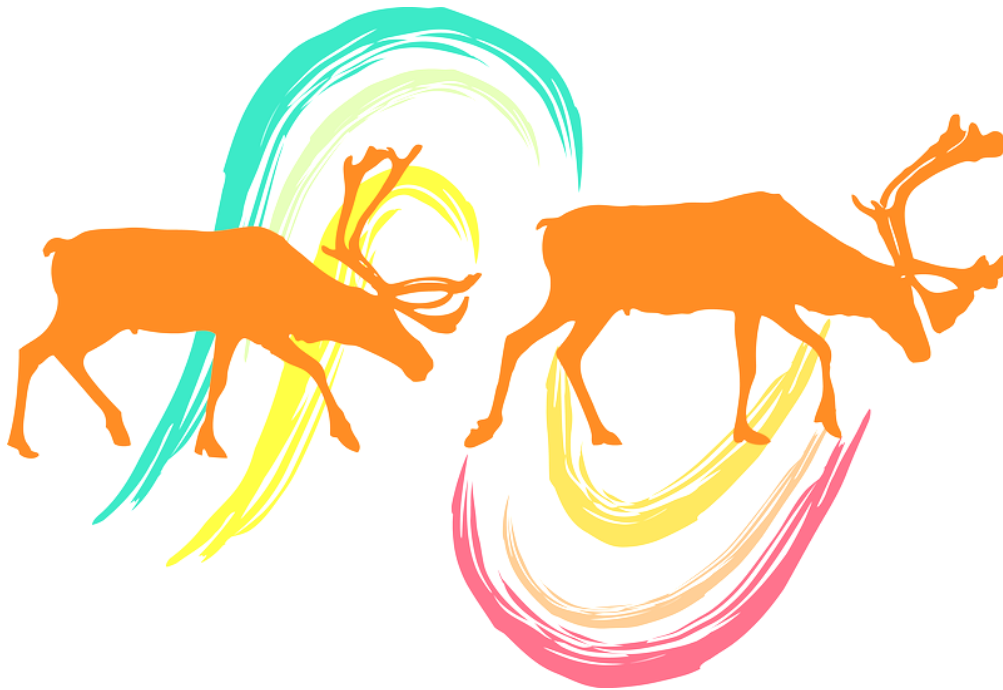




Action Plan for

THE BLUENOSE-WEST
CARIBOU HERD
— *ORANGE STATUS* —



Prepared by the Advisory Committee for
Cooperation on Wildlife Management

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About the ACCWM

The Advisory Committee for Cooperation on Wildlife Management was established to exchange information, help develop cooperation and consensus, and make recommendations regarding wildlife and wildlife habitat issues that cross land claim and treaty boundaries. The committee consists of Chairpersons (or alternate appointees) of the Wildlife Management Advisory Council (NWT), Gwich'in Renewable Resources Board, ʔehdzo Got'ıne Gots'ę Nákedı (Sahtú Renewable Resources Board), Wek'èezhìi Renewable Resources Board, Kitikmeot Regional Wildlife Board, and Tuktut Nogait National Park Management Board.

About *Taking Care of Caribou* and the associated Action Plans

In late 2014 and early 2015, members of the ACCWM approved *Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds management plan*. The Plan was developed in consultation with most of the communities that harvest from the three herds. The intent is for the Plan to address caribou management and stewardship over the long term. It was presented to the Minister of Environment and Natural Resources (Government of the Northwest Territories), the Minister of Environment (Government of Nunavut), and the Environment Minister (Government of Canada) in 2014. The Management Plan is supported by two companion documents: a report that summarizes recent scientific information about the herds, and a report that provides a summary of the information that was shared during community meetings to develop the Plan. Individual Action Plans were then developed for each of the three herds. These Action Plans provide details on the types of actions that are recommended based on a herd's status, as well as who is responsible for the actions, and when they should be done.

Disclaimer:

The ACCWM recognizes that the implementation of management actions moving forward is subject to appropriations, prioritizations, and budgetary restraints of the participating agencies and organizations.

Contents

Acronyms used in this Plan	ii
Introduction	1
Management and Action Planning Overview	2
Roles and Responsibilities	3
How a Herd’s Status and Appropriate Management Actions are Determined	4
Communications	6
Understanding Current Bluenose-West Herd Size, Trend and Status	7
Status Decision 2016	7
Information used in the 2016 Status decision	8
Population size.....	8
Population trend and rate of change	10
Productivity and recruitment	11
Adult composition	11
Body condition and health	12
Harvest levels.....	15
Predator populations.....	17
Range and movement patterns.....	19
Environment and habitat.....	22
Human disturbance	23
Background to post-calving survey methods	23
Table 4: Criteria used to assess Bluenose-West herd status in 2016	25
Orange Status Management Actions for Bluenose-West Caribou	30
Management Actions Table for Bluenose-West Caribou: Orange Status	31
A. Education	31
B. Habitat.....	34
C. Land use activities.....	35
D. Predators	38
E. Harvest Management	39
F. Monitoring	42
Appendix A: List of ACCWM Working Group members.....	45
Appendix B: Terms of reference for the ACCWM annual status meeting.....	46

Appendix C: Communication Plan 49

Appendix D: Criteria used to assess herd status with links to relevant actions in the Management Actions Table for Bluenose-West Caribou: Orange Status 54

Appendix E: Summary table of management actions presented in *Taking Care of Caribou* 55

Appendix F: Determining allocations and Total Allowable Harvests..... 57



The Bluenose-West caribou population status is
ORANGE: intermediate and decreasing

Acronyms used in this Plan

ACCWM (WG)	Advisory Committee for Cooperation on Wildlife Management (Working Group)
CI	Confidence Interval
DOE	Department of Environment, Government of Nunavut
ENR	Department of Environment and Natural Resources, GNWT
GN	Government of Nunavut
GNWT	Government of the Northwest Territories
GRRB	Gwich'in Renewable Resources Board
GSA	Gwich'in Settlement Area
HTC	Hunters and Trappers Committee
HTO	Hunters and Trappers Organization
IGC	Inuvialuit Game Council
ISR	Inuvialuit Settlement Region
NWMB	Nunavut Wildlife Management Board
NWT	Northwest Territories
PCA	Parks Canada Agency
RRC	Renewable Resources Council
SRRB	Sahtú Renewable Resources Board (ᐅehdzo Got'Inę Gots'ę Nákedı)
SSA	Sahtú Settlement Area
TAH	Total Allowable Harvest
TG	Tłıchq Government
TNNPMB	Tuktut Nogait National Park Management Board
WMAC (NWT)	Wildlife Management Advisory Council (Northwest Territories)

Introduction

This *Action Plan for Bluenose-West Caribou* was developed by wildlife management boards with stewardship responsibilities for barren-ground caribou and their habitat in the Northwest Territories and Nunavut.¹ It is the next step in a collaborative management planning process that has involved 17 communities in six land claim areas, over the last ten years. The Action Plan describes the specific actions that will carry out the **principles** and goals outlined in *Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds Management Plan (November 3, 2014)*.

Members of the Advisory Committee for Cooperation on Wildlife Management (ACCWM) approved *Taking Care of Caribou* (the Management Plan) in late 2014 and early 2015. The ACCWM presented the Plan to the Minister of Environment and Natural Resources (Government of the Northwest Territories), the Minister of Environment (Government of Nunavut), and the Environment Minister (Government of Canada) in 2014. The intent is for the Plan to address management activities and caribou stewardship over the long term. The Plan describes the consensus-based approach, herd definitions, principles, and goals that guided the process. It provides a framework for **Monitoring** the herds, making decisions, and taking action. Five different categories of management actions are outlined in the Plan, including **Education**, **Habitat**, **Land Use Activities**, **Predators** and **Harvest Management**.

Management Plan **principles**:

- Management decisions will respect treaties and land claim agreements and Aboriginal harvesting rights in areas both with and without a land claim agreement
- Management decisions will reflect the wise use of the herds in a sustainable manner
- Adequate habitat (quantity and quality) is fundamental to the welfare of the herds
- Management decisions will be based on the best available information – including science, as well as traditional and local knowledge – and will not be postponed in the absence of complete information
- Effective management requires participation, openness and cooperation among all users and agencies responsible for the stewardship of the herds and their habitat. Shared use requires shared responsibility
- Harvests must be allocated in a manner which respects Aboriginal harvesting rights and the sustainable harvesting limit, if any, of each herd
- The impacts to caribou herds and their habitat must be anticipated and minimized
- Harvesting is fundamental to the cultural, social, spiritual and economic well-being of the communities of the Northwest Territories and Nunavut (*Taking Care of Caribou*, p. 12).

¹ Throughout the Management Plan and Action Plans, the terms ‘wildlife management boards’ or ‘member boards’ refer to the six boards which are members of the Advisory Committee for Cooperation on Wildlife Management.

Separate Action Plans have been developed for each of the three herds. Plans such as this one lay out specific objectives, tasks and priorities for the herds, and provide more details on who is responsible for management actions, as well as how and when they will be carried out. The Action Plans are based on the best current information available, but are designed to be “living documents” to allow for the adjustment of tasks as new information becomes available. They are intended to be in place three to five years, but are reviewed annually and may be revised as needed.

The ultimate goal of the Management Plan and the accompanying Action Plans is to ensure that there are caribou for today and for future generations. The management goals of the plans are to:

- Maintain herds within the known natural range of variation,
- Conserve and manage caribou habitat, and
- Ensure that harvesting is respectful and sustainable (*Taking Care of Caribou*, p. 12).

Management and Action Planning Overview

Stewardship planning for the Bluenose-East, Bluenose-West and Cape Bathurst caribou herds is founded on an “adaptive management cycle”. This means that there are ongoing efforts to monitor and assess the results of management actions, adapt when things aren’t working well, use what is learned to shape future actions, and share that information with others. This is an important process in being able to gauge the success of management actions. Figure 1 shows a diagram of the adaptive management cycle.

Issues thought to be affecting barren-ground caribou have been identified collaboratively through both scientific research and community engagement. Some factors, such as climate change, are difficult to influence, but all require cooperation and coordination for effective action. The Management Plan was developed because the ACCWM identified a need to:

- Develop a cooperative approach to managing for the herds,
- Protect the habitat in the herds’ range, and
- Make decisions on the shared harvests in an open and fair manner (*Taking Care of Caribou*, p. 6).

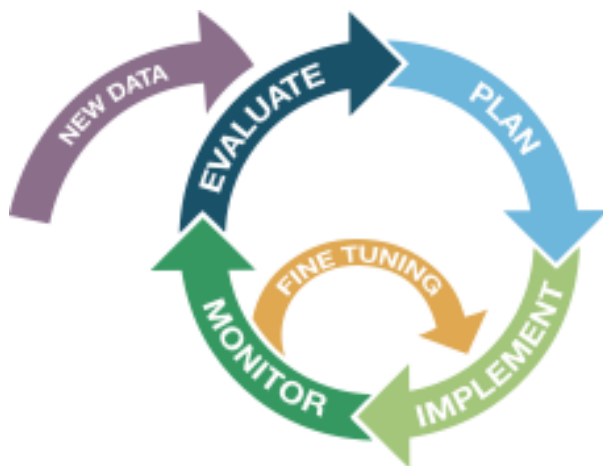


Figure 1: Diagram showing the process of an adaptive management cycle (figure from Weeks, R., and S. Jupiter. 2013. *Adaptive Comanagement of a Marine Protected Area Network in Fiji*. *Conservation Biology* Vol. 27, No. 6: 1234-1244.)

The Management Plan provides an overall framework for how this cooperation can take place. Implementation of the Action Plans is also cooperative, requiring ongoing community input and support. An inclusive, consensus-based approach is used at all stages of the planning process. Sometimes, management topics can be controversial and finding agreement is challenging. In order to honour differing perspectives yet still move ahead with planning, it was decided to be transparent about differences and acknowledge them as unresolved **'hot topics'** that are likely to require further work.

Hot topics presented in the Management Plan include:

- Defining Caribou Herds
- Exchange or Movement between Caribou Herds
- Caribou Collaring
- Perspectives on Harvesting and Harvest Monitoring
- Predator Control Programs
- Priorities for Harvest Allocation
- Cow vs. Bull Harvests.

Each ACCWM member board is responsible for approving these Action Plans for implementation within its region. Once an Action Plan is approved, it is submitted to the appropriate governments and other parties for implementation.

Roles and Responsibilities

The **Advisory Committee for Cooperation on Wildlife Management** was established in 2008, to exchange information, help develop cooperation and consensus and make recommendations regarding wildlife and wildlife habitat issues that cross land claim and treaty boundaries. The chairpersons of six wildlife management boards make up the ACCWM Figure 3.

The ACCWM member boards have authority through land claim and other agreements to make recommendations and decisions on wildlife management issues. Under their mandates, the boards have responsibility for wildlife and wildlife habitat management. The ACCWM can work towards consensus-based recommendations to governments regarding caribou management actions. However, ACCWM recommendations do not prohibit individual boards from providing additional recommendations, nor are individual boards bound by ACCWM recommendations.

The **Advisory Committee for Cooperation on Wildlife Management** consists of the Chairpersons (or alternate appointees) of:

- Wildlife Management Advisory Council (WMAC (NWT))
- Gwich'in Renewable Resources Board (GRRB)
- ?ehdzo Got'Inę Gots'ę Nákedı (Sahtú Renewable Resources Board (SRRB))
- Wek'èezhii Renewable Resources Board (WRRB)
- Kitikmeot Regional Wildlife Board (KRWB), and
- Tuktut Nogait National Park Management Board (TNNPMB).

Early in 2015 the ACCWM established a Working Group to prepare draft Action Plans for the Cape Bathurst, Bluenose-West and Bluenose-East barren-ground caribou herds. The members of this Working Group are included in **Appendix A**. It is important to note that the success of the Management Plan and associated Action Plans is not just the responsibility of the ACCWM and its Working Group, but also relies on the cooperation of multiple partners. Potential government partners include the Government of the Northwest Territories, Government of Nunavut, Parks Canada Agency, Tłı̄chǫ Government and other Aboriginal Governments. Regional partners, which vary significantly by region, may include individual community members, community organizations such as Renewable Resource Councils (RRCs), Hunters and Trappers Committees and Organizations (HTCs and HTOs), and regional organizations.

How a Herd’s Status and Appropriate Management Actions are Determined

The ACCWM is responsible for determining herd status each year and developing appropriate management actions based on that status. Each fall, the member boards meet to share information and make collaborative decisions regarding the herds, according to the requirements of regional legislation and land claims agreements. The implementation of the Action Plans is also reviewed at this time. The annual status meeting is an opportunity for the ACCWM to invite authorized representatives of management agencies such as Environment and Natural Resources (ENR - GNWT), Parks Canada, and the Government of Nunavut, as well as harvesters, the public, and researchers to get together and discuss the best available information about the caribou. Terms of reference for the meeting are included in **Appendix B**.

New information presented and reviewed at the annual status meeting may include that from monitoring and research programs, as well as community and/or traditional knowledge. Herd status is determined based on information that includes several **monitoring indicators**. Decisions are also influenced by other information from harvesters and scientists.

Scientists and traditional knowledge holders recognize that caribou populations tend to go up and down in cycles that usually last between 30 and 60 years. The Management Plan and Action Plans rely on a “traffic light” approach to indicate the relative levels of risk associated with the different phases of a population cycle. The levels are colour-coded as follows:

Monitoring indicators used to assess herd status include:

- Population size
- Population trend and rate of change
- Productivity and recruitment
- Adult composition
- Body condition and health
- Harvest levels
- Predator populations
- Range and movement patterns
- Environment and habitat
- Human disturbance.



yellow the population level is **intermediate and increasing**



green the population level is **high**



orange the population level is **intermediate and decreasing**



red the population level is **low**

Management actions are based on these phases of the population cycle, using approximate levels or “thresholds” as a guide. Thresholds for the herds were determined by the ACCWM based on known historic highs and lows, with input received from community and technical experts in a consensus-based process. **However, it is not only the threshold value that is used to determine the colour zone – the determination of herd status takes into account all available information.** The traffic light approach to understanding risk in caribou population cycles is shown in Figure 2 along with the approximate thresholds for the Bluenose-West herd.

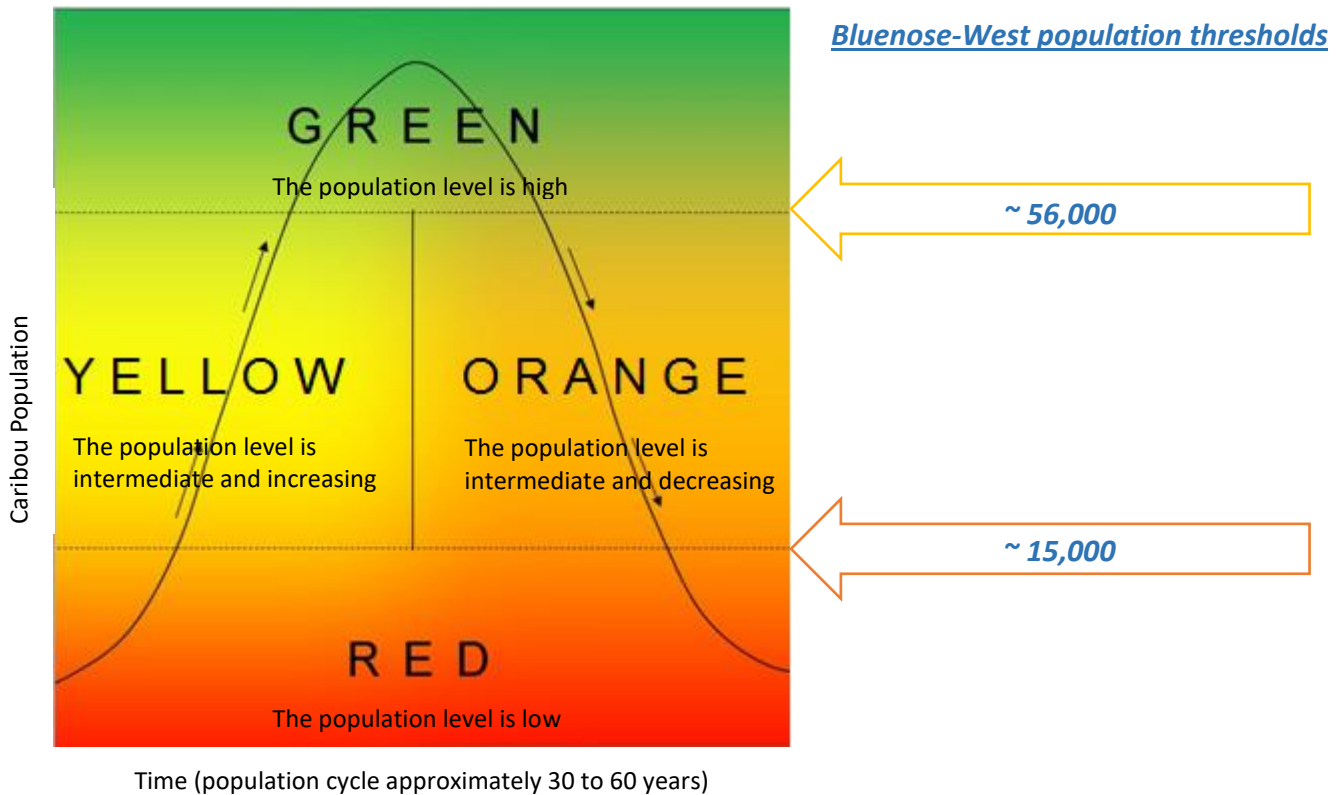


Figure 2: Phases of the caribou population cycle with the colour-coded "traffic light" approach used in the Management Plan and associated Action Plans.

Setting herd status helps provide guidance to implementers about the appropriate monitoring and management actions that should be taking place at each population level. Once herd status is set, the Action Plan includes details about what are the appropriate prioritized actions, their objectives, and what specific tasks will be done, by whom and within what timeframe.

Communications

In order for the Management Plan to be successful in achieving its goal of having caribou today and for future generations, people need to know about the Plan, the management actions, and related activities. Without successful communication, we cannot expect people to be engaged, informed, active participants in *Taking Care of Caribou*.

Communication is the process of transmitting and receiving ideas and information. Communication can take many forms and is not a one-time event, but an ongoing process. It occurs at all levels and scales and is the responsibility of all groups engaged in stewarding these caribou. This includes the ACCWM as a collective and its individual member boards, the territorial governments, local resource management organizations such as HTC, HTO, and RRC, as well as individuals at the family and community level. There are special requirements for effective communication in the NWT and Nunavut, as it is an immense geographical area that crosses territorial boundaries and numerous regions with diverse cultures and environments. There is also a wide diversity of management institutions operating at different scales from the local to the national. **Appendix C** includes a detailed **Communication Plan**.



Figure 3: ACCWM and Working Group members, plus members of the public, at the 2016 annual status meeting in Inuvik on November 30th (missing from photo: KRWB).

Understanding Current Bluenose-West Herd Size, Trend and Status

The ACCWM met on November 30, 2016 to review information pertaining to the status of the Bluenose-West caribou herd. Prior to that, member boards reviewed information available and had discussions, in preparation for the annual status meeting. During status meeting discussions about Bluenose-West caribou, up-to-date scientific knowledge was provided by Environment and Natural Resources (ENR-GNWT) biologists, and community knowledge was provided by representatives from three regions – the Inuvialuit Settlement Region (ISR), the Gwich'in Settlement Area (GSA), and the Sahtú Settlement Area (SSA).

Status Decision 2016

According to the process outlined in the Management Plan, numerous criteria are used to make a status decision. The information considered by the ACCWM in making the 2016 decision is presented below and summarized in Table 5 at the end of this section. Additional historic scientific information can be found in a report available from ACCWM members and on the ENR website.²

Based on the information provided, the ACCWM determined the Bluenose-West herd status colour zone to be **orange** in November 2016. The 2017/18 actions outlined in this Plan are based on this determination. Each year at the fall status meeting the Action Plan will be reviewed. Concerns were raised about the lack of herd recovery and herd size proximity to red zone despite ongoing management actions. The member boards agree there has been inconsistent implementation of management actions range-wide and there is a need for continued conservation of the herd. Complete implementation of actions agreed to under this Plan is required.



The Bluenose-West caribou population status is
ORANGE: intermediate and decreasing

The 2016 status decision was made in accordance with the principles stated in the Management Plan. While information was provided for all of the criteria outlined in Table 5, it is hoped that in the future, even more information from all regions will be made available to the ACCWM for determining herd status, especially from community and traditional knowledge sources.

² Davison, T. 2016. Technical Report on the Cape Bathurst, Bluenose-West, and Bluenose-East Barren-ground Caribou Herds: companion report to Taking Care of Caribou: The Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds management plan. Department of Environment and Natural Resources, Government of the Northwest Territories. File Report No. 150. 81pp.

Information used in the 2016 Status decision

Both scientific and community knowledge helped to inform the 2016 status decision. ENR and Parks Canada Agency (PCA) provided current scientific information at the status meeting; the data included here were presented at the meeting. Because ENR conducts post-calving photo surveys to estimate herd size every three years, no new population estimates were available for the 2016 decision; the next survey will be in 2018. The scientific data included in this section was presented by ENR at the 2016 status meeting. A brief background to the relevant scientific survey methods are included at the end of this section.

Some community information was provided on each of the ten monitoring criteria. The following outlines regional approaches to gather information:

Inuvialuit Settlement Region, NWT – Information provided for this region was summarized from public meetings held in Paulatuk, Aklavik and Tuktoyaktuk during a ‘Caribou Community Tour’ in Oct/Nov 2016, with representatives from the Inuvialuit Game Council (IGC), Wildlife Management Advisory Council (WMAC (NWT)), Gwich’in Renewable Resources Board (GRRB) and ENR-GNWT. Community members in Aklavik did not provide extensive information for the monitoring table, as they have not been actively encountering or harvesting Bluenose-West caribou. A total of 67 community members attended the three meetings. Two meetings were planned for Inuvik, but not held due to a lack of turn-out. Representatives of the WMAC (NWT), IGC, TNNPMB, and HTCs participated in the status meeting.

Gwich’in Settlement Area, NWT – the Nihtat Renewable Resources Council provided monitoring table information to the GRRB via email correspondence. All Gwich’in RRCs were invited to supply information to the table and to meet with GRRB staff if desired in order to do so; all were invited to attend the annual status meeting. NRRC members were also invited to a joint Inuvik public meeting (with WMAC (NWT)) about the action plans. In addition to two GRRB board members as ACCWM representatives and two GRRB support staff, two members of the Gwichya Gwich’in RRC and a staff member of the Gwich’in Tribal Council joined the public at the status meeting.

Sahtú Settlement Area, NWT – Information provided by the Sahtú Renewable Resources Board (ᑭᑦᑲᑦᑲᑦ ᑭᑦᑲᑦᑲᑦ ᑭᑦᑲᑦᑲᑦ ᑭᑦᑲᑦᑲᑦ, SRRB) draws upon 2015/16 meetings of the Déljᑦᑲᑦ ᑭᑦᑲᑦᑲᑦ (Caribou) Working Group; ᑭᑦᑲᑦᑲᑦ ᑭᑦᑲᑦᑲᑦ (Renewable Resources Council) meetings in Fort Good Hope, Tulít'a, and Déljᑦᑲᑦ; the Caribou Meeting jointly sponsored by the Sahtú Secretariat, Inc. and SRRB in Colville Lake; a Caribou Stewardship meeting with Colville Lake Renewable Resources Council; and submissions encompassing both Bluenose-East and Bluenose-West herds during the SRRB's 2016 Bluenose East ᑭᑦᑲᑦᑲᑦ Hearing proceeding.

Population size

Overall, representatives from the Inuvialuit and Sahtú Settlement Areas describe the current population of Bluenose-West caribou as unchanged over recent years.

In Paulatuk, harvesters report that herd size based on their observations/knowledge is about the same over the last few years, but caribou movement patterns change and they are further from town lately. People in Tuktoyaktuk report evidence that there are a lot of caribou around recently. The Gwich'in Nihtat RRC (Inuvik) reported the population of Bluenose-West caribou as low but stable, saying there are not as many caribou as in the past and they are seen to travel in smaller groups now. The SRRB understanding is that herd size is similar to previous years. Colville Lake conducted a community-based survey of the herd in fall 2015 but the data are not available.

ENR's most recent post-calving ground survey was conducted in 2015. In 2015 the post-calving population survey results were used to calculate the size of the Bluenose-West herd by two different estimation methods, the historically-utilized Lincoln-Peterson and the Rigest. Of the two population estimation methods, ENR and the boards agreed at the 2016 meeting that the Rigest is the preferred estimation method; more information on caribou population estimates is provided in the **Background to post-calving survey methods**. The population survey results (the number of adult caribou) were:

- Rigest estimate and with 95% CI = $21,535 \pm 5,136^3$
- Lincoln-Peterson estimate with 95% Confidence Intervals (CI) = $15,274 \pm 1,370$
- Minimum count = 13.637.

The Minimum Count values are the actual number of caribou that were counted on the photos used for the survey estimate. Because there are more caribou on the landscape than get surveyed (*i.e.*, some groups of caribou are missed by the survey), the count from the photos and an estimation calculation (Rigest and Lincoln-Peterson) are used to correct for what is missed to give a more complete estimate. In other words, the minimum count represents the absolute lowest number of adult caribou in the herd at the time of the survey.

The Lincoln-Peterson estimate places the Bluenose-West herd very close to the red zone, as the threshold between the orange and red zones for this herd is 15,000 and the lower confidence interval for the estimate is 13,899 (see Figure 4); once a herd estimate crosses this threshold the population level would be considered low. However, the thresholds between the zones were reached through a consideration of both scientific and community information during meetings about the caribou, and it was agreed that these threshold values were 'fuzzy', meaning they should not be seen as exact, but an approximation. While the Rigest estimate is

³ A count of an entire population of animals would be very costly if not impossible to do. A well-designed survey that samples the area where the population occurs can provide a good estimate of the population size. A confidence interval accompanies a survey estimate, to represent the variation that exists with this method. It means that if the survey were to be done repeatedly under the same conditions, the estimates would fall within that range. So with a 95% confidence interval, if the survey was repeated many times, 95% of the time the estimates would fall within that range.

higher than the Lincoln-Peterson, it confirms that the herd is at least in the lower range of the orange zone and possibly approaching red status.

Population trend and rate of change

Representatives from communities in all three settlement areas (Inuvialuit, Gwich'in and Sahtú) described the current population of Bluenose-West caribou as unchanged or stable in recent years.

The 2015 Lincoln-Peterson population estimate of $15,274 \pm 1,370$ (95% CI) caribou was statistically significantly lower than the 2012 herd estimate of $20,465 \pm 3,490$ (95% CI). However, it was not statistically significantly lower than the 2009 estimate of $17,897 \pm 1,310$ (95% CI). Determining a trend across these three datasets is complicated by the fact that in 2012, survey conditions were not ideal, and resulted in very large margins of error (Confidence Intervals). Nonetheless, both the Rivest and Lincoln-Peterson population estimates seem to show a similar trend in that between 1992 and 2005 the herd went through a large decline and there is no evidence of recovery in the last ten years. Between 2005 and 2015 the average annual rate of decline in the Bluenose-West population was 2%. Lincoln-Peterson and Rivest population estimates (with 95% Confidence Intervals) as well as minimum counts for the period from 1986 to 2015 are shown in Table 1 and Figure 4.

Table 1: Lincoln-Peterson and Rivest population estimates for the Bluenose-West herd, 1986-2015. Estimates are based on post-calving population surveys and include 95% Confidence Intervals. At the time of the status decision Rivest population estimates had only been calculated back to 2000.

Year	Lincoln-Peterson estimate	Rivest estimate	Minimum count
2015	$15,274 \pm 1,370$	$21,535 \pm 5,136$	13,637
2012	$20,465 \pm 3,490$	$32,326 \pm 15,482$	14,637
2009	$17,897 \pm 1,310$	$21,773 \pm 4,884$	16,595
2006	$17,781 \pm 0$	$28,461 \pm 7,431$	17,781
2005	$20,800 \pm 2,040$	$26,228 \pm 5,878$	17,875
2000	$81,149 \pm 16,200$	$118,472 \pm 45,177$	52,508
1992	$112,360 \pm 25,566$		76,008
1987	$106,887 \pm 4,655$		104,512
1986	$88,369 \pm 6,899$		83,430

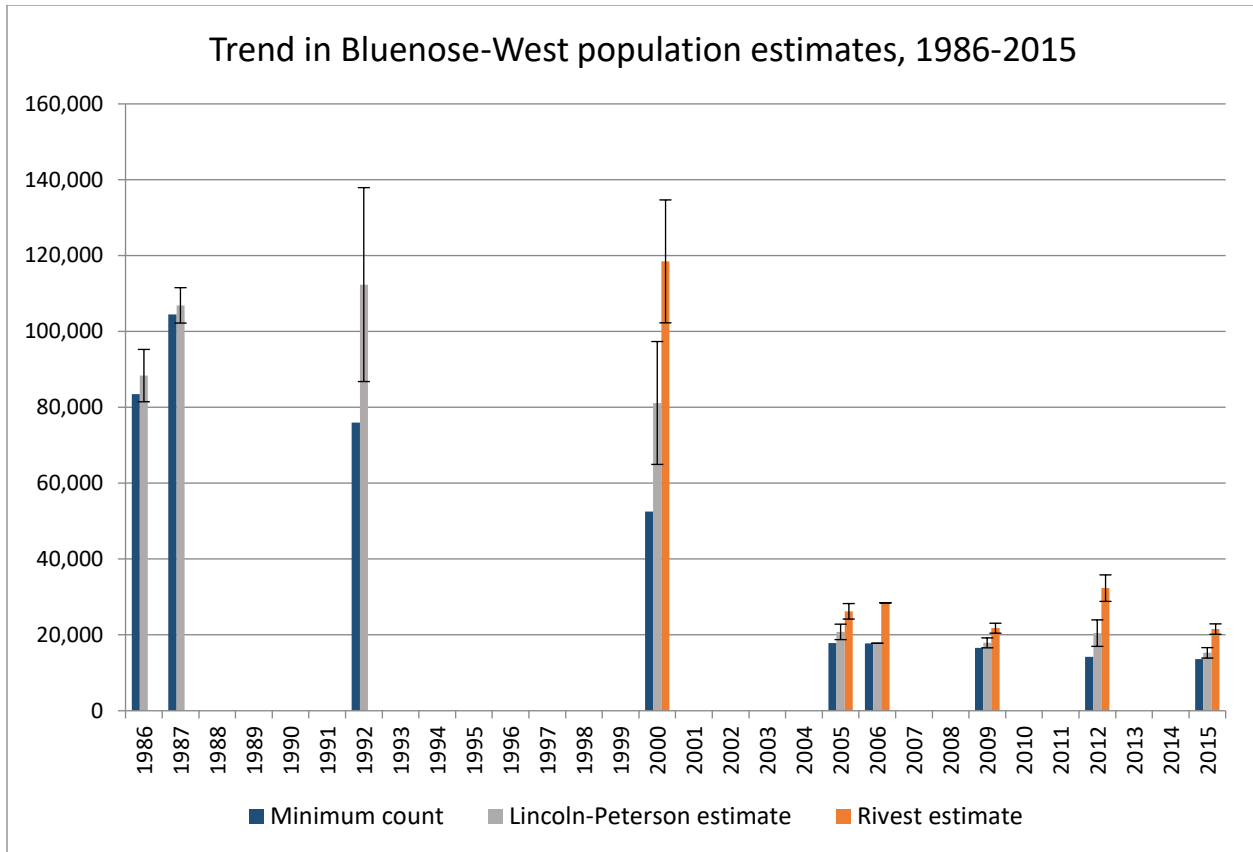


Figure 4: Graph showing Lincoln-Peterson and Rivest population estimates for the Bluenose-West herd since 1986, including 95% Confidence Intervals. Minimum counts are included for comparison purposes.

Productivity and recruitment

There is no new scientific information regarding productivity and recruitment for this herd since 2011; a spring survey that year found 32 calves per 100 cows. The ISR was the only region to report observations relating to this topic during the 2016 status meeting.

In Paulatuk, few hunters are in the calving ground area to make observations, but some hunters said that in 2016 they were seeing approximately five to seven calves per 15 cows. There have also been sightings of multi-year families – that is, several instances of cows accompanied by newborns and yearlings. In Tuktoyaktuk a lot of harvesters noted that there are a lot of calves; there have been sightings of twins and triplets that are in good shape.

Adult composition

There was no new scientific information on adult composition for the Bluenose-West herd. The last fall composition survey conducted in 2009 found a bull to cow ratio of 70 bulls per 100 cows. Only one community commented on bull to cow ratios for 2015/16; Paulatuk reported during a community hunt seeing 12 bulls and three cows. Community members saw many bulls passing through in early July.

As described in greater detail in *Range and movement patterns*, Tuktoyaktuk harvesters saw bulls come in late and in bigger bunches (e.g., Jul/Aug, groups of ~30). People are usually coming back from harvesting at end of Sept., but bulls were just coming in at that time (this is a shift in the timing of bull arrival).

Body condition and health

Paulatuk harvesters observed a lot of healthy, prime bulls passing through their area in early July; there was approximately 2.5 inches of fat on harvested animals. Caribou were described as in really good shape, but fat levels were only fair; harvesters usually see more fat at this time of year. There were comments that there was little rain in the Paulatuk area in 2016; this can cause high levels of fat loss due to a lack of nutrition in forage. In Tuktoyaktuk, harvesters observed that the caribou have been pretty healthy compared to 15 years ago. There are suggestions that climate change can be a cause for improved health, as it has been very easy on caribou. Animals may be fatter from running less, due to fewer bugs over last couple years. No observations of sick, thin, or unhealthy caribou were reported from the Gwich'in or Sahtú areas.

ENR monitors body condition and health in barren-ground caribou by working with harvesters. Harvesters are asked to measure back fat, and to rate the body condition of the caribou they harvest as Excellent, Good, Fair or Poor. These ratings are translated to a numerical value between one and four, with 1 = Poor and 4 = Excellent, so they can be averaged. Only five samples were received in 2015/16. The condition of bulls was on average 'poor' and cow condition was on average 'fair' in the 2015/16 harvest season. Body condition data as rated by harvesters are presented in Table 2. Figure 5 shows average reported conditions since 2007/08.

Harvesters also measure the depth of the back fat of harvested caribou; average back fat in 2015/16 was 2 cm for cows and 0.1 cm for bulls – however, only five animals were sampled this year. Back fat measurements of Bluenose-West caribou taken by harvesters in the Inuvik Region are presented in Table 3. Figure 6 shows average reported back fat measurements since 2007/08.

It is important to keep in mind that harvesters can be selective and these indicators may not represent the entire herd. In addition, the month that the harvest occurs affects the sample greatly, and harvest seasons are not consistent between years.⁴

⁴ Reported numbers based on tag seasons. Tag season was from July 1 to June 30 then changed to Sept 1 to Aug 31 in 2010, and in 2013 changed to Oct 1 to Sept 30. Samples included were harvested in the following months: 2007/08: Nov, Jan, Apr, Jun; 2008/09: Jul, Sept, Dec, Feb, Mar, Apr; 2009/10: Sept, Dec, Jan-Jul; 2010/11: Jan; 2011/12: Sept, Dec-Apr, Jun-Aug; 2012/13: Dec, Jan, Jun-Oct; 2013/14: Oct-Jan, Jun-Sept; 2014/15: Jan-Mar, Jun, Jul, Sept; 2015/16: Dec, Jan, May-Sep.

Table 2: Summary of the condition Bluenose-West caribou harvested in the Inuvik Region as assessed by hunters on scale of 1 – 4, with 1 = Poor and 4 = Excellent. Numbers of samples are provided in brackets.

Season	Female	Male
2015/16*	2.00 (1)	1.25 (4)
2014/15*	3.29 (17)	3.05 (19)
2013/14	2.6 (11)	3.1 (21)
2012/13	2.4 (14)	2.6 (29)
2011/12	3.0 (1)	(0)
2010/11	2.4 (5)	3.0 (23)
2009/10	2.2 (12)	2.5 (22)
2008/09	1.0 (7)	2.8 (6)

*Samples submitted from I/BC/06 harvests except in 2014/15 and 2015/16, for which only Paulatuk samples are included, because based on collar data, the change of zone boundary means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst caribou.

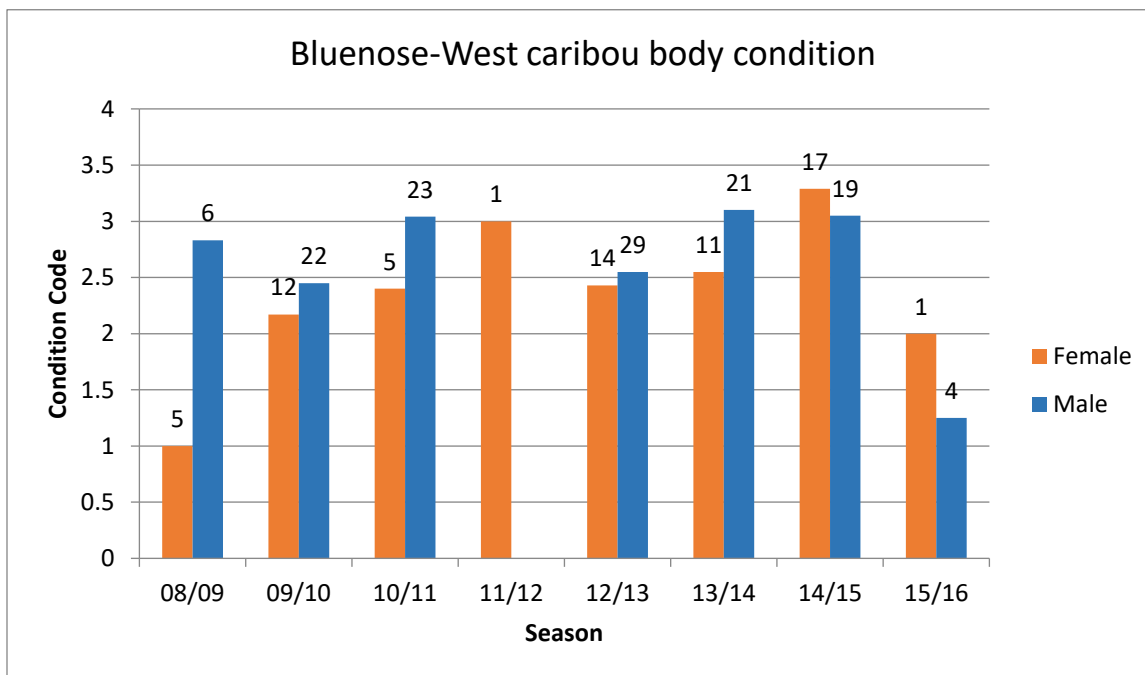


Figure 5: Average reported condition of Bluenose-West caribou as assessed by hunters on a scale of 1-4. Number of samples are noted at the top of each bar. 2008/2009 and 2011/2012 had low numbers of samples taken.

Table 3: Summary of back fat measurements (in centimeters) of Bluenose-West caribou harvested in the Inuvik Region.

Season	Gender	Back Fat in cm (number of samples)
2015/16*	Female	2.00 (1)
	Male	0.13 (4)
2014/15*	Female	2.21(17)
	Male	2.94 (20)
2013/14	Female	1.77 (11)
	Male	2.39 (25)
2012/13	Female	1.66 (17)
	Male	1.30 (36)
2011/12	Female	0.75 (2)
	Male	1.00 (1)
2010/11	Female	2.01 (9)
	Male	3.31 (25)
2009/10	Female	0.70 (12)
	Male	1.20 (22)
2008/09	Female	0.00 (5)
	Male	2.40 (6)

*I/BC/06 harvest except in 2014/15 and 2015/16, for which only Paulatuk harvest is included, because change of zone boundary means Inuvik and Tuktoyaktuk harvesters were accessing Tuktoyaktuk Peninsula/Cape Bathurst caribou.

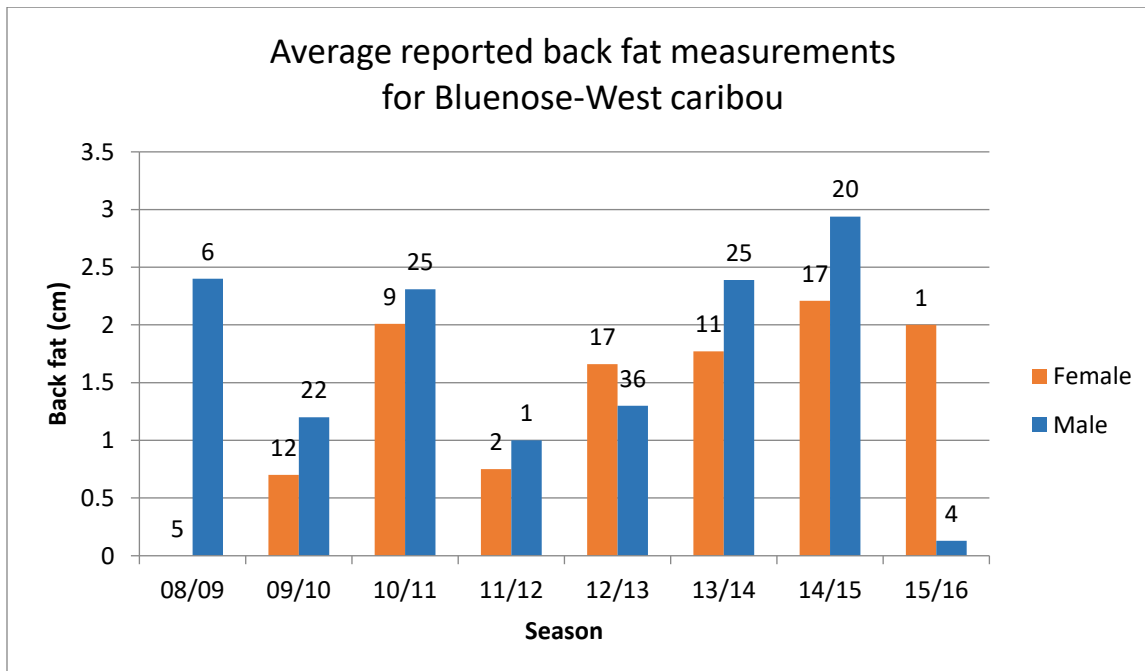


Figure 6: Average reported back fat measurements (in centimeters) for Bluenose-West caribou, with the number of samples noted at the top of each bar. Note that some historical years that are used for comparison have small sample sizes, such as 2008/2009 and 2011/2012.

Harvest levels

A tag requirement was put in place for the Bluenose-West herd in the Gwich'in Settlement Area and Inuvialuit Settlement Region in 2007, and in the Sahtú Settlement Area in October 2009, following the boards' decision of a 4% Total Allowable Harvest (TAH) limit. Based on the 2006 (Lincoln-Peterson) population estimate of 18,050, the herd TAH was set at 722 animals. This TAH was shared between regions according to approximate historical use and by agreement of the GRRB, SRRB and WMAC (NWT) with the Minister of GNWT. Harvest allocations to each region are: 22 Gwich'in (3%), 345 Inuvialuit (48%) and 350 Sahtú (48.5%), with five held back unallocated each year. This recommendation also included a bull dominated harvest with a target of 80% bulls to encourage herd recovery. Table 4 includes the harvest data collected to date by ENR under the quota implemented in 2007.

Table 4: Harvest data for Bluenose-West collected by ENR since quota implementation in 2007.

	Quota	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15 ^d	2015/16
Aklavik	30	0	0	0	0	0	11	0	3	0
Inuvik	75	33	17	52	41	8	41	0	73	42
Tuktoyaktuk	75	37	63	14	17	24	27	12	75	75
Paulatuk ^b	129	198	150	230	239	279	261	150	97	171
Ulukhaktok	20	0	0	0	0	3	0	0	0	0
Sachs Harbour	16	0	0	0	0	0	0	0	9	0
		268	230	296	297	314	340	162	254	288
Gwich'in	22	2	1	13	22 ^c	22 ^c	0	0	3	

^a Season changed to Sept1 to Aug 31 in 2010, and to Oct 1 in 2013

^b Extra tags transferred to Paulatuk from communities after a certain date

^c Tags misplaced, assumed all used

^d Boundary change between I/BC/06 and I/BC/07.

Harvest in barren-ground caribou zone I/BC/06 (ISR) is tracked by tags. In the 2015/16 harvest season 288 tags were used by Inuvialuit (Inuvik - 42, Tuktoyaktuk – 75, Paulatuk - 171) and 5 tags by Gwich'in (Inuvik).

The Nihtat RRC (Inuvik) had 4/22 tags out for use in 2016/17 as of November 2017. There may be interest in a community hunt to use the remaining tags if the Porcupine herd is inaccessible and its harvest is low.

In the Sahtú, ENR staff estimated 83 caribou were harvested in the 2015/16 season. Fort Good Hope reported a harvest of 200 in 2014/15, and more recently are reporting a reduced harvest, but no data are available; their leadership organizations have reportedly not provided funding for hunts of barren-ground caribou. Colville Lake's harvest is reported as unchanged; again no data are available. There is a lack of confidence in the accuracy and completeness of these data. Because of this, it is not possible to know if the TAH is actually being exceeded or not. The SRRB is in the process of adopting a community conservation planning approach, and Colville Lake is

developing a plan for self-regulation for review and approval by the SRRB as an alternative to the tag system.

With incomplete harvest composition information, it is unclear if the member boards' recommended target of 80% bulls to 20% cows is being met, but this is unlikely. Inuvialuit representatives said that they are trying to adjust the sex ratio of their harvest by changing the start of the harvest season to result in more bulls/fewer cows being taken.

During the 2016 status meeting, the ACCWM member boards discussed adjusting the TAH to reflect the recent decision to use the Rivest population estimate as the preferred estimation method. The 4% TAH was set at 722, based on the 2006 Lincoln-Peterson population estimate of 18,050. Because the 2015 Rivest estimates the current herd size at 21,535 ($\pm 5,136$ CI), 4% of that population estimate would result in a TAH of 861 animals. The member boards decided to move forward with a new TAH based on the most recent estimate and each work towards making recommendations to the appropriate Minister. The relevant action regarding adjusting the Bluenose-West TAH is included in the **Management Actions Table** (see E.2.B.1).

In 2014/15, the eastern boundary of I/BC/07 was moved to Husky Lakes (see Figure 7D); the adjustment of the Bluenose-West zone meant that it now included some of the range of the Cape Bathurst and Tuktoyaktuk Peninsula herds as well as Bluenose-West range. Concerns were raised by the GRRB that tags originally issued as part of a TAH for Bluenose-West caribou are now being used in an area with Cape Bathurst caribou, and this could be impacting the Cape Bathurst herd. The Tuktoyaktuk Peninsula herd has also started coming into the expanded area of I/BC/06 in the winter, where the tags can be used. It is difficult to tell what herd harvested animals in this expanded area of the I/BC/06 zone are from; Cape Bathurst, Tuktoyaktuk Peninsula and some Bluenose-West all use this expanded area. Data reported to ENR for 2015/16 showed 117 tags possibly used, with 81 (27 males, 49 females) taken in this expanded area. The change in the boundary may decrease the pressure on the Bluenose-West herd, while increasing the harvest of Cape Bathurst and Tuktoyaktuk Peninsula caribou.

The season for the I/BC/06 tags has changed over time. Originally the season was set at 1 July - 30 June. In 2010, the season changed to 1 Sept - 31 August and in 2013, to 1 Oct - 30 Sept. This was done to allow Paulatuk more time to harvest with unused tags reallocated to them from other ISR communities. With the change of the boundary, Inuvik and Tuktoyaktuk have been using more of their tags but due to the season start date, in October when the bulls are in the rut, the harvest has been focused on cows. The cow harvest, while likely more Cape Bathurst and Tuktoyaktuk Peninsula than Bluenose-West caribou, needs to be reduced for conservation of the herds. There is a WMAC (NWT) recommendation to change the season start date back to 1 July to target more bulls.

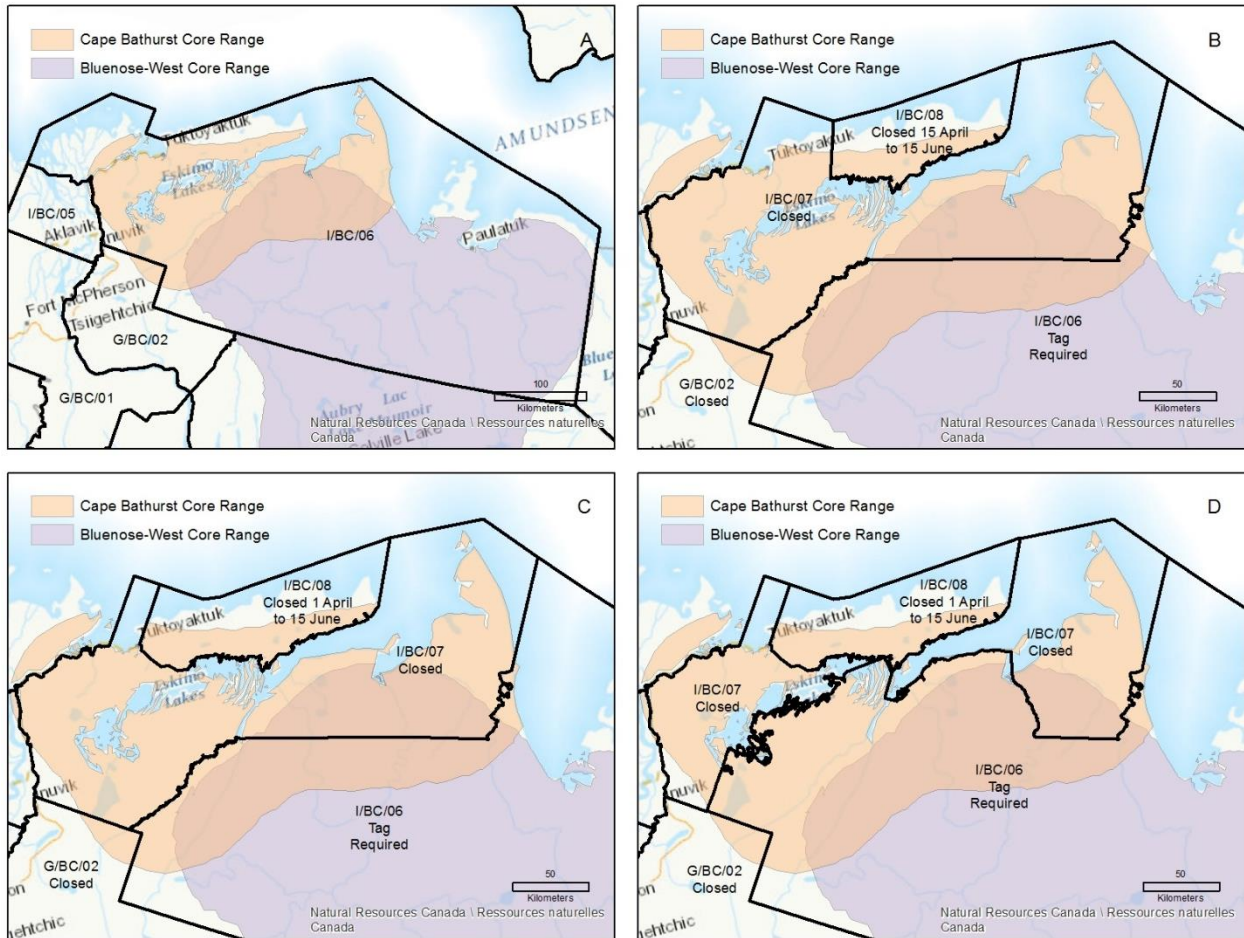


Figure 7: Caribou management areas showing core caribou range based satellite tracking data collected from cows 1996-2008 as follows A. Prior to 2007; B. Areas adjusted in ISR (2007) and Sahtú Settlement Area (2009) to reflect the core range of the herds; C. Boundary for Tuktoyaktuk Peninsula (I/BC/08) adjusted south to use north of Diamond Lake Trail as landmark (2009); D. Current management areas since 2014; I/BC/06 increased in size along the I/BC/06 boundary.⁵

Predator populations

There is limited scientific information available about predator populations in the NWT. However, ENR collects samples\carcasses from wolves harvested in the Inuvik and Sahtu regions. The average annual number of wolves submitted in Paulatuk (2007 to 2015) and Colville Lake (2011-2016) are 9.7 and 19.2 respectively. Of all the Inuvik region mainland wolf samples submitted with stomach contents, 68% of the stomach contents was caribou. These data are shown in Figures 8 and 9. ENR is now looking at a more long term analysis using stable isotopes, which will provide information on more than just wolves' most recent meal (e.g., can get more information about wolves' year-round diet).

⁵ Nagy, J.A., .L. Johnson, N.C. Larter, M.W. Campbell, A.E. Derocher, A. Kelly, M. Dumond, D. Allaire and B. Croft. 2011. Subpopulation structure of caribou (*Rangifer tarandus* L.) in arctic and subarctic Canada. *Ecological Applications*, 21(6): 2334–2348.

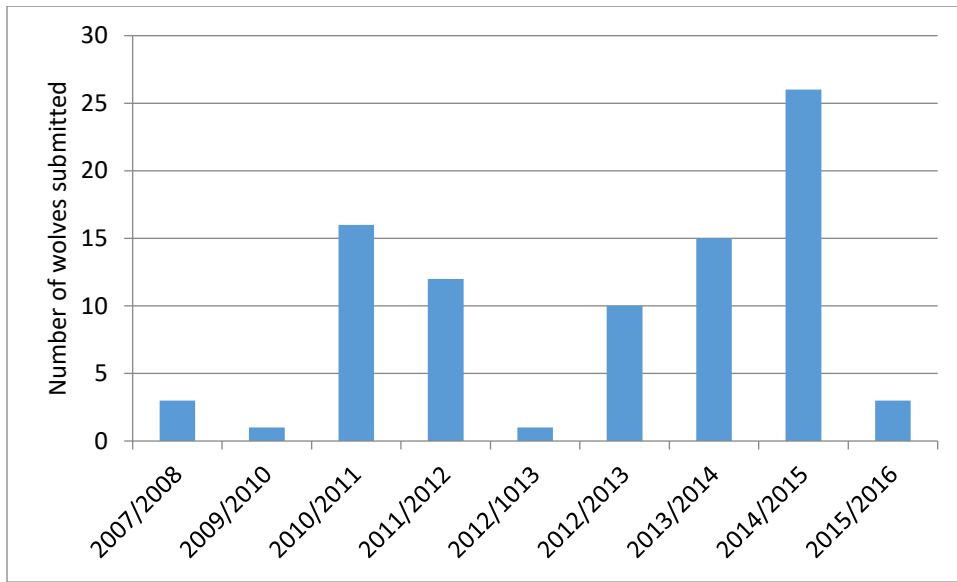


Figure 8: Number of wolf carcasses/samples submitted to ENR by Paulatuk hunters, 2007-2016.

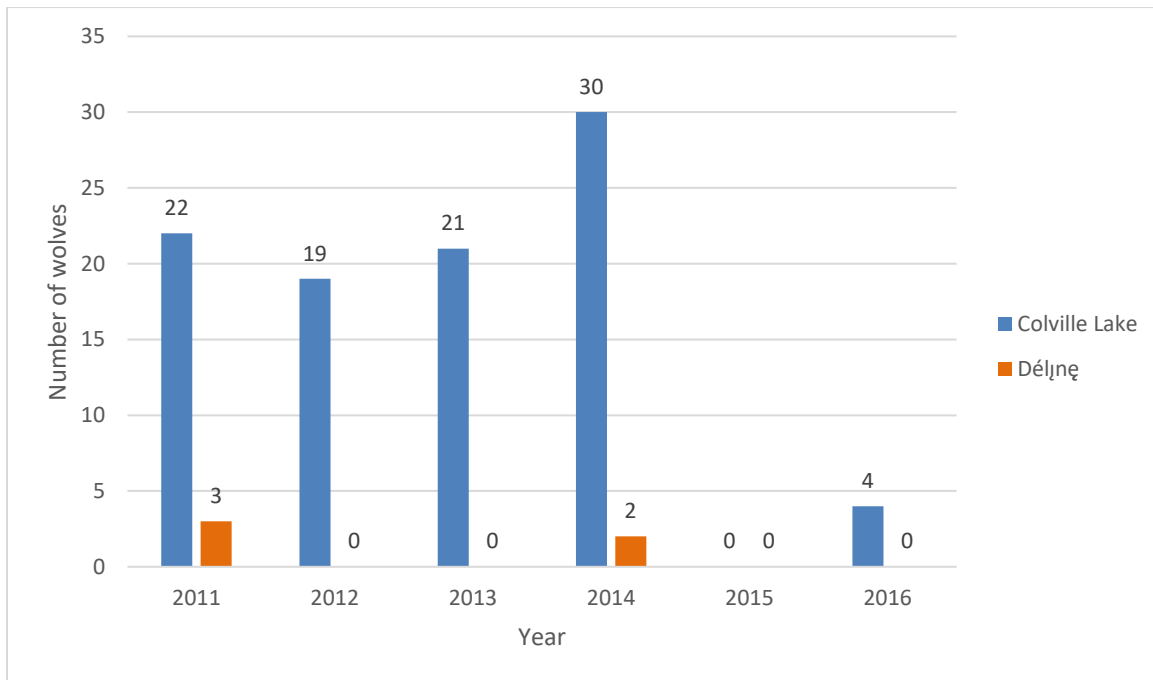


Figure 9: Number of wolf carcasses/samples submitted to ENR by Colville Lake and Délıne, 2011-2016.

In the ISR, both Paulatuk and Tuktoyaktuk report high numbers of grizzly bears and wolves. It was also noted that wolf packs seen are now larger than they used to be. Tuktoyaktuk also reports more eagles lately. A member of the public attending the status meeting reported that around Fort McPherson near the Mackenzie Delta large packs of wolves have been seen during the winter. In the Sahtú, community members have noted the positive role that predators play with respect to the herd.

Range and movement patterns

Most of the regional observations regarding range and movement patterns for this herd came from the ISR. Paulatuk harvesters stated that while caribou movements can be variable, there is a shift in range that varies year to year – some years they pass way up, or 60-80 km from the community. Caribou are coming in later than usual when migrating to the calving ground, and their migration route has possibly changed. They also saw a lot of bulls passing through the area in early July. An additional comment heard during the meeting was that if land is overused by caribou, elders say that the caribou won't use it.

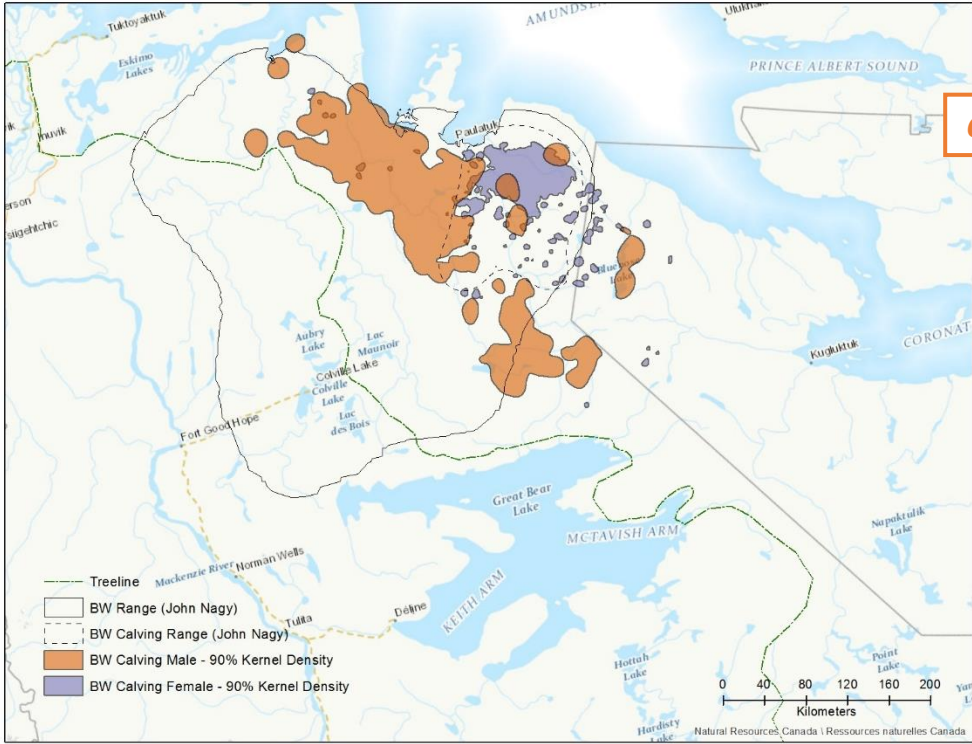
The spring migration was much later than usual in both Paulatuk and Tuktoyaktuk – where bulls are arriving late and in bigger bunches. Tuktoyaktuk harvesters also reported that they saw a high number of caribou in the spring time (May) traveling steadily. At Old Man Lake there is usually a high number of caribou in March; this is a place where the caribou are seen moving east, on their way to the calving grounds, and bulls come through the area later than cows. Recently, the bulls have come in late and in bigger bunches (e.g., Jul/Aug, in groups of ~30). It was also noted that caribou don't have a path like they used to – harvesters would follow those trails – and due to low numbers of trappers there were no packed trails for caribou to follow.

Gwich'in harvesters report that caribou are traveling in smaller groups. In the Colville Lake area (SSA) caribou movements were reportedly different last fall; people noticed that caribou were closer to Délı̄nę than in the past, and coming down further south in the Whitefish River area.

Updated seasonal range maps were presented using collar data from bulls and cows for 2009 to 2015. These maps are included in Figures 10 through 14. Over-all, the scientific information indicates the following:

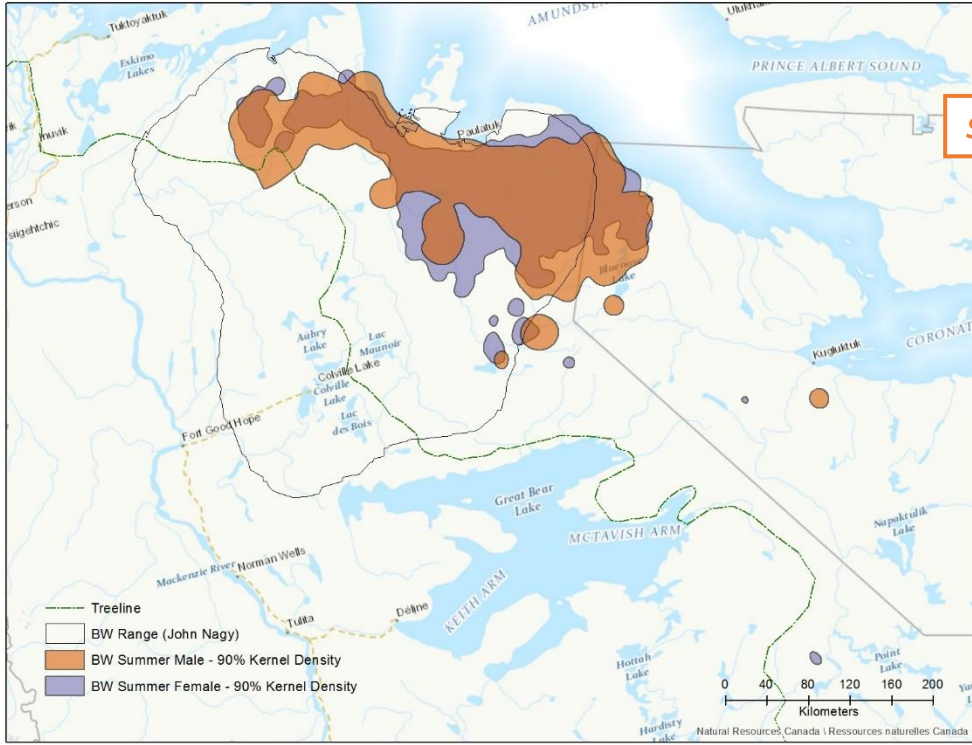
- Summer range – cows and bulls tend to be mixed and found in same areas
- During fall migration there is little difference in the movements of cows and bulls
- There are some differences in winter range used between cows and bulls
- In spring there is a lot of overlap with some differences
- During calving period cows and bulls use different range.

The collar data showed a high fidelity of cows to calving grounds: 83 cows (97.2%) returned to the Bluenose-West calving ground over a five-year period; no caribou moved between the Cape Bathurst and Bluenose-West calving grounds; only two Bluenose-West caribou moved to the Bluenose-East calving grounds, and one Bluenose-East caribou moved to the Bluenose-west calving ground.



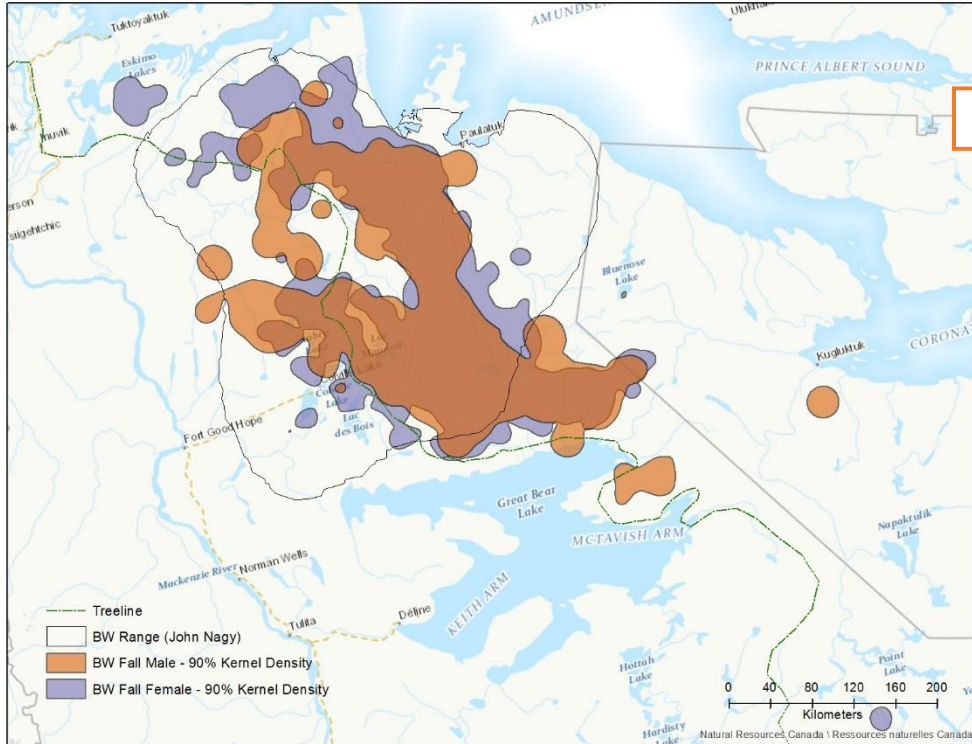
Calving

Figure 10: Bluenose-West caribou movement patterns during calving (May 29-Jun. 3) based on collared cows and bulls, 2009-2015, 90% Kernel Density polygons.



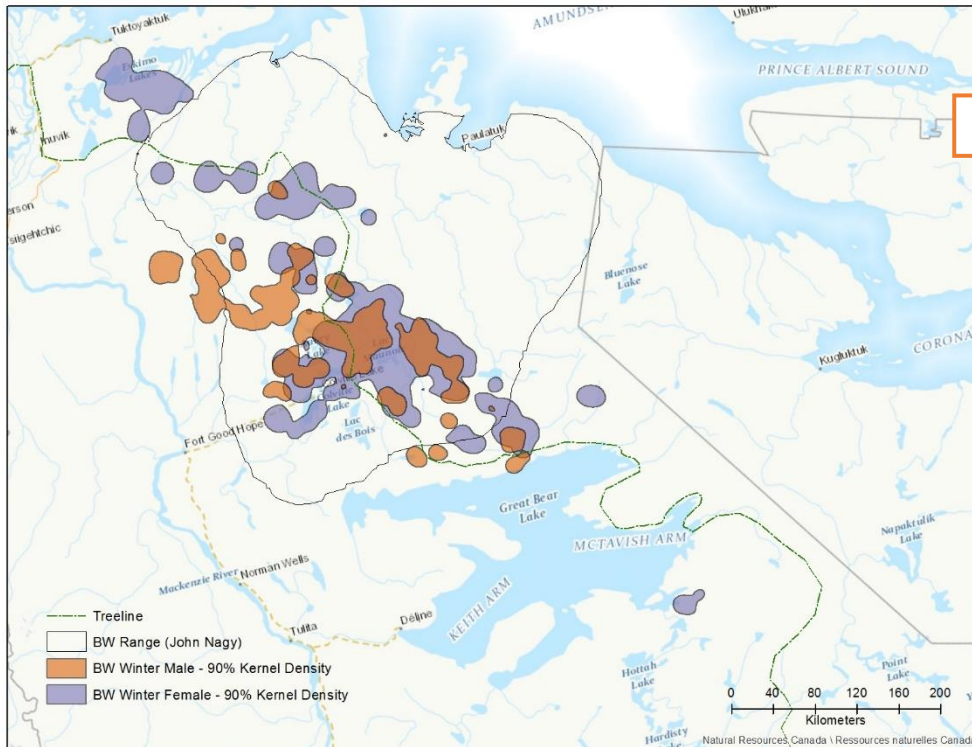
Summer

Figure 11: Bluenose-West caribou movement patterns during summer (Jun. 23-Aug. 22) based on collared cows and bulls, 2009-2015, 90% Kernel Density polygons.



Fall

Figure 12: Bluenose-West caribou movement patterns during fall (Aug. 23-Dec. 5) based on collared cows and bulls, 2009-2015, 90% Kernel Density polygons.



Winter

Figure 13: Bluenose-West caribou movement patterns during winter (Dec. 6-Apr. 14) based on collared cows and bulls, 2009-2015, 90% Kernel Density polygons.

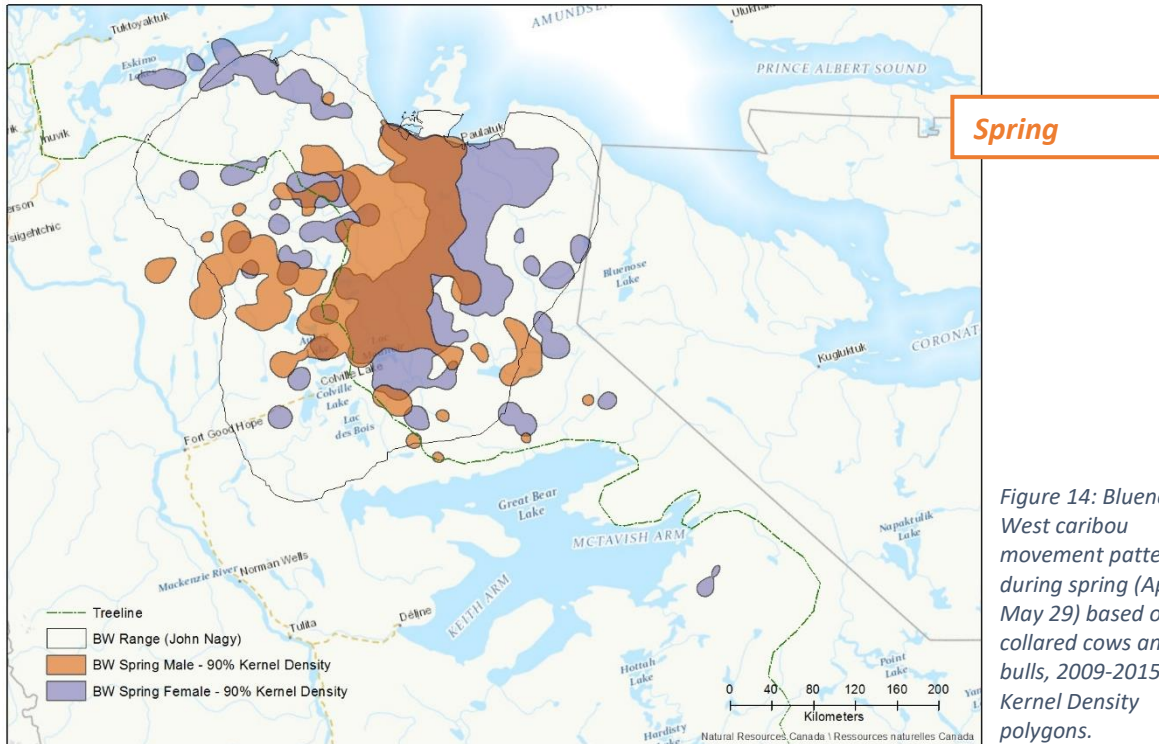


Figure 14: Bluenose-West caribou movement patterns during spring (Apr. 15-May 29) based on collared cows and bulls, 2009-2015, 90% Kernel Density polygons.

Environment and habitat

There were numerous reports from Inuvialuit and Gwich'in areas that people are seeing signs of climate change in Bluenose-West caribou habitat. In Tuktoyaktuk creeks stay open longer and winter is not as cold and damp as it used to be, however, the summer is a lot cooler and there are more northeast winds now. Over-all there is not much snow – which causes some of the hunters to not be able to reach their normal areas. In an Aklavik meeting (with Gwich'in and Inuvialuit participants) people raised questions about the potential negative effects of increased muskox numbers on caribou populations. A member noticed in areas near Inuvik that muskox are now in the same area as the Bluenose-West herd. It has been said that when muskox are around, the caribou tend to stay away.

Parks Canada made a presentation of results from habitat studies on the calving range within Tuktu Nogait National Park during the status meeting. The main findings of the study were:

- The timing of green-up during key calving life stages is trending significantly earlier
- Peak productivity has remained stable occurring in late June
- Sedge and shrub cover have increased slowly over the past 25 years.

No changes were noted for the Sahtú region.

Human disturbance

Scientists report that there is minimal human disturbance and/or industrial activity on the range of the Bluenose-West caribou, as currently it is a slow period for industry in the area. Other information was provided by five communities in three regions (the ISR, GSA, and SSA).

Community members from Tuktoyaktuk, Paulatuk and Aklavik report that low-flying aircraft – especially helicopters – are always an issue and disturb caribou. In Tuktoyaktuk, construction of the Inuvik to Tuktoyaktuk highway was seen to cause the caribou to turn back east (due to road steepness, equipment, traffic, etc.). There are indications they have changed their migration due to road construction and concerns that this summer the caribou won't move onto or across the road. It is also possible they caribou may not move off the road once on it. There are additional concerns in Paulatuk that Inukshuk building by tourists may impact caribou migration, as these structures were traditionally used to direct where caribou go.

In the Sahtú, some concerns and questions were expressed by Colville Lake about possible impacts on Bluenose-West caribou by Darnley Bay Resources Ltd., as well as impacts from past exploration in that area.

Background to post-calving survey methods

The post-calving ground survey method is used to obtain a population estimate for the Bluenose-West herd. The first survey of this kind was done in 1986. Radio-collars are deployed on caribou in March throughout the caribou range. These collars are then used to find groups of caribou in July during post-calving. On hot days with little wind when the bugs are harassing the caribou, the caribou will form large groups on the tundra. These groups are photographed from a small airplane and the number of 1+ year old caribou can be counted on the photographs.

There are two different methods to calculate a population estimate and the associated confidence interval using the information collected from the post-calving survey: Lincoln-Peterson and Rivest. Both methods use the number of collars and the number of caribou counted on the photographs in their estimate calculations. The Lincoln-Peterson method adjusts the number of caribou counted on the photographs by a ratio of collars deployed to collars located during the survey. If all collars are found, the population estimate remains the minimum count as it assumes all animals can be located near a collared caribou. The Rivest method takes into account the probability of finding a group based on group size and number of collars; this method will always result in an estimate higher than the minimum count.

Switching population estimates: from the Lincoln-Petersen to the Rivest method

Estimates from both population estimation methods have been included here for comparison purposes, however ENR and the boards agreed at the 2016 meeting that the Rivest is the preferred estimation method. In the past, the Lincoln-Peterson method had consistently been used to estimate the population size of the Bluenose-West herd. In the future, the Lincoln-

Peterson estimate will also be provided. There are several reasons for switching to the Rigest method, including:

- Other jurisdictions are using Rigest estimates to estimate population size
- The Rigest method can always indicate confidence intervals
- The Lincoln-Peterson method tends to have a bias towards low estimates
- Larger Confidence Intervals resulting from the Rigest method may be more realistic measures of uncertainty; the Lincoln-Peterson method may not represent actual error very accurately.

It is important to note that under ideal survey conditions, where there is adequate grouping of animals and most or all collars are found, the two methods produce very similar estimates.

Table 5: Criteria used to assess Bluenose-West herd status in 2016.⁶

Criteria	Community-Based Information ⁷	Scientific Information	Comments
Population size	<p>Inuvialuit: Paulatuk reports herd size unchanged over last few years, but patterns move around; caribou are further from town. Tuktoyaktuk reports evidence that there are a lot of caribou around.</p> <p>*Additional comment that numbers are similar to last few years.</p> <p>Gwich'in/Nihtat RRC (Inuvik): reports population at low levels but stable. There are not as many as there used to be. Used to travel in larger herds; now in smaller groups.</p> <p>Sahtú: SRRB understanding is herd size is similar to previous years</p>	<p>2015 estimates + 95% CI</p> <p>LP: 15,274 ± 1,370</p> <p>Rivest: 21,535 ± 5,136</p> <p>(Number of adult caribou)</p>	<p>ENR data estimated based on July post-calving ground surveys.</p> <p>Gwich'in: comments represent observations over the last few years.</p> <p>Sahtú: Colville Lake 2015 hunter survey data not yet available</p>
Population trend and rate of change	<p>Inuvialuit: no concerns or alarms raised by Paulatuk; not seeing change</p> <p>Gwich'in/Nihtat RRC (Inuvik): says herd stable; not seeing change</p> <p>Sahtú: population stable; not seeing change</p>	<p>Average annual rate of decline = 2% (2005-2015)</p>	<p>No significant recovery since 2005 when management actions initiated. Previous herd LP estimates:</p> <p>2012: 20,465 ± 3,490 (95% CI)</p> <p>2009: 17,897 ± 1,310 (95% CI)</p> <p>2006: 17,781 ± 0 (95% CI)</p> <p>2005: 20,800 ± 2,040 (95% CI)</p> <p>2000: 81,149 ± 16,200 (95% CI)</p>

⁶ This table is populated with information presented to the ACCWM to assess herd status in 2016, and is adapted from the monitoring criteria table included in *Taking Care of Caribou*. Appendix D in this document provides links to specific management action items for each of these criteria.

⁷ Community-based information noted as “Additional comment” and marked with an asterisk (*) was documented during the 2016 status meeting, and not by the regional processes described in earlier sections of this plan (see *Information used in the 2016 status decision*).

Criteria	Community-Based Information	Scientific Information	Comments
Productivity and recruitment	<p>Inuvialuit: Most Paulatuk hunters are not in area to observe calving. Hunter observations estimate about 5-7 calves/15 cows. Cows with newborns and yearlings observed. Many Tuktoyaktuk harvesters have seen a lot of calves lately; twins have been observed</p> <p>Sahtú: not hearing about signs of recovery (e.g., no observations of twin calves)</p>	<p>Number of calves per 100 cows in 2011: = 32</p>	<p>ENR spring annual recruitment survey (except in years population estimate is done)</p>
Adult composition	<p>Inuvialuit: Paulatuk saw many bulls passing through early July. Recent community hunt saw 12 bulls, 3 cows. In Tuktoyaktuk bulls came in late and in bigger bunches (e.g., Jul/Aug, groups of ~30). People are usually coming back from harvesting at end of Sept., but bulls just coming in</p>	<p>Number of bulls per 100 cows in 2009: = 70</p>	<p>ENR fall composition surveys</p>
Body condition and health	<p>Inuvialuit: Paulatuk community hunt recorded fat 2.5-3" fat (12 bulls, 3 cows); usually see more fat this time of year. Caribou were in really good shape but fat was fair. Also reported lots of bulls passing through early July; healthy, prime bulls observed. In Tuktoyaktuk no sick caribou have been seen; animals have been pretty healthy compared to 15 years ago (when there were a lot of lumps and ribs were visible). Climate change can be a cause for improved health, as it has been very easy on them. Caribou may be fatter from running less, due to fewer bugs over last couple years due to cooler temperatures</p> <p>Gwich'in/Nihtat RRC (Inuvik): people are seeing healthy caribou</p>	<p>Condition of bulls was on average 'poor' and cow condition was on average 'fair' in the 2015/16 harvest season. Average back fat in 2015/16 was 2 cm for cows and 0.1 cm for bulls</p>	<p>Scientific information based on harvester reports. Sample size very low 2015/16 (information reported on 1 cow, 4 bulls).</p> <p>Inuvialuit: There was not much rain in Paulatuk in 2016 (but there was in 2015), which can cause high levels of fat loss due to lack of nutrition.</p> <p>Sahtú: no remarks about skinny or unhealthy caribou from Colville Lake</p>

Criteria	Community-Based Information	Scientific Information	Comments
Harvest levels	<p>*Additional comments:</p> <p>Inuvialuit: Trying to adjust sex ratio of harvest by changing start of harvest season to take more bulls/less cows</p> <p>Gwich'in: harvest low, self-imposed by communities. Nihtat RRC (Inuvik) in 2016 has 4/22 tags out for use currently; may be interest in a community hunt to use tags if Porcupine herd is inaccessible and its harvest is low</p> <p>Sahtú: Fort Good Hope reported harvest of 200 (2014/15) and more recently are reporting a reduced harvest (no data available); their leadership organizations have reportedly not provided funding for hunts of barren-ground caribou. Colville Lake harvest reported as unchanged (no data available)</p>	<p>Total harvest uncertain. Not meeting 80% bulls target.</p>	<p>TAH tags return in Inuvik Region 2015/16: Inuvialuit: 345 Quota, 288 harvest Gwich'in: 22 Quota, 4 harvest ENR Sahtu (Colville Lake operations summary report) Sept 2015-March 2016 estimated 83 caribou harvested, including 30 caribou bulls reported harvested at Horton Lake.</p>
Predator populations	<p>Inuvialuit: Paulatuk reports high numbers of predators (grizzly bears, wolves). Numbers of eagles in area and impact on caribou unknown. Overall increase in all predators. Results from wolf carcasses indicate stomachs contain mostly caribou. Paulatuk also reports there is one large pack instead of multiple packs, and a high occurrence of wolves in summer. Tuktoyaktuk reports more bears, eagles and wolves</p> <p>Gwich'in/Nihtat RRC (Inuvik): recorded no observations at recent meeting</p> <p>*Additional comment: more wolves observed in Delta currently</p>	<p>Average yearly harvest of wolves 9.2 (range 1-26). 68% of wolf stomach contents was caribou.</p>	<p>ENR collects samples from wolves harvested in the Inuvik and Sahtu region</p> <p>Sahtú: Colville Lake and Fort Good Hope noted positive role that predators play with respect to the herd</p>

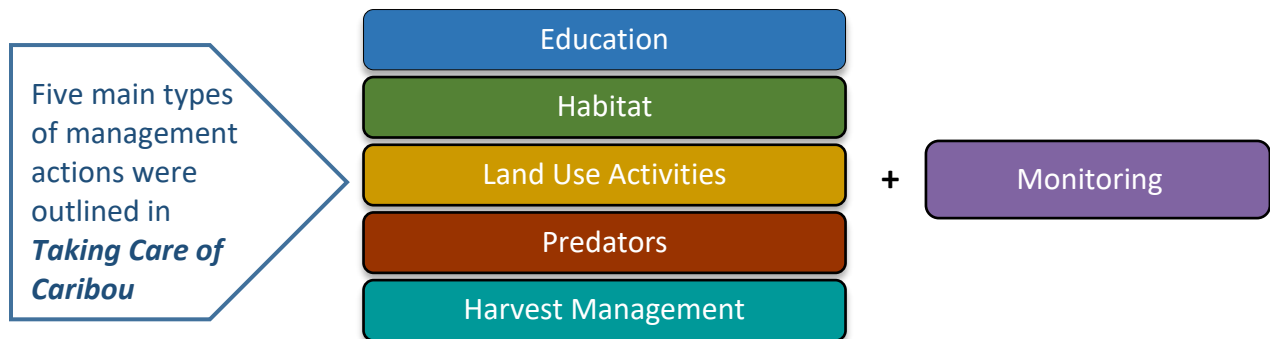
Criteria	Community-Based Information	Scientific Information	Comments
<p>Range and movement patterns</p>	<p>Inuvialuit: Paulatuk notes shift in range. Movements variable, caribou 60 to 80 km from community year to year.</p> <p>*Additional comment: if land is overused by caribou, elders say caribou won't use it. Spring migration is much later than usual. In Tuktoyaktuk high numbers of caribou were seen in spring (May) traveling steady. At Old Man Lake there is a high number of caribou (March). Bulls came in late and in bigger bunches (e.g., Jul/Aug, groups of ~30). Caribou don't have a path like they used to; harvesters would follow those trails. Due to low numbers of trappers there were no packed trails for caribou to follow</p> <p>Gwich'in/Nihtat RRC (Inuvik): reports caribou are travelling in smaller groups</p> <p>Sahtú: Colville Lake reported different movements last fall, so caribou were closer to Déljñę than in the past, and coming down further south (Whitefish River area)</p>	<p>Updated seasonal range maps presented at status meeting show that during calving, cows and bulls are using different areas.</p> <p>Fidelity to calving grounds based on cow caribou collars is high (97.6% returned to Bluenose-West calving ground).</p>	
<p>Environment and habitat</p>	<p>Inuvialuit: Tuktoyaktuk reports creeks stay open longer; winter is not as cold and damp; summer is a lot cooler and there are more northeast winds. There is not much snow – so some hunters cannot reach usual areas</p> <p>Aklavik (Gwich'in and Inuvialuit): Meeting participants raised questions about effects of increased muskox numbers on caribou populations. A member noticed in areas (near Inuvik) that muskox are in the same area as the Bluenose-West herd. It's been known that when muskox are around, the caribou tend to stay away</p>	<p>Parks Canada: summer habitat experiencing green-up significantly earlier in the year. Stable trend in productivity in late June. Slight increasing trend in shrubbiness.</p>	<p>Parks Canada work was done on calving and summer ranges.</p> <p>Inuvialuit: Paulatuk deferred comment until receive report from Parks Canada</p> <p>Sahtú: no changes in habitat reported</p>

Criteria	Community-Based Information	Scientific Information	Comments
<p>Human disturbance</p>	<p>Inuvialuit: Tuktoyaktuk and Paulatuk report that low-flying aircraft – especially helicopters – are always an issue and disturb caribou. There are concerns in Paulatuk that Inukshuk building by tourists may impact caribou migration. In Tuktoyaktuk, highway construction caused the caribou to turn back east (due to road steepness, equipment, traffic, etc.). This summer the caribou won't move onto/across the road. They have changed their migration due to road construction.</p> <p>*Additional comments: caribou may not move off the road once on it. When researchers count they cause the caribou to spread apart causing the harvesters to use more gas to hunt</p> <p>Aklavik (Gwich'in and Inuvialuit): Low flying aircraft disturb caribou</p> <p>Sahtú: Concerns and questions were expressed about possible impacts by Darnley Bay Resources Ltd., as well as past exploration in Colville Lake area impact concern levels</p>	<p>Minimal human disturbance / industrial activity on the range.</p> <p>TNNPMB/Parks Canada has agreed to minimize over-flights during calving</p>	

Orange Status Management Actions for Bluenose-West Caribou

Management actions described in *Taking Care of Caribou* fall into five main categories: *Education*, *Habitat*, *Land Use Activities*, *Predators* and *Harvest Management*.

We have included a sixth category here to capture the *Monitoring* actions that were also identified in the Management Plan. Monitoring is a key part of learning and assessing the success of management actions. For the most part, monitoring actions differ from management actions as they are not as dependent on herd status – they are ongoing in many cases, but their frequency or intensity may change with changing status.



To make it easier to find specific information for each of these action categories they have been colour-coded throughout this document.

Different actions are often required depending on whether a herd's status is determined to be green, yellow, orange or red. A table summarizing appropriate management actions for all status levels as agreed to in *Taking Care of Caribou* is included in **Appendix E**. As the status of the Bluenose-West herd is **orange** (intermediate and decreasing), each of the bulleted actions outlined for orange status in that table has now been developed into a series of specific tasks in the **Management Actions Table** of this Action Plan. These tasks will take into consideration concerns raised about the lack of herd recovery and herd size proximity to red zone despite ongoing management actions. Links between monitoring criteria and relevant actions are provided in **Appendix D**.

Because most activities under *Education* and *Habitat* require very long-term approaches to be effective, the suggested management actions remain the same no matter the status of the herd. For actions in the *Land Use Activities*, *Predators*, and *Harvest Management* categories to be responsive to different phases of the population cycle, different actions are required depending on a herd's status – for example, when setting a herd Total Allowable Harvest (see **Appendix F** for an explanation of how allocations and the Total Allowable Harvest for a herd are set).

Management Actions Table for Bluenose-West Caribou: Orange Status

Following principles laid out in *Taking Care of Caribou*, all actions and tasks described in this table will draw upon both community-based knowledge (including traditional knowledge) and scientific information. The ACCWM recognizes that documenting and using traditional knowledge is a priority for all member boards.

A. Education ⁸				
A – 1. Develop education strategy <i>Objective – address community concerns regarding a lack of education (see various themes identified in Taking Care of Caribou) and clarify an approach</i>				
Task	Partners ⁹	Performance Measure	Deliverable date	Priority level ¹⁰
A.1.1 Strike an Education and Communication Working Group	ACCWM and government partners ¹¹	Education and Communication Working Group meeting	2017/18	Top
A.1.2 Develop a Terms of Reference	ACCWM Working Group	Finalized TOR, approved by ACCWM	2017/18	Top
A.1.3 Determine existing materials, programs, gaps, and opportunities for collaboration	Education and Communication Working Group	List of existing materials and programs, and opportunities for collaboration	2017/18	Top
A.1.4 Engage community organizations ¹² for input on educational strategy	Education and Communication Working Group,	Summary of input / guidance from	2017/18	Top

⁸ Education specific to industrial land uses is dealt with in section C – Land Use Activities (C.3.1 and C.3.2).

⁹ Potential partners have been identified for individual tasks. Leads on tasks may vary, and will be determined at a later date.

¹⁰ While the ACCWM member boards feel that most of the management actions included here have a high priority, only those tasks and actions that call for immediate attention have been given a priority and deliverable deadline to date. These actions/tasks are categorized as ‘Top’ priority in the table. Further prioritization work (i.e., assigning High, Medium or Low priorities and deliverable dates to the remaining actions/tasks) will be done at a later date.

¹¹ Potential government partners include: GNWT, GN, PCA, TG and other Aboriginal Governments.

¹² Throughout this document, “Engage community organizations” means that the member boards of the ACCWM will decide in any circumstance whether the community perspective is adequately represented within each boards’ discussions, or whether a further process of community/community organizations’ engagement is necessary. ACCWM member boards have discretion as to what community organizations are engaged and how the engagement takes place.

	with assistance from ACCWM	communities and related revisions		
A.1.5 Develop educational strategy, allowing for regional differences	Education and Communication Working Group	Document outlining strategy	2017/18	Top
A.1.6 ACCWM reviews educational strategy and provides advice to member boards ¹³ for approval	ACCWM	Advice provided to member boards	2017/18	Top
A.1.7 Implementation of educational strategy	Member boards, government partners and regional partners ¹⁴	Summary report	Apr 2017 and onwards	Top
A – 2. Develop education materials <i>Objective – address community concerns regarding a lack of education on sustainable and respectful use, as well as caribou ecology</i>				
A.2.1 Develop draft materials based on results of A.1.3 and A.1.4	Education and Communication Working Group	Draft education materials	2017/18	Top
A.2.2 Engage community organizations regarding types of materials and distribution		Summary of input / guidance from communities and related revisions	2017/18	Top
A.2.3 Revise and distribute materials		Send finalized educational materials	2017/18	Top
A – 3. Community education events / programs <i>Objective – address community concerns regarding a lack of education on sustainable and respectful use, as well as caribou ecology. Limit wounding loss and improve identification of individual caribou</i>				
A.3.1 Develop events / programs based on results of A.1.3 and A.1.4	Education and Communication Working Group, with assistance from ACCWM WG and regional partners	Develop 1-3 workshop curricula / programs		

¹³ Throughout this Action Plan, the term ‘member boards’ refers to the six boards which are members of the Advisory Committee for Cooperation on Wildlife Management (ACCWM), including the Wildlife Management Advisory Council (NWT), Gwich’in Renewable Resources Board, ʔehdzo Got’jñę Gots’ę Nákedı (Sahtú Renewable Resources Board), Wek’èezhii Renewable Resources Board, Kitikmeot Regional Wildlife Board, and Tuktut Nogait National Park Management Board.

¹⁴ Regional partners, which vary significantly by region, may include individual community members, community organizations, such as RRCs/HTCs/HTOs, and regional organizations.

A.3.2 Engage community organizations regarding type and timing of workshops in each region	Education and Communication Working Group, with assistance from ACCWM WG	Summary of input / guidance from communities and related revisions		
A.3.3 Deliver workshops / events	Education and Communication Working Group, with community organizations and government partners	Minimum target: delivery of one workshop / event per region, per year		
A.3.4 Hold sight in your rifle events		Minimum target: delivery of one workshop / event per region, per year	Ongoing	
A – 4. School and youth education events / programs <i>Objective – address community concerns regarding need for education and engagement of youth. Increase knowledge transfer between elders and youth</i>				
A.4.1 Adapt education materials (developed in A – 2) for school use (at elementary and high school levels)	Education and Communication Working Group	Education packages for community agency / organization use		
A.4.2 Adapt community education programs / events (developed in A – 3) for use in school and youth-focused settings appropriate for each community and region (e.g., back to the land camps)		Draft youth-focused workshop curricula / programs		
A.4.3 Engage community organizations regarding types of materials and program delivery		Summary of input / guidance from communities and related revisions		
A.4.4 Program delivery	Community groups / agencies	Minimum target: delivery of one workshop / event per region, per year		
A.4.5 Encourage and promote hunter mentorship – develop programs	Community groups / agencies, with schools	Minimum target: delivery of one workshop / event per region, per year		

B. Habitat

B – 1. Identify and recommend protection for key habitat areas
Objective – address community concerns that key habitat areas are not protected sufficiently

Task	Partners	Performance Measure	Deliverable date	Priority level
B.1.1 Compile and review ENR Technical Report, SARC BGC Status report, land use plans, results of monitoring programs, etc. for information	Government partners and ACCWM WG	Compilation of existing materials	2017/18	Top
B.1.2 Engage community organizations for identification of key habitat areas	ACCWM WG	Summary of input / guidance from communities	2017/18	Top
B.1.3 Identify key habitat areas in a sensitive habitat report based on information from B.1.1 and B.1.2	Government partners and ACCWM WG	Provide report to ACCWM, including draft maps of key areas	2017/18	Top
B.1.4 ACCWM reviews sensitive habitat report and provides advice to member boards for approval	ACCWM	Advice provided to member boards	2017/18	Top
B.1.5 Member boards make and communicate recommendations to appropriate authorities	Member boards	Recommendations provided	2017/18	Top

B – 2. Review results of monitoring, including cumulative effects, to ensure enough habitat is available and caribou are able to move between areas of good habitat
Objective – ensure research and monitoring programs are relevant and addressing current information needs for habitat management

B.2.1 Map and track landscape disturbances	Government partners	Compilation map		
B.2.2 Identify and review recent relevant information (e.g., including results from research, monitoring; see C – Land Use Activities, also F – Monitoring Actions)	ACCWM WG and government partners, academics	Summary report	Every year before annual status meeting	
B.2.3 Identify and / or review any gaps or previous gaps assessments		List of gaps identified		
B.2.4 Seek collaborators to help refine research questions and knowledge gaps		Advice included / received from collaborators		
B.2.5 ACCWM reviews information and provides advice	ACCWM	Advice provided to member boards		

for research and monitoring based on information from B.2.1-4				
B.2.6 Member boards make and communicate recommendations to appropriate authorities	Member boards	Recommendations provided		
B – 3. Recommend important habitat as a ‘value at risk’ for forest fire management <i>Objective – ensure sufficient winter habitat for caribou</i>				
B.3.1 Based on results of B – 1 and as results of B – 2 are available, provide advice to member boards on values at risk	ACCWM	Key areas identified for fire management and advice provided to member boards		
B.3.2 Member boards make and communicate recommendations to fire management	Member boards	Recommendations provided		

C. Land use activities

C – 1. Review results of cumulative effects monitoring programs
Objective – ensure cumulative effects monitoring programs are operational and relevant

Task	Partners	Performance Measure	Deliverable date	Priority level
C.1.1 Building on work done in Habitat (B – 2), identify and review recent relevant information (e.g., CIMP, ENR, DOE)	ACCWM WG and government partners	Summary report		
C.1.2 Identify and / or review any gaps or previous gaps assessments		List of gaps identified. Collation of previous gap assessments		
C.1.3 ACCWM reviews information and provides advice for research and monitoring based on information from C.1.1 and C.1.2	ACCWM	Advice provided to member boards		
C.1.4 Member boards make and communicate recommendations to appropriate authorities	Member boards	Recommendations provided		

C – 2. Provide advice on mitigation of industrial impacts to proponents and regulators
Objective – minimize industrial impacts to caribou and their habitat

C.2.1 Identify parties involved in industrial activities on a herd's range (e.g., regulators, proponents and active developers)	ACCWM WG and other relevant agencies / partners (e.g., Land and Water Boards, ILA)	List of regulators, proponents, active developers		
C.2.2 Engage community organizations to identify land use concerns and how they should be addressed. Engage with regulators to identify any existing protocols	ACCWM WG	Summary of input / guidance from communities and current regulatory protocols		
C.2.3 Identify and / or develop mitigating advice and / or recommendations, targeted to specific audiences, including standards provided in <i>Taking Care of Caribou</i> (Appendix G)	ACCWM WG, regional and government partners	Recommendations provided		
C.2.4 ACCWM reviews information and advises member boards	ACCWM	Advice provided to member boards		
C.2.5 Member boards make and communicate recommendations to proponents (including air carriers and other subcontractors) and regulators, including updates on herd status and sensitive habitat report	Member boards	Recommendations provided; results of C.2.2 and herd status provided		
<p>C – 3. Provide active and accessible communication and recommend education programs for all, including proponents and airlines <i>Objective – address concerns regarding land use activities impacting caribou habitat, and a lack of information on best practices / mitigating advice</i></p>				
C.3.1 Develop and / or adapt existing education packages specific to proponents, regulators, air carriers and any other users not already covered by actions in A – Education, and C – 1 and C – 2 (recreational, traffic)	Education and Communication Working Group	Draft materials		
C.3.2 Communicate educational materials developed in C.3.1		Finalized materials sent out		

C – 4. Recommend increased enforcement of land use regulations, including community monitors ¹⁵ <i>Objective – evaluate and track effectiveness of enforcement, and ensure community monitoring programs have a role in supporting application of land use regulations</i>				
C.4.A.1 Identify relevant agencies involved in inspection, enforcement and monitoring	ACCWM WG and other relevant agencies / partners (e.g., Land and Water Boards, ILA)	List of relevant agencies and regulations	2017/18	Top
C.4.A.2 Compile and review acts / regulations and current inspection and / or enforcement strategies and levels	ACCWM WG and regional partners	Summary report	2017/18	Top
C.4.A.3 Engage community organizations regarding enforcement approaches	ACCWM WG and government partners	Summary of input and guidance	2017/18	Top
C.4.A.4 Based on information from C.4.A.2 and C.4.A.3, assess enforcement, and provide advice about increased inspection or enforcement and / or regulation changes as required	ACCWM	Advice provided to member boards	2017/18	Top
C.4.A.5 If and as required, member boards provide recommendations to appropriate authorities	Member boards	Recommendations provided	2017/18	Top
C.4.B.1 Compile and review information on capacity, roles and opportunities for community monitors. Include identification of existing programs	ACCWM WG and regional partners	Summary report	2017/18	Top
C.4.B.2 Engage community organizations regarding potential opportunities for community monitors	ACCWM WG and regional partners	Summary of input and guidance	2017/18	Top
C.4.B.3 Provide advice and ensure that mitigating advice provided in (C.2.3) includes roles for community monitors where appropriate	ACCWM	Advice provided to member boards	2017/18	Top

¹⁵ Enforcement is an action whereby delegated officers ensure compliance to an act of parliament or legislative assembly, or a regulation disseminated under an act where there is a sanction for failure to “comply” normally in the form of a fine or imprisonment. Monitoring is an action whereby community monitors (as described in this plan) observe and report on all aspects of land-use activities and wildlife management to the relevant agencies and/or regulators. A community monitor has no delegated legal authority.

C.4.B.4 If and as required, member boards provide recommendations to appropriate authorities	Member boards	Recommendations provided	Apr – May 2017	Top
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D. Predators

D – 1. Review results of research programs that monitor predator abundance and predation rates
Objective – determine which predators impact caribou and the relative intensity of their impacts

Task	Partners	Performance Measure	Deliverable date	Priority level
D.1.1 Gather, compile, review and present predator research and monitoring results to ACCWM (including community and scientific monitoring results)	ACCWM WG and government partners	Summary report	2017/18	Top
D.1.2 Engage community organizations to identify and prioritize research needs	ACCWM WG	Summary of input / guidance from communities	2017/18	Top
D.1.3 Identify and prioritize research needs based on information resulting from D.1.1 and D.1.2	ACCWM WG and government partners	Advice provided to ACCWM	2017/18	Top
D.1.4 ACCWM reviews and provides advice to member boards	ACCWM	Advice provided to member boards	2017/18	Top
D.1.5 Member boards recommend research priorities to appropriate authorities	Member boards	Recommendations provided	2017/18	Top

D – 2. Consider recommending options for predator management
Objective – review information from all partners to determine whether predator management is a viable option

D.2.1 Compile results from research regarding predator management / control programs	ACCWM WG and government partners	Literature review		
D.2.2 Engage with other jurisdictions that have predator control experience		Information for summary report		
D.2.3 Identify jurisdictional / regional rules and regulations around predator management		List of existing regulations and rules		
D.2.4 Compile and review information from D.2.1-3		Summary report		

D.2.5 Engage community organizations regarding potential options for predator management		Summary of input / guidance from communities		
D.2.6 ACCWM provides advice to member boards regarding options for predator management	ACCWM	Advice provided to member boards		
D.2.7 If justified, member boards recommend predator management tools to appropriate authorities	Member boards	Recommendations provided, if needed		

E. Harvest Management

E – 1. Recommend no resident, outfitter or commercial harvest¹⁶

Objective – limit licensed harvest to assist in herd recovery

Task	Partners	Performance Measure	Deliverable date	Priority level
E.1.1 Based on results of discussions concerning a Total Allowable Harvest (TAH) and harvest ratios, member boards make and communicate recommendations to appropriate authorities	Member boards	Recommendations provided		

E – 2 Recommend a mandatory limit on subsistence harvest based on a TAH accepted by the ACCWM¹⁷

Objective – limit subsistence harvest to assist in herd recovery

E.2.A.1 Compile historical and current harvest information by region	Member boards and government partners	Summary documents		
E.2.A.2 Review information from preceding step with community organizations and advise	Member boards and regional partners	Summary of input / guidance from communities		

¹⁶ The process differs in Nunavut, where the Land Claim Agreement (1993) specifies that an Inuk “shall have the right to dispose freely to any person any wildlife lawfully harvested. This includes the right to sell, barter, exchange and give either inside or outside the Nunavut Settlement Area” (5.7.30).

¹⁷ As strict conservation measures are needed areas with land claim agreements establish a Total Allowable Harvest (TAH). As circumstances require each ACCWM member (with the exception of the TNNPMB) will set the TAH for their region. When a herd is shared over land claim areas and/or areas without settled land claim agreements proportional allocations are set as to determine how the user groups will share the TAH.

regarding regional processes (e.g., public hearings)				
E.2.A.3 Meetings to discuss and propose regional proportional allocations ¹⁸	Member boards and other traditional users	Provide percentages for inclusion in Action Plan		
E.2.B.1 Based on information presented at annual status meeting, ACCWM proposes a herd TAH and sex ratio	ACCWM	Proposed TAH and definition of majority bull harvest	Every year, following annual status meeting	
E.2.B.2 ACCWM advises member boards regarding the proposed herd TAH, based on E.2.B.1	ACCWM	Proposed TAH provided to member boards		
E.2.B.3 Each member board consults with communities on regional TAH as required by their respective land claim agreements (including public hearings as required by respective land claim agreements)	Member boards	Summary of input / guidance from communities and related revisions		
E.2.B.4 Boards recommend TAH to Minister		Recommendations provided		
E – 3. Recommend a majority-bulls harvest, emphasizing younger and smaller bulls and not the large breeders and leaders <i>Objective – ensure selective harvest to assist in herd recovery</i>				
E.3.1 Based on results of discussions concerning TAH and harvest ratios (E.2.B.1-3), member boards make and communicate recommendations to appropriate authorities	Member boards	Recommendations provided		
E – 4. Prioritize the collection of harvest information (see F – 1. Develop harvest monitoring program) <i>Objective – record accurate harvest information</i>				
E.4.1 Assess status of harvest reporting programs (see F – Monitoring) and identify any roadblocks / challenges to success	ACCWM WG with government partners and regional partners	Review report of existing programs	2017/18	Top
E.4.2 Based on E.4.1, work with communities / partners to identify what additional support		Regional workshops as required	2017/18	Top

¹⁸ The processes for determining Total Allowable Harvests and regional allocations are described in Appendix F.

or cooperation is needed, and how best to provide it				
E.4.3 Adjust educational programming or communication plan if required (see A – Education)		Revised materials, as needed	2017/18	Top
E – 5. Recommend harvest of alternate species and encourage increased sharing, trade and barter of traditional foods, such as the use of community freezers <i>Objective – explore other species to harvest to reduce pressure on caribou</i>				
E.5.1 Based on available information, identify alternate species populations whose status allows increases in harvest	ACCWM WG with government partners	List and rationale of potential alternate species / populations		
E.5.2 Engage community organizations to determine regionally appropriate species / populations	ACCWM WG	Summary of input / guidance from communities and related revisions		
E.5.3 Based on information resulting from E.5.1 and E.5.2, develop list of regionally appropriate alternate species for harvest		List of alternate species		
E.5.4 ACCWM reviews list and provides advice to member boards	ACCWM	Advice provided to member boards		
E.5.5 Member boards recommend alternate species populations to users. Collaborate with partners to recommend the development and funding of harvest or sharing programs (may include trade and barter, community hunts or freezers, etc.)	Member boards	Recommendations provided		
E.5.6 Adapt existing Communication Plan and educational materials to better promote use of alternate species (see A – Education and Appendix C)	Education and Communication Working Group	Draft communication plan and education materials		
E – 6. Recommend increased enforcement including community monitors (see footnote clarifying monitoring and enforcement responsibilities at C – 4). <i>Objective – maximize approaches and tools to ensure compliance of regulations</i>				
E.6.A.1 Identify relevant agencies involved in inspection, enforcement and monitoring	ACCWM WG and other relevant agencies /	List of relevant agencies		

	partners (e.g., Land and Water Boards, ILA)			
E.6.A.2 Compile and review acts / regulations and current strategies and levels of inspection and enforcement	ACCWM WG and regional partners	Summary report		
E.6.A.3 Engage community organizations and enforcement officers regarding enforcement approaches	ACCWM WG and government partners	Summary of input / guidance		
E.6.A.4 Based on information from E.6.A.2 and E.6.A.3 assess enforcement and provide advice about inspection and enforcement strategies and levels.	ACCWM WG and regional partners	Advice provided to member boards		
E.6.B.1 Compile and review information on capacity, roles and opportunities for community monitors. Include identification of existing programs	ACCWM WG and regional partners	Summary report		
E.6.B.2 Engage community organizations regarding potential opportunities for community monitors	ACCWM WG and regional partners	Summary of input and guidance		
E.6.B.3 Provide advice about roles for community monitors where appropriate	ACCWM	Advice provided to member boards		
E.6.B.4 Member boards provide recommendations to appropriate authorities	Member boards	Recommendations provided		

F. Monitoring

F – 1. Develop a comprehensive harvest reporting program

Objective – develop or adapt existing harvest reporting programs to collect and provide standardized harvest data from all regions

Task	Partners	Performance Measure	Deliverable date	Priority level
F.1.1 Compile and review information on existing harvest reporting programs and develop minimum standards	ACCWM WG	Summary report	2017/18	Top

F.1.2 Engage community organizations regarding appropriate programs for harvest data collection		Summary report	2017/18	Top
F.1.3. Adapt harvest reporting programs based on information from F.1.1 and F.1.2. to standardize harvest data		Finalized harvest reporting program	2017/18	Top
F.1.4 Implement harvest data collection program	Member boards and government partners	Collections initiated	2017/18	Top
F.1.5 Establish annual data reporting template		Template	2017/18	Top
F.1.6 Adapt and / or develop database and protocols		Pilot database program developed	2017/18	Top
F.1.7 Gather, compile and present total herd harvest data to ACCWM	ACCWM WG	Summary report	2017/18	Top
<p>F – 2. Develop and initiate community-based monitoring (CBM) programs (including observational and experiential data)</p> <p><i>Objective – develop or adapt existing community-based monitoring programs to collect data in a format that can be used for decision-making</i></p>				
F.2.1 Compile and review information on existing community-based monitoring programs	ACCWM WG	Summary report		
F.2.2 Compile existing traditional knowledge documentation and identify any new documentation / work required as basis for a community-based monitoring program	ACCWM WG with regional partners	Draft 'state of traditional knowledge' report(s)		
F.2.3 Engage community organizations regarding appropriate programs for community-based monitoring to collect herd status information (see Table 1 in <i>Taking Care of Caribou</i>)	ACCWM WG	Summary of input / guidance from communities		
F.2.4 Adapt and / or develop CBM program(s) based on information from F.2.1-3		Finalized CBM program		
F.2.5 Recommend appropriate CBM programs including TK studies	Member boards	Recommendations provided		

F.2.6 Establish data-sharing arrangements and / or information-sharing protocols	Member boards and regional partners	Signed data-sharing agreements		
F.2.7 Adapt and / or develop database	ACCWM WG	Database program developed		
F.2.8 Gather, compile and present results to ACCWM	Regional partners	Summary report	Annual status meeting	
F – 3. Conduct scientific monitoring to assess herd status <i>Objective – develop or adapt existing scientific monitoring programs to collect data in a format that can be used for decision-making</i>				
F.3.1 Compile and review information on existing scientific monitoring programs	Government partners and regional partners	Summary report		
F.3.2 Engage community organizations regarding appropriate programs for scientific monitoring to collect herd status information (see also F.2.3) and appropriate ways to collaborate	ACCWM WG	Summary of input / guidance from communities		
F.3.3 Research and develop mechanism for collaboration between regions, compiling information and reporting on research programs	ACCWM to determine responsible parties	Decide on mechanism for collaboration		
F.3.4 Construct scientific monitoring schedule based on engagement and Table 1 in <i>Taking Care of Caribou</i>	ACCWM WG	Annual report / work plan	Annual status meeting	
F.3.5 Support appropriate scientific monitoring studies	Member boards	Approval by member boards	Annual status meeting	
F.3.6 Establish information sharing protocols	Government partners	Information shared according to protocol		
F.3.7 Gather, compile and present results to ACCWM		Status of all monitoring criteria communicated to the ACCWM	Annual status meeting	

Appendix A: List of ACCWM Working Group members

The ACCWM formed a working group to draft the Action Plans that accompany the *Taking Care of Caribou* Management Plan. The Working Group included representatives of the following organizations:

- ʔehdzo Got'Inę Gots'ę Nákedı (Sahtú Renewable Resources Board)
- Dehcho First Nations¹⁹
- Department of the Environment, Government of Nunavut
- Environment and Natural Resources (ENR), GNWT
- Gwich'in Renewable Resources Board
- Inuvialuit Game Council
- Kitikmeot Regional Wildlife Board
- Kugluktuk Hunters and Trappers Organization (Kugluktuk Angoniatit Association)
- Nunavut Wildlife Management Board, and
- Parks Canada Agency
- Tuktut Nogait National Park Management Board
- Wek'èezhii Renewable Resources Board
- Wildlife Management Advisory Council (NWT).

¹⁹ The Dehcho First Nations organization is part of the Working Group, but has had very limited involvement. There is an outstanding invitation for them to join the ACCWM.

Appendix B: Terms of reference for the ACCWM annual status meeting

Background

Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds Management Plan outlines a long-term framework for management actions that are based on a herd's status. The ACCWM is responsible for determining herd status each year and recommending appropriate management actions based on that status. This is done at an annual status meeting, normally held in late November. Management and action planning are based on a July 1 to June 30 harvest year.

Purpose of the Annual Status Meeting

The purpose of the annual status meeting is to:

- Assess the population status of the herd,
- Determine the management (colour) zone that applies to the herd based on the assessment, and
- Recommend management actions for the following year.

Financial Considerations

The individual boards of the ACCWM are responsible for expenses related to their members' participation, and the administrative costs of convening meetings, as outlined in their Memorandum of Understanding (2016). Individual boards of the ACCWM will cover the expenses of their members' travel to and participation in the annual status meeting. They will take turns hosting the meeting, and will cover the costs for the meeting room and other associated costs of hosting the meeting. Host boards may seek supplementary funding to cover these costs as needed. All other participants of the annual status meeting are responsible for costs they may incur in their participation.

Host requirements

The meeting chair/host party shall provide secretariat services to the Committee for the hosted meeting. For further clarity, secretariat services include, but are not limited to, organizing a meeting, preparing a meeting agenda, coordinating preparation of background information, taking notes and preparing meeting minutes and correspondence.

Meeting preparation

Preceding the annual status meeting, the following steps will take place:

1. A meeting date will be set by the ACCWM and communicated to all partners
2. Researchers, community members, and other interested parties may be invited to present information and/or participate as appropriate, eight weeks prior to the status meeting

3. Eight weeks prior to the meeting, member boards will collect, compile and coordinate monitoring information to be shared with other boards. Other agencies and organizations that may also have information will be approached at this time (*e.g.*, PCA, GN, *etc.*). Member boards use this information to populate the monitoring table
4. Four weeks prior to the meeting, parties need to confirm attendance at meeting. Regionally populated versions of the monitoring table are then distributed to confirmed attendees. This will include all information available from community monitoring, traditional knowledge work and scientific monitoring, and will include harvest information
5. There is an expectation that each member board will come to the annual status meeting prepared to discuss herd status and propose management actions through consensus.

Meeting format

The annual status meeting will be organized into two working sessions, with the following steps taking place during those sessions:

1. Public information and comment meeting
 - Review available information from each region
 - Receive presentations, summary reports, etc.
 - Review and discuss actions that were implemented in preceding year
 - Review and evaluate implementation of actions under communications strategy
 - Introduce and discuss actions that are proposed for upcoming year.
2. In-camera meeting of the ACCWM and support staff
 - Finalize monitoring table, based on all regional input
 - Collectively review and discuss all available community-based information (including traditional knowledge) and scientific information
 - Member boards deliberate to determine herd status, considering all information that was presented during the public information and comment meeting
 - Evaluate implementation of priority actions in Action Plan from previous year
 - Review recommended management actions based on status and prioritize actions for coming year
 - At the conclusion of each meeting, the participating members shall determine the chair/host and date of the next meeting.

Meeting deliverables:

1. Written summary of the meeting, including proposed status decisions for three herds, the populated monitoring table, and a rationale for the status decision for review and consideration by each member board
2. Recommendations for prioritized, status-appropriate management actions and revised Action Plans

3. Revised communications actions as needed
4. Determination of the confidentiality of the information.

Following the annual status meeting, the chairs of the member boards present these deliverables to their respective boards for review and consideration. Each member board then follows the process laid out in their land claim agreements to determine whether they support, oppose or accept the recommended status and associated actions with comments or revisions.

Within 30 days, the ACCWM representatives will each meet with their individual member boards (via teleconference or in person) to formalize their board's position regarding the status decision and recommended actions. Each member board then communicates their position to the Minister; other ACCWM member boards are copied on this correspondence. The ACCWM then submits updated Action Plans for implementation. In Nunavut, the Kitikmeot Regional Wildlife Board will communicate their position regarding status and actions to the Nunavut Wildlife Management Board for a decision (NWMB). The NWMB then will forward their decision and recommendations to the Department of Environment Minister for approval prior to implementation.

Amendments to Annual Status Meeting Terms of Reference

This Terms of Reference will be reviewed from time to time as the ACCWM member boards may determine. Any member board may propose amendments at any time, but amendments proposed within three months of the annual status meeting shall not be reviewed by the ACCWM until after the meeting. The board proposing the amendment(s) has a responsibility to forward them to all member boards. Boards shall have 90 days to provide comment. Once approved by all the member boards, the amended Terms of Reference shall supersede any previous versions.

Appendix C: Communication Plan

This communications plan is a living document. Its current version reflects the knowledge and understanding of the ACCWM during the first round of action planning in 2015 and early 2016. It is expected that it will evolve as the ACCWM and its member boards continue to implement *Taking Care of Caribou* and the associated Action Plans. This communication plan addresses the specific context of managing for these caribou herds in the NWT and Nunavut, which includes a diversity of indigenous and non-indigenous cultures and languages, and various types of wildlife management institutions. This plan focuses on formal communications while recognizing that a lot of communication takes place in informal ways in the north (for example, one on one conversations, phone calls, etc.).

Goals and Objectives

Clear principles and methods for communication will help to ensure that:

- All groups can effectively participate in sharing knowledge of the caribou and of the Management Plan;
- Groups will work together to discuss and implement effective management actions; and
- Trust and confidence in management processes will be built.

Taking Care of Caribou describes communications about caribou stewardship as being accessible and active, as well as two-way between knowledge holders and wildlife managers.

Our goals are for communications about Action Plan implementation to be regionally appropriate. Communications should also be timely so that no one is left guessing as to what decisions have been made, what events are planned, what herd status and monitoring results are, and what activities and actions are underway. Successful communications should help support decision making, and help build awareness and understanding of who the ACCWM is, as well as its mandate and those of its member boards. When sharing information with the public, our goal is to be consistent and make materials clearly identifiable and related to *Taking Care of Caribou*.

Communication objectives may change as management actions are implemented, depending on the type of ideas and information being shared. Many objectives are interconnected and some communications will touch on multiple objectives. Our overall objectives are: announcing and sharing information; building awareness; increasing community and partner participation; and education. Below are some examples of the types of information that may be shared for each of these objectives as *Taking Care of Caribou* is being implemented:

Announcing and Sharing Information

- *Taking Care of Caribou* Management Plan, Community Engagement Report, Technical Scientific Report

- Herd specific Action Plans
- Decisions made by wildlife managers
- Meetings or public events
- New programs and how to participate
- Changes to policy or regulations
- Newly complete reports or reviews
- Perspectives and knowledge
- Partner, community or organizational discussions, concerns or activities with regard to the caribou.

Building Awareness

- ACCWM, mandate and members
- Newly implemented programs
- Successful events held
- Recognition of partnerships and teamwork.

Increasing Community and Partner Participation

- Motivating harvesters to participate in sampling programs
- Encouragement of the public to follow management decisions
- Recruiting people to help plan events
- Recruiting people to participate in meetings or events related to management actions
- Requesting partner feedback or participation on working groups
- Requesting funding support for management actions.

Education

- ACCWM, mandate and members
- Management and Action Planning processes
- The colour-coded herd status
- Any voluntary or regulated limits on harvesting, such as changes to regulations
- Rationale for harvest regulations (e.g., why harvesting mostly bulls rather than cows may be preferable)
- What is being researched or monitored and why
- Results of research or monitoring programs
- Impacts of current or proposed land use activities to caribou and ways to mitigate impacts
- Educational themes, such as promotion of respectful hunting and butchering practices, information about caribou diseases and human health risks, and other themes described in ***Taking Care of Caribou***. (Note: other education specific activities are including in the Education section of the **Management Actions Table** in this document).

Responsibilities

An Education and Communication Working Group will help prepare official communications about ***Taking Care of Caribou*** and the implementation of management actions that come from the ACCWM as a committee to the public, or that come from ACCWM member boards on

behalf of the ACCWM to their regional communities. Such official communication is a different type of communication than when community organizations or individuals contact their HTC, RRC or ACCWM member board, for example.

The ACCWM and the Education and Communication Working Group need to ensure that overall messaging about the ACCWM and its member boards as well as situational messaging are pre-approved. The ACCWM and its Working Group also need to consider their communication objectives, both long standing and situational, when considering messaging. In addition, the Education and Communication Working Group should also track input given to the ACCWM and ACCWM responses to those inputs. For example, this may include feedback regarding a potential product from a target audience.

The individual boards of the ACCWM will each be responsible for delivering the prepared communications within their regions as scheduled. They will be required to assist the Education and Communication Working Group by giving timely feedback and direction regarding what methods, messages, and audiences will be appropriate for meeting communication objectives in their regions.

While communication will span both formal and less formal methods, overall it will rely on teamwork and cooperation to successfully deliver common messaging about *Taking Care of Caribou* and associated actions.

Target Audiences

For every type of communication method used in implementing management actions, care will need to be taken to determine the specific audience and to target communications appropriately. Several examples of possible target audiences for communication include:

- Youth and schools
- Harvesters
- Proponents and developers
- Regulators
- Air carriers
- Visitors
- Potential funders.

A further task of the Working Group will be to consider how to incorporate languages into communication messaging to ensure that it is regionally appropriate. It is expected that the ACCWM and the Education and Communication Working Group will be responsible for developing messaging that can be adapted by member boards to regional situations with local languages incorporated according to individual board protocols. The Working Group and ACCWM can be a forum for sharing best practices in using local languages.

Timing and Frequency

For *Taking Care of Caribou* to be successful, it is important that communications are timely and appropriately paced. There need to be regular annual communications of the work of the ACCWM. There will also need to be communications that are responsive to decisions between annual status meetings, including responses to urgent situations. The Education and Communication Working Group can help respond through assignments from the ACCWM to prepare materials in these different situations. The Education and Communication Working Group can also make recommendations to the ACCWM regarding timing and frequency.

Again, the individual boards of the ACCWM have a high level of responsibility in ensuring that communications and reviews of draft products prepared by the Working Group are done in a timely fashion and are appropriate for their region.

Methods

There are many communication techniques which may be used depending on the particular message and the intended audience. The Education and Communication Working Group, with feedback from regional partners, will need to consider what each target audience encounters, reads, listens to, watches and engages in, to help place messages where they will be seen and accessed, and to ensure that communications are in a suitable format for the chosen audience. Visual messaging that helps the public easily recognize *Taking Care of Caribou* communications should be used in products prepared by the Education and Communication Working Group. For example, communications may include a recognizable logo with “*Taking Care of Caribou*” as the tagline.

Examples of possible communication methods that were suggested by community members during public engagements for *Taking Care of Caribou* include:

- Posters
- Fliers and brochures
- Radio announcements and programs
- School visits
- Presentations, such as at HTC or RRC meetings
- Newsletters
- Promotional materials (*e.g.*, items such as caps, T-shirts, mugs, bumper stickers, magnets, cloth grocery bags, *etc.*)
- Internet and social media, such as organization websites, Facebook pages, YouTube feeds, podcasts
- Letters to the Editor
- News stories, columns, and reports
- Press releases and press conferences
- Written or in-person briefings to airlines or developers
- Community events, such as on-the-land gatherings, sight-in your rifle events, *etc.*
- Word of mouth
- Music

- Exhibits and public art
- Books or other reading material, such as education modules
- Television (*e.g.*, cable stations can show PowerPoint ads for a low cost; purchased ad time can also be used to convey messages)
- DVDs, such as hunter training videos
- Theatre plays or skits
- Story telling.

The annual status meeting of the ACCWM and its Working Group is another opportunity for face-to-face communication between representatives of management agencies, community members, the public and scientists.

Resources

Successful communications will depend on the availability of resources, including staff, funds and other resources, such as technical equipment needed for various media types. Adequate funding will need to be sought out and budgeted for to ensure that full opportunity is provided for dialogue about the status of herds and management actions being considered or underway. Care should be taken to look for opportunities for partnerships and donated resources that might be available for communications needs (*e.g.*, in editing, translating, printing, publishing and disseminating information).

Evaluation

Each year, the ACCWM will meet to review implementation of the Action Plan(s). Part of this review will include an evaluation of communications made to and from the ACCWM, Plan partners, and the public. It is important to evaluate how well communications were carried out and how well they worked in meeting communications goals and objectives. A template for evaluation can be built from the list of objectives and should also include consideration of the Education and Communication Working Group process and its interactions with and responsiveness to direction from the ACCWM. The communications plan itself will also be reviewed for possible revisions at that time. Good communication would mean that groups effectively participated to share knowledge, and that they worked together to discuss and implement actions and built trust and confidence in management processes. As with the Management Plan, an adaptive management approach will be taken to ensure communications are effective as *Taking Care of Caribou* is implemented.

Appendix D: Criteria used to assess herd status with links to relevant actions in the Management Actions Table for Bluenose-West Caribou: *Orange Status*

Information	Examples of links to relevant actions in Management Actions Table
Population size	A. Education (A.2, A.3, and A.4) C. Land use activities (C.2 and C.3) E. Harvest Management (E1, E.2, E.3, and E.4) F. Monitoring (F.2 and F.3)
Population trend and rate of change	A. Education (A.2, A.3, and A.4) C. Land use activities (C.2 and C.3) E. Harvest Management (E1, E.2, E.3, and E.4) F. Monitoring (F.2 and F.3)
Productivity and recruitment	A. Education (A.2, A.3, and A.4) E. Harvest Management (E1, E.2, E.3, and E.4) F. Monitoring (F.2 and F.3)
Adult composition	A. Education (A.2, A.3, and A.4) E. Harvest Management (E1, E.2, E.3, and E.4) F. Monitoring (F.2 and F.3)
Body condition and health	A. Education (A.2, A.3, and A.4) E. Harvest Management (E1, E.2, E.3, and E.4) F. Monitoring (F.1, F.2, and F.3)
Harvest levels	A. Education (A.2, A.3, and A.4) E. Harvest Management (E1, E.2, E.3, and E.4) F. Monitoring (F.1, F.2, and F.3)
Predator populations	A. Education (A.2, A.3, and A.4) D. Predators (D.1 and D.2) F. Monitoring (F.2 and F.3)
Range and movement patterns	A. Education (A.2, A.3, and A.4) B. Habitat (B.1, B.2, and B.3) C. Land use activities (C.1, C.2, C.3, and C.4.B) E. Harvest Management (E.2 and E.4) F. Monitoring (F.2 and F.3)
Environment and habitat	A. Education (A.2, A.3, and A.4) B. Habitat (B.1, B.2 and B.3) C. Land use activities (C.1, C.2, C.3, and C.4.B) F. Monitoring (F.2 and F.3)
Human disturbance	A. Education (A.2, A.3, and A.4) B. Habitat (B.1, B.2, and B.3) C. Land use activities F. Monitoring (F.2 and F.3)

Appendix E: Summary table of management actions presented in *Taking Care of Caribou*

Management Actions Based on Herd Status/Colour Zone				
Management Action	The population level is intermediate and increasing	The population level is high	The population level is intermediate and decreasing	The population level is low
Education	<p>Recommend education programs for all status levels. Ideas for educational themes include:</p> <ul style="list-style-type: none"> • Promoting total use of harvested caribou, and proper butchering and storage methods; • Limiting wounding loss; • Letting the leaders pass; • Promoting community hunts with experienced hunters; • Use of alternate species; and • Increased sharing of traditional foods. 			
Habitat	<ul style="list-style-type: none"> • Identify and recommend protection for key habitat areas; • Review results of monitoring, including cumulative effects, to ensure enough habitat is available and caribou are able to move between areas of good habitat; • Recommend important habitat as a 'value at risk' for forest fire management. 			
Land use activities	<ul style="list-style-type: none"> • Review results of cumulative effects monitoring programs; • Provide advice on mitigation of industrial impacts to proponents and regulators. 	<ul style="list-style-type: none"> • Review results of cumulative effects monitoring programs; • Provide advice on mitigation of the impacts of exploration and development activities to proponents and regulators. 	<ul style="list-style-type: none"> • Review results of cumulative effects monitoring programs; • Provide advice on mitigation of industrial impacts to proponents and regulators; • Provide active and accessible communication and recommend education programs for all including proponents and airlines; • Recommend increased enforcement of land use regulations, including community monitors. 	<ul style="list-style-type: none"> • Work directly with proponents and regulators of exploration and development activities to advise on mitigation measures; • Review results of cumulative effects monitoring programs; • Provide active and accessible communication and recommend education programs for all including proponents and airlines; • Recommend increased enforcement of land use regulations, including community monitors.

Management Actions Based on Herd Status/Colour Zone				
Management Action	The population level is intermediate and increasing	The population level is high	The population level is intermediate and decreasing	The population level is low
Predators	<ul style="list-style-type: none"> Continue research programs to monitor predator condition (e.g., carcass collection and community monitoring programs). 	<ul style="list-style-type: none"> Continue research programs to monitor predator condition (e.g., carcass collection and community monitoring programs). 	<ul style="list-style-type: none"> Review results of research programs that monitor predator abundance and predation rates; Consider recommending options for predator management. 	<ul style="list-style-type: none"> Review results of research programs that monitor predator abundance and predation rates; Consider recommending options for predator management.
Harvest	<ul style="list-style-type: none"> Recommend easing limits on subsistence and then resident harvests ; Consider recommending outfitter and commercial harvests at discretion of the ACCWM. 	<ul style="list-style-type: none"> Support harvest by beneficiaries of a Land Claim and members of an Aboriginal people, with rights to harvest wildlife in the Region; Recommend that if subsistence needs are met resident harvest should be permitted (with limits); Potentially recommend resident (non-beneficiary), non-resident, sport hunts, and/or commercial harvests. 	<ul style="list-style-type: none"> Recommend a mandatory limit on subsistence harvest based on a TAH accepted by the ACCWM; Prioritize the collection of harvest information; Recommend no resident, outfitter or commercial harvest; Recommend a majority-bulls harvest, emphasizing younger and smaller bulls and not the large breeders and leaders; Recommend harvest of alternate species and encourage increased sharing, trade and barter of traditional foods, such as the use of community freezers; Recommend increased enforcement including community monitors. 	<ul style="list-style-type: none"> Recommend harvest of alternate species and meat replacement programs, and encourage increased sharing, trade and barter of traditional foods; Prioritize the collection of harvest information; Review of mandatory limit for subsistence harvest for further reduction; Recommend increased enforcement including community monitors; Resident, commercial, or outfitter harvest remain closed.

Appendix F: Determining allocations and Total Allowable Harvests

In areas of Nunavut and the NWT that have land claims agreements, when strict conservation measures are needed, a Total Allowable Harvest (TAH) is established. The TAH is based on what is considered to be an acceptable percentage of the herd to harvest, considering where it is in its population cycle, whether cows or bulls are harvested, and associated risks to the herd. This means that as a herd's status changes, the TAH will change.

Harvest allocations are an agreed-upon set percentage of how the total harvest from a herd is shared between groups. Agreements about allocations are based on harvest levels and according to the requirements of regional legislation and of land claims agreements. Priorities for harvest allocations are laid out in *Taking Care of Caribou* (p. 48).

The ACCWM recognizes that it is important to work collaboratively when discussing a TAH for shared herds. With the exception of the TNNPMB, each ACCWM member may, if circumstances require, set a TAH for their region; allocation is then done within the region according to what is outlined in individual land claims. Within this setting, communities may also choose to voluntarily restrict harvest – for example, a regional council such as an HTO may set community by-laws that affect harvesting.

