs.

During its third 10-year mandate, the Board will continue to implement appropriate Board programs. An example is the community-based caribou monitoring program, which was initiated in 2001 with Board funds and funding from government and non-government sources. Through this and other programs, the Board will also participate in the CircumArctic Rangifer Monitoring and Assessment (CARMA) network, which is working to monitor and assess the impacts of global change on the human/*Rangifer* (i.e., caribou and reindeer) system across the circumarctic through co-operation among countries, regions and disciplines.

It is crucial that the Board continue to fulfill its mandate and responsibilities, reflecting community needs, government responsibilities and funding requirements. While the Board is interested in partnership programs, especially for new initiatives such as youth involvement, the primary responsibility and mandate for caribou conservation remains with governments. The Board will therefore continue to urge governments to maintain an adequate level of caribou management programs and budgets in keeping with their responsibilities. The Board's programs will not replace or duplicate programs that are the responsibility of governments; instead, they will enhance or supplement them.

4.0 Community Involvement and Information

4.1 The Role of Communities in Caribou Management

Since the *Beverly and Qamanirjuaq Barren Ground Caribou Management Agreement* was first approved, the Board has capitalized on local community input. Local residents have been involved in aerial surveys, caribou monitoring, interviews, mapping, sampling and reporting on caribou matters such as harvest, movements, distribution, caribou health and relative abundance.

One of this plan's major goals is to keep communities as full participants in the management of the Beverly and Qamanirjuaq herds, especially for monitoring herd distribution and movements. In order to achieve this, communities must be involved in the design and implementation of studies and programs. Communities must also receive support to make their full involvement possible, to take part in educational and monitoring programs, and to help find the best ways to exchange information between community members and government.

Local information and observations about caribou condition, range, weather/climate and land use can effectively add to scientific data collection and interpretation. Additional work is needed, however, to promote the provision of harvest information and support for conventional survey tools at the community level.

Governments, industry, aboriginal organizations and others will be encouraged to partner with the Board to improve data and information programs in light of the Board's high priority on integrating scientific data and community information. It is important for the Board and others to collate and standardize processes and formats for collecting and recording information about caribou and caribou range so that initiatives will be consistent,

concise and effective, and information will be comparable between caribou herds and ranges across the circumpolar North. Various components of information-collection techniques will be addressed during the development of action plans for community involvement.

4.2 Traditional Environmental Knowledge

Traditional environmental knowledge (TEK) is the knowledge and insight gained by people through generations of living in close contact with nature. Countless generations of Aboriginal people have been moulded by the sharing of traditional knowledge. For Aboriginal peoples, TEK is an inseparable part of their ancient cultures and includes rules and views that affect modern resource use.

The practical application of local and traditional knowledge with scientific information demonstrates the value of local consultations, and documenting and preserving traditional knowledge before it is lost. An action plan will be developed to examine ways of integrating TEK and local knowledge with western science, recognizing its value and making use of it in ways that respect the rights and wishes of those who share their knowledge.

5.0 Conservation of Beverly and Qamanirjuaq Caribou

5.1 Purpose and Design of the Management Plan

The purpose of this management plan is to outline the ways in which the Board will work co-operatively with governments, communities and other organizations to safeguard the Beverly and Qamanirjuaq caribou herds. This plan is an overview that prescribes specific action plans,

which will be developed by the Board. The management plan and action plans are based on the principles, goals and priorities outlined in the following sections.

This plan reflects the judgment and experience of the Board on the challenges, issues and opportunities in management, without constraints on funding, staff or agency priorities. The Board expects all organizations to make their best efforts to prioritize, partner and implement the plan.

5.2 Principles for Caribou Conservation

The BQCMB will follow these principles during development and review of the management and action plans, during planning and implementation of Board programs, and when making recommendations to governments and communities for caribou conservation.

1. The participation of communities on the Board and the implementation of the management plan shall be consistent with Aboriginal and treaty rights as recognized in the *Constitution Acts, 1867-1982* and in other legislation such as the Natural Resources Transfer Agreements, the *Nunavut Land Claims Agreement Act*, and other legislated land claim agreements.
2. Effective caribou management must be based on full co-operation, participation and communication among communities and governments.
3. Management decisions affecting caribou and/or their habitats must be consistent with the **precautionary principle** (see following explanation).
4. All management decisions must be consistent with the interdependent principles of **sustainable development**³ that ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.
5. Caribou management programs will make use

³ These principles, which are in harmony with the Board's mandate, include meeting human needs, maintaining ecological integrity and cultural diversity, and achieving equity, social justice and self-determination for Aboriginal peoples.

The Precautionary Principle

In the absence of complete information where there are threats of serious or irreparable damage, lack of complete information or certainty shall not be a reason for postponing reasonable conservation measures.

(Adapted from the *Bathurst Barren Ground Caribou Management Planning Agreement*⁴.)

The Board recognizes that there are deficiencies in knowledge of the caribou herds and their habitats and that it will be necessary to make management decisions in the absence of complete information. To ensure their conservation, the precautionary principle will be employed at all times. In other words, management decisions regarding all aspects of caribou conservation will err on the side of caution. Rather than maximizing caribou harvest levels, a conservative estimate of herd population size will be used to allocate the harvest. Incomplete certainty of serious or irreparable threats shall not be used as a reason for approving human activities that may impact caribou and their range. Likewise, conservation measures will be implemented for all management decisions, but especially where there are deficiencies in knowledge of caribou ecology.

- of the best scientific information and local and traditional knowledge available.
6. The value of wildlife organizations, hunters' and trappers' organizations, band councils and individual community members in bringing local perspectives and traditional environmental knowledge to caribou management is recognized and will be encouraged.
 7. Governments and communities recognize that Aboriginal people depend on caribou not only for food but also because of their social, economic and cultural benefits to the communities.
 8. The maintenance of suitable caribou habitat is essential. Preservation of calving areas, post-calving areas and migration routes is generally of greatest importance.
 9. The Board will make recommendations concerning land-management programs, land-use planning, and land-use activities and developments on caribou and their habitats.
 10. Education and awareness of appropriate caribou hunting methods (to reduce wounding) as well as handling and storage of caribou is necessary, and could involve principles of allowable harvest, voluntary harvest restraints and more effective harvesting techniques.
 11. The governments of Canada, Manitoba, Saskatchewan, the Northwest Territories and Nunavut recognize their complementary mandates to administer, manage and allocate the commercial harvest of barren-ground caribou in co-operation with the communities so that caribou populations are maintained over the long term.
 12. Scientific information and advice will be freely available to individuals and organizations.
 13. The Board will provide a single window for disseminating information on caribou-related issues to aid federal, provincial, territorial and regional organizations, governments and community groups.

⁴ Bathurst Caribou Management Planning Committee. 2004. A draft management plan for the Bathurst caribou herd. 20pp.

5.3 Goals of the Management Plan

The goals of the management plan provide the foundation for the action plans, and fall under four main themes.

Co-operation

1. To manage the herds in a co-operative manner that involves the full participation of communities and governments, and brings together local and traditional knowledge and scientific knowledge in the management process.
2. To co-operate with other northern wildlife, land-use and resource management boards and committees.

Information, Education and Communications

3. To increase knowledge of caribou ecology.
4. To encourage the wise use of caribou.
5. To strengthen public support for the conservation of caribou.

Population Management

6. To encourage governments to monitor population status and trend to identify the appropriate management strategy for each herd.
7. To recommend management action to conserve the caribou populations within the parameters of normal and natural population fluctuations.

Caribou and Habitat Protection

8. To encourage governments to identify caribou seasonal ranges and assess range conditions.
9. To recommend management action to ensure maintenance of sufficient high-quality habitat to support healthy caribou herds.
10. To encourage governments to manage human land-use activities in a manner that protects

caribou and caribou range, particularly in key habitats such as calving and post-calving areas.

5.4 Management Plan Priorities

The 2005 – 2012 management plan builds on the 1996 – 2002 plan⁵, yet takes a new direction in the management of the two caribou herds. A high priority for the current seven-year period is to enhance and increase community involvement in monitoring and managing the caribou herds and their habitats.

Additional priorities include:

- monitoring – population size and trend, herd movements and distribution, caribou health, land-use activities on the caribou ranges, range conditions, harvest levels
- management tools and actions for protection of caribou and caribou range (including protected areas and caribou protection measures)
- environmental assessment, including the cumulative effects of development activities on caribou ranges
- incorporating local and traditional knowledge about caribou and changes occurring across the caribou ranges into management programs
- school programs about caribou ecology and conservation
- communicating with governments, other wildlife and resource management boards/committees, caribou range communities and the general public.

The Board will support additional high-priority projects and programs and will attempt to secure funding from various sources, including government and non-government sources, and will also allocate portions of the Board's own budget to these programs. As a registered charitable organization, the Board will pursue partnerships

⁵ BQCMB 1996. Beverly and Qamanirjuaq Caribou Management Plan 1996-2002. 12pp.

and co-operative projects with appropriate government and non-government organizations for programs related to caribou management and conservation.

6.0 Management of the Caribou Herds and Their Ranges

6.1 Uses of Caribou

People living in communities on the ranges of the Beverly and Qamanirjuaq caribou herds hope that opportunities to harvest caribou will be safeguarded for their children and future generations. Membership on the Board is a chance for traditional caribou hunters to fully participate in making recommendations to governments to maintain the option of a traditional lifestyle for their communities.

Management actions must always ensure that caribou are accessible to people from the caribou-range communities, and that the opportunity to harvest caribou remains part of their future. Accordingly, the Board developed these harvest allocation categories, in descending order of priority:

1. Traditional users (domestic use)
2. Resident users (domestic use)
3. Traditional/resident users (guiding non-resident hunting)
4. Local use for commercial purposes
5. Export use for commercial purposes

Caribou are used in many different ways. Traditional caribou-using people harvest caribou for food and clothing. They share with family and friends, and sometimes with other communities. Recreational hunting occurs among other residents who require a special licence. Commercial use takes place through outfitting for non-resident trophy hunts, and in Nunavut and the NWT, caribou meat and other parts are sold to the public.

The Board promotes the wise use of caribou to protect the herds from human-caused decline, and safeguard the basic needs of traditional hunters and other caribou users. Several factors affect the wise use of caribou.

- **Amount of harvest** – It is very important to know the level of harvest to ensure that the herds can withstand the harvest pressures of present and future generations. If too many caribou are harvested, the well-being of the herds and the people who rely on them may be threatened.
- **Crippling loss** – Animals shot but not retrieved add to the harvest, but do not benefit community residents.
- **Handling and storage** – Poor handling and storage of caribou parts also puts more pressure on the herds, and on communities, which must spend more time and effort securing their supply of caribou.
- **Priorities of use** – It is necessary for the Board to adopt priorities of use that will protect the herds from over-harvest and safeguard the basic needs of communities. The use of caribou for food is commonly recognized and accepted as the most important use category that must not be threatened by other kinds of uses, including recreational and trophy hunting, and other commercial uses.

The use of caribou continues to be a challenge to the Board. This issue will be addressed by management actions after ongoing consultation with traditional users, recreational hunters, outfitters and commercial operators. Factors affecting caribou use will be addressed by action plans.

The Value of Harvest Data

For their part, communities need to understand the value of harvest data in management. Harvest data are required for many management purposes,

including:

- protecting herds from serious declines
- allowing the Board to address requests for new harvest allocations
- improving calculations of basic needs levels for communities
- calculating the economic value of caribou
- distinguishing between traditional and non-traditional uses of caribou, and
- enhancing the role and involvement of caribou-range communities in caribou conservation.

It is recognized that governments need to understand and respect certain sensitivities in collecting harvest data from traditional caribou hunters. The Board will develop an action plan for promoting the value of harvest data to communities.

6.2 Information Requirements

The Board has developed a list of ongoing information requirements to address management issues. This information is required to help communities and wildlife managers make better decisions to ensure long-term maintenance of healthy caribou herds, recognizing that the normal and natural fluctuations of barren-ground caribou herds will at some point affect sustainable harvest levels. The following types of information are required for management of the Beverly and Qamanirjuaq caribou herds.

1. Population size
2. Population trend
3. Recruitment (annual calf survival)
4. Patterns of movements and distribution
5. Reliable and accurate harvest information
6. Local and traditional knowledge from communities
7. Range condition and trend
8. Effects of environmental conditions (snow,

forage, insects, disease, predation and contaminants) on caribou

9. Impacts of human activities on caribou behaviour, distribution and mortality, and on caribou range
10. Herd health (indicated by measures such as pregnancy rates, calf mortality and physical condition of breeding females)
11. Genetic similarities and dissimilarities between adjacent herds.

During development of this list, the Board realized the importance of incorporating local and traditional knowledge from caribou-range communities, and gaining the understanding and support from communities for current wildlife research and management techniques. The Board will identify additional information requirements as it addresses research and communication issues in response to specific situations.

6.3 Population Management

Concern about the possible decline of the Beverly and Qamanirjuaq caribou herds during the 1970s was largely responsible for the establishment of the Board. Now in its third decade, the Board's primary goal remains to safeguard these two herds.

Recognizing that barren-ground caribou herds naturally fluctuate in numbers, population management strategies must correspond to the phase of the cycle the herd is in. The main objective of population management is to monitor where the Beverly and Qamanirjuaq herds are within their long-term population cycles to help guide decisions about population monitoring actions and caribou harvest.

The Board has developed strategies to determine appropriate management actions for the Beverly and Qamanirjuaq herds that are based on the status (population levels and trend) of each herd within natural long-term population

fluctuations. These management strategies are described generally here. Details will be provided in the action plan for population management.

The Management Strategies

Three strategies have been developed by the BQCMB to manage the Beverly and Qamanirjuaq caribou herds (Figure 2).

- **Strategy A – Core Management (Stable or Increasing Trend/High Population)**

Core management applies at all times during population cycles and represents the minimum level of population management activities that need to be conducted. Core management actions would be applied when population surveys and/or other indicators suggest that herd trend is increasing or stable and that population size is above existing

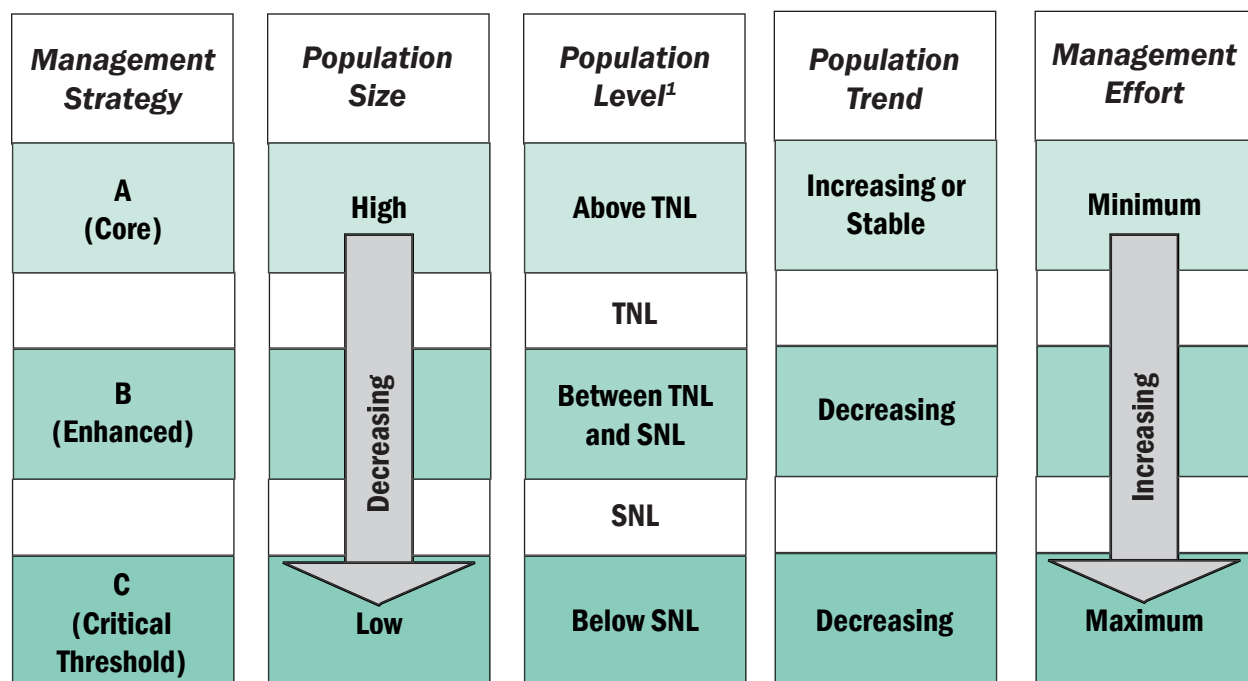
commercial, resident and subsistence harvesting needs.

- **Strategy B – Enhanced Management (Declining Trend)**

As herd trend declines, management actions need to be intensified to ensure that herds will be able to follow their natural cycle and increase in size again. Enhanced management will be applied when population censuses and/or other indicators suggest that population trend is declining or that population size has decreased below existing commercial, resident and subsistence harvesting needs.

- **Strategy C – Critical Threshold Management (Population level below Subsistence Needs Level, or SNL)**

Critical threshold management would apply when the population size is at the low point of the cycle



¹TNL (Total needs level): total existing commercial, resident and subsistence harvesting needs.
SNL (Subsistence needs level): see text for explanation.

Figure 2. Management strategies in relation to population size and trend

Subsistence Needs Level

The subsistence needs level (SNL) is defined as the total number of caribou required to sustain the basic subsistence needs of traditional hunters harvesting from each of the Beverly and Qamanirjuaq herds. The total herd size that is required to sustain the traditional subsistence harvest represents a critical level, below which management action must be maximized. Below this critical level, the Board recognizes that subsistence hunters will experience significant hardship.

The SNL is calculated separately for each herd using the sum of the lowest subsistence harvests recorded in each community harvesting from these herds, with an adjustment (25 percent) added to account for wounding/crippling loss.

and there are not enough caribou to meet the subsistence needs level.

The extent of management effort required increases from high to low caribou population levels, and from Management Strategy A to C, as shown in Figure 2. Herds with decreasing trends require greater management than herds with increasing or stable trends. Maximum management effort will be required for a decreasing herd with a population level below SNL. In contrast, a herd that is increasing and near the high of the cycle will require only core management actions.

6.4 Harvest Management

The Board recognizes that communities and governments must agree there is a problem before harvest management is considered. The first step will be to verify that herd size is below the

subsistence needs level. With both communities and governments involved in monitoring the herds, all parties will review and discuss results to reach consensus on the trend of the caribou herds. The aim is to identify and carry out harvest management actions that halt a human-induced decline in the herds and allow population levels to recover above those needed to sustain subsistence needs levels.

Total Sustainable Harvest

Total sustainable harvest (TSH) is defined as the total number of animals that can be removed from a population without risk of causing a decline. Naturally, there are many dangers in assigning such a number, particularly when data used to assess population status and trends are collected infrequently and population estimates are often imprecise. Because of these limitations, this plan incorporates the **precautionary principle**,⁶ building in safeguards to ensure healthy caribou herds in relation to natural population fluctuations.

Total population sizes for both the Beverly and Qamanirjuaq herds of barren-ground caribou are extrapolated from the total number of breeding females obtained from photographic calving ground surveys. TSH estimates are calculated using the most recent total population estimates, with an adjustment to incorporate the precautionary principle. Details for calculations will be provided in the action plan for population management.

6.5 Population Monitoring and Indicators

Regular population monitoring by means of surveys is an essential tool for the effective management of the two herds. The use of indicators is a means of monitoring abundance and trend in periods between the more intensive

⁶ See definition in Sec. 5.2.

and expensive population estimates. Indicators of population size can provide an effective alternative in response to decreasing wildlife management budgets, provided that they are initially calibrated with regular and precise estimates of breeding females on each of the caribou calving grounds. Indicators will be described in an action plan addressing the issue of population monitoring.

Accurate caribou population data, complemented by information about these indicators, are prerequisites for the Board to make credible and responsible management decisions and recommendations. If government agencies are unwilling or unable to assess population size and trend, indicators such as harvest data are of limited value.

The causes of a population decline are likely to be many and complex. There is no assurance that annual monitoring of indicators, surveys or research will identify the causes. However, the annual monitoring of indicators of caribou population health and range condition is more likely than periodic population estimates to indicate a decline in caribou numbers and thus trigger scientific effort to isolate the causes.

7.0 Action Plans

Action plans are an important part of the management plan because they describe what needs to be done to achieve the management plan's goals. Action plans outline essential tasks that must be conducted to allow communities and governments to make appropriate decisions to ensure that healthy caribou herds and caribou ranges are maintained. Action plans also assign responsibilities for conducting programs and projects, although they are dynamic and are updated periodically to reflect changing circumstances.

Action plans will be developed by the Board

to address the goals and priorities outlined in this management plan (Sections 5.3 and 5.4), the information required to address management issues (Sec. 6.2), and other issues and tasks identified over the life of the management plan.

The action plans will address topics that include:

- community involvement in management and incorporating local and traditional knowledge into caribou management
- monitoring, including scientific monitoring by governments and community-based monitoring
- assessment of herd size and trend
- caribou condition/health
- range use and condition
- the need for habitat protection, particularly in important habitats such as calving grounds and post-calving areas
- use of caribou, including harvest data reporting and harvest management, minimizing crippling loss, meat handling/storage, and priority uses of caribou
- environmental assessment of proposed developments and other land-use activities on caribou range, including cumulative effects assessment
- education, including increasing public awareness and appreciation of the caribou herds and the BQCMB, and increasing understanding about the value of harvest data
- communication, including provision of information to communities and the general public about the herds and the issues they face.

Appendix 1

Beverly and Qamanirjuaq Barren Ground Caribou Management Agreement

THIS AGREEMENT made on the 1st day of April 2002 BETWEEN:

THE GOVERNMENT OF CANADA, as represented by the Minister of Indian Affairs
and Northern Development (hereinafter referred to as “Canada”);
and

THE GOVERNMENT OF MANITOBA, as represented by the Minister of Conservation
(hereinafter referred to as “Manitoba”);
and

THE GOVERNMENT OF SASKATCHEWAN, as represented by the Minister of Environment and
Resource Management (hereinafter referred to as “Saskatchewan”);
and

THE GOVERNMENT OF THE NORTHWEST TERRITORIES, as represented by the Minister of
Resources, Wildlife and Economic Development (hereinafter referred to as “Northwest Territories”);
and

THE GOVERNMENT OF NUNAVUT, as represented by the Minister of Sustainable Development
(hereinafter referred to as “Nunavut”)

WHEREAS the Beverly herd and Qamanirjuaq herd of barren ground caribou historically migrate
across provincial and territorial boundaries;

AND WHEREAS the continued well-being of these herds requires coordinated management,
goodwill and co-operation amongst the above governments and the TRADITIONAL USERS of
these caribou;

AND WHEREAS the parties hereto recognize that, as well as the value of the caribou to all
Canadians generally, a special relationship exists between TRADITIONAL USERS and the caribou:

NOW THEREFORE THIS AGREEMENT WITNESSETH that the parties hereto under the
authority of:

- (a) The Northwest Territories Act (1985), The Nunavut Act (1993);
- (b) The Manitoba Wildlife Act - section 84;
- (c) The Saskatchewan Wildlife Act - section 9;
- (d) The Northwest Territories Wildlife Act - section 27;
- (e) The Nunavut Act - section 73 agree that:

A. Definitions In this Agreement:

1. “Beverly herd” means that herd of barren ground caribou which utilizes range in Manitoba, Saskatchewan, the Northwest Territories and Nunavut and regularly bears its young near Beverly Lake in Nunavut, and historically migrates into Saskatchewan, and Manitoba and the Northwest Territories.
2. “Qamanirjuaq herd” means that herd of barren ground caribou which utilizes range in Manitoba, Saskatchewan, the Northwest Territories and Nunavut and regularly bears its young near Qamanirjuaq Lake in Nunavut and historically migrates into Saskatchewan, and Manitoba and the Northwest Territories.
3. “TRADITIONAL USERS” means those persons recognized by communities on the caribou range as being persons who have traditionally and currently hunted caribou for subsistence.
4. “HABITAT” means the whole or any part of the biosphere upon which the Beverly and Qamanirjuaq caribou herds depend, including all of the land, water and air that they inhabit, cross or utilize at any time.

B. The Beverly and Qamanirjuaq Caribou Management Board

1. A joint management board shall be established to be known as the Beverly and Qamanirjuaq Caribou Management Board, hereinafter referred to as the “Board,” having the following objectives:
 - (a) to co-ordinate management of the Beverly and Qamanirjuaq herds in the interest of TRADITIONAL USERS and their descendants, who are residents on the range of the caribou, while recognizing the interest of all Canadians in the survival of this resource;
 - (b) to establish a process of shared responsibility for the monitoring of the herds and for the development of management programs between the parties hereto and the TRADITIONAL USERS of the Beverly and Qamanirjuaq herds;
 - (c) to establish communications amongst TRADITIONAL

USERS, between TRADITIONAL USERS and the parties hereto, and amongst the parties hereto in order to ensure coordinated caribou conservation and caribou HABITAT protection for the Beverly and Qamanirjuaq herds;

- (d) to discharge the collective responsibilities for the conservation and management of caribou and caribou HABITAT within the spirit of this Agreement.

2. Support shall be provided by the parties hereto to the Board in its efforts to achieve coordinated management of the Beverly and Qamanirjuaq herds by responding promptly to recommended measures.

C. Board Responsibilities

Without restricting the generality of clause B of this Agreement, the parties agree that the Board shall have the following duties and responsibilities:

1. To develop and make recommendations to the appropriate governments and to the groups of TRADITIONAL USERS for the conservation and management of the Beverly and Qamanirjuaq herds of barren ground caribou and their HABITAT in order to maintain the herds, as far as reasonably possible, at a size and quality which will sustain the requirements of TRADITIONAL USERS. Such recommendations may include, but are not necessarily limited to:
 - (a) limitations on the annual harvest of the Beverly and Qamanirjuaq herds and the allocation of that harvest amongst the Northwest Territories, Nunavut, and the provinces of Saskatchewan and Manitoba;
 - (b) criteria for regulating the methods of harvest;
 - (c) methods of TRADITIONAL USER participation to assist in the management of the Beverly and Qamanirjuaq caribou herds;
 - (d) caribou research proposals;
 - (e) recommended standardized data collection and presentation;

- (f) a herd management plan for the Beverly and Qamanirjuaq herds which will include consideration of traditional knowledge, where available; and will take into account the maintenance of the natural balance of ecological systems; the protection of wildlife HABITAT; and the maintenance of vital, healthy wildlife populations capable of sustaining lawful harvesting needs.
- 2. To monitor the caribou HABITAT over the entire ranges of the Beverly and Qamanirjuaq herds so as to facilitate the maintenance and protection of productive caribou HABITAT.
- 3. To conduct an information program and hold such public meetings as are necessary to report on and discuss with TRADITIONAL USERS its responsibilities, findings and progress.
- 4. To assess and report on the operation of its herd management plan to appropriate governments and TRADITIONAL USER groups.
- 5. To submit to the parties hereto annual reports which shall include:
 - (a) a summary of Board activities, recommendations and responses by governments and TRADITIONAL USERS;
 - (b) a review of the state of the Beverly and Qamanirjuaq caribou herds and their HABITAT;
 - (c) a summary of harvests by jurisdiction and community;
 - (d) a financial statement for the operation of the Board.
- 6. To consider any other matters respecting the management of barren ground caribou that are referred to the Board by the parties hereto or Board members. The Board may also consider any other matters respecting the management of the Beverly and Qamanirjuaq herds referred to the Board by any other person or organization.

D. Membership of the Board

1. Up to fifteen members shall be appointed to the Board as follows:
 - (a) The Minister of Indian Affairs and Northern Development, Government of Canada; The Minister of Conservation, Government of Manitoba; the Minister of Environment and Resource Management, Government of Saskatchewan; the Minister of Resources, Wildlife and Economic Development, Government of the Northwest Territories; and the Minister of Sustainable Development, Government of Nunavut shall each appoint one senior official from their respective ministries for a total of five members.
 - (b) the Minister of Conservation, Government of Manitoba, shall appoint two residents from the communities of Northern Manitoba for a total of two members;
 - (c) the Minister of Environment and Resource Management, Government of Saskatchewan, shall appoint two residents from the communities of Northern Saskatchewan for a total of two members; and may appoint a third resident from the communities of Northern Saskatchewan;
 - (d) the Minister of Resources, Wildlife and Economic Development, Government of the Northwest Territories, shall:
 - (i) where recommended by the Dene Nation, appoint one resident from the communities in the South Slave Region of the Northwest Territories;
 - (ii) where recommended by the Métis Nation of the Northwest Territories, appoint one resident from the communities in the South Slave Region of the Northwest Territories; for a total of two members;
 - (e) the Minister of Sustainable Development, Government of Nunavut, shall, where recommended by the Kivalliq Wildlife Board, appoint two residents from the communities in the Kivalliq [Keewatin] region of Nunavut and may appoint a third resident

from the communities of the southern Kivalliq [Keewatin] region of Nunavut.

2. The members of the Board shall be appointed for a term of five years, subject to the right of the parties to terminate the appointment of their respective appointees at any time and reappoint Board members in accordance with the above.

E. Board Rules and Procedure

1. The Board shall establish in writing from time to time rules and procedures for its functioning, provided however that:
 - (a) the Chairman and Vice-Chairman shall be elected from amongst the members of the Board by secret ballot;
 - (b) the election and replacement of the Chairman and the Vice-Chairman shall be by simple majority;
 - (c) thirty days notice of meeting shall be given by mail, telephone or telegram, as appropriate;
 - (d) eight members shall constitute a quorum;
 - (e) decisions of the Board shall be by consensus wherever possible, and shall always require a majority voting in favour, with each member having one vote;
 - (f) no voting by a proxy shall be allowed;
 - (g) the Board shall hold formal meetings twice yearly or more often as necessary at the call of the Chairman;
 - (h) the Board shall keep summary minutes and records of all its meetings and circulate them amongst its members;
 - (i) the Board may establish or dissolve standing committees as it deems necessary to carry out its functions, and set the terms of reference for such standing committees; and
 - (j) the Board members unable to be present at

Board meetings shall receive notice of Board recommendations thirty (30) days in advance of submission to any minister for action, except where there is consent of all Board members in which case recommendation to the Minister(s) can be made forthwith.

F. Finances

1. Subject to the terms and conditions of this Agreement and to funds being appropriated by the legislative authority in respect of each party on an annual basis, the parties hereto shall annually provide funds necessary to ensure the Board functioning in a manner herein before stated provided, however, that all costs for the Board shall not exceed \$75,000.00 annually and that all such annual costs shall be shared equally amongst the parties to this Agreement in accordance with section F-2 below.
2. Prior to the administrative costs for the Board being eligible to be shared by the parties hereto, the Board shall be required to submit to each party an annual estimate of the financial administrative costs, not exceeding \$75,000.00 in each year, and each party shall in writing within thirty days of receipt thereof, indicate its approval or disapproval for such budget and provide reasons therefore. In the event that a majority of the parties hereto approve the annual budget for the administrative costs, the budget shall be shared equally by all parties hereto.
3. Administrative costs to be shared amongst the parties hereto shall include expenditures related to:
 - (a) a secretariat to provide for and follow up on meetings, record and distribute minutes, provide members with informational support, maintain the operation of the Board between meetings, and undertake such other organizational arrangements as the Board may require;
 - (b) the production of an annual report and its distribution;
 - (c) a modest independent research review capability;
 - (d) the production of a newsletter, and other

informational and educational material; and

(e) such other costs as the parties may agree upon.

4. Each party shall be responsible for funding the expenses for salaries or honoraria and other incidental travel expenses, including transportation, meals, accommodation related to Board members appointed or confirmed by that party. The provisions for said expenses shall be in addition to the annual administrative costs provided in section F-1 above.
5. The Board shall annually account for all monies received and disbursed and said records shall be available to any of the parties for inspection upon thirty days written notice to the Chairman.

G. General

1. All reports, summaries or other documentation prepared or otherwise completed under the terms of this Agreement shall become the joint property of all parties hereto and any and all income derived therefrom shall be jointly shared amongst the parties in proportion to expenditures incurred by each party in generating such income.
2. The parties are committed to taking all actions under this Agreement in a way that respects any treaty rights or Aboriginal rights of Aboriginal peoples relating to the hunting of Beverly and Qamanirjuaq barren ground caribou.
3. This Agreement shall take effect on the 1st day of April, 2002, and shall terminate on the 31st day of March, 2012, unless sooner terminated, for any reason, by any of the parties hereto upon six month's notice in writing to the other parties.
4. In recognition of the importance of the Beverly and Qamanirjuaq herds and their HABITAT, the withdrawal of any of the parties from this Agreement shall not preclude the remaining parties from continuing with the objectives and processes set out in this Agreement.
5. This Agreement may be amended at any time by an exchange of letters following unanimous approval by the parties hereto.
6. This Agreement supersedes the Beverly-Qamanirjuaq Barren Ground Caribou Management Agreement made between Manitoba, Saskatchewan, the Northwest Territories and Nunavut on the 1st day of April, 1999.

