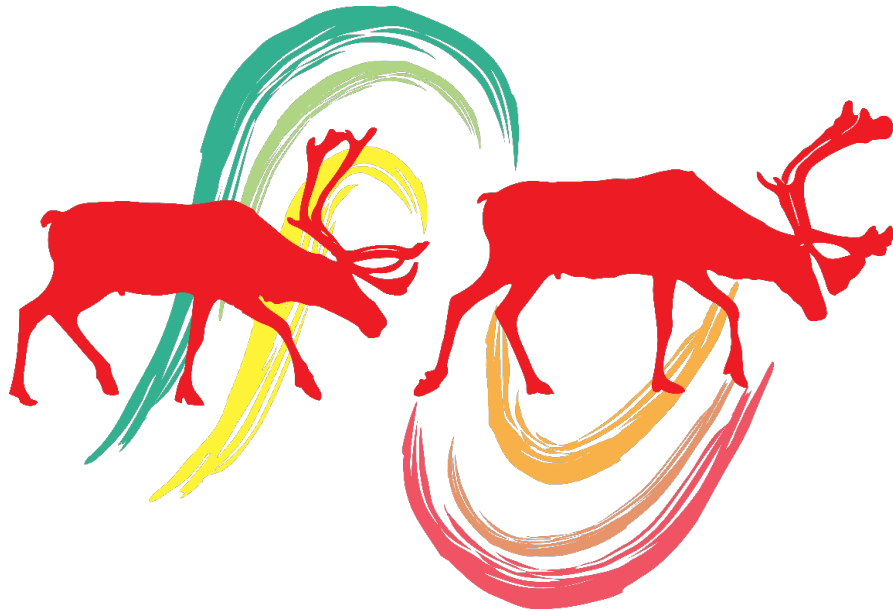


**ACCWM Annual Status Meeting Summary
November 17–19, 2020**

**CAPE BATHURST CARIBOU
BLUENOSE-WEST CARIBOU
BLUENOSE-EAST CARIBOU**



**Prepared by the Advisory Committee for
Cooperation on Wildlife Management**

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This meeting summary was prepared by the Advisory Committee for Cooperation on Wildlife Management Working Group. For additional copies contact:

Advisory Committee for Cooperation on Wildlife Management
c/o Wek'èezhì Renewable Resources Board
102 A 4504 49th Avenue, Yellowknife, NT X1A 1A7 Tel.: (867) 873-5740 Fax: (867) 873-5743
Email: jpellissey@wrrb.ca

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'jne Gots'è Nákedı (Sahtú Renewable Resources Board), Wek'èezhì 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 17 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 summarizing 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.

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Acronyms Used in This Plan

ACCWM (WG)	Advisory Committee for Cooperation on Wildlife Management (Working Group)
CI	Confidence Interval
DGG	Déljñę Got'jñę Government
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
HTC	Hunters and Trappers Committee
HTO	Hunters and Trappers Organization
ISR	Inuvialuit Settlement Region
ITH	Inuvik-Tuktoyaktuk Highway
NWMB	Nunavut Wildlife Management Board
NWT	Northwest Territories
PCA	Parks Canada Agency
RRC	Renewable Resource Council
SE	Standard Error
SRRB	Sahtú Renewable Resources Board
TAH	Total Allowable Harvest
TG	Tłjchq Government
TNNPMB	Tuktut Nogait National Park Management Board
WEMP	Wildlife Effects Monitoring Plan
WMAC (NWT)	Wildlife Management Advisory Council (Northwest Territories)
WRRB	Wek'èezhii Renewable Resources Board
WWHPP	Wildlife and Wildlife Habitat Protection Plan

Introduction

This **ACCWM Annual Status Meeting Summary** 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 part of a collaborative management planning process that has involved 17 communities in six land-claim areas over the last ten years. It is a companion document to the Action Plans describing the specific actions for each herd 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)***. This document summarizes the traditional and local knowledge and scientific information presented at the 2018 Annual Status Meeting, methods used by the Boards to collect information for the monitoring tables, and other relevant information pertaining to the Annual Status Meeting.

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), IGC, GTC, SSI, TG, DCFN, PCA (Western Arctic Field Unit), NTI and KHTO (KAA) 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

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.

categories of management actions are outlined in the Plan, including *Education*, *Habitat*, *Land Use Activities*, *Predators*, and *Harvest Management*.

Separate Action Plans were developed for each of the three herds. These Action Plans lay out specific objectives, tasks, and priorities for the herds. They also provide further details on the parties responsible for management actions, as well as how and when these actions 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 for three to five years but are reviewed annually and may be revised as needed. Action Plans for 2017/18 and 2018/19 were developed after the ASMs. In 2018, the ACCWM decided to write a meeting summary and then separate action plans that focus on the action tables for each herd.

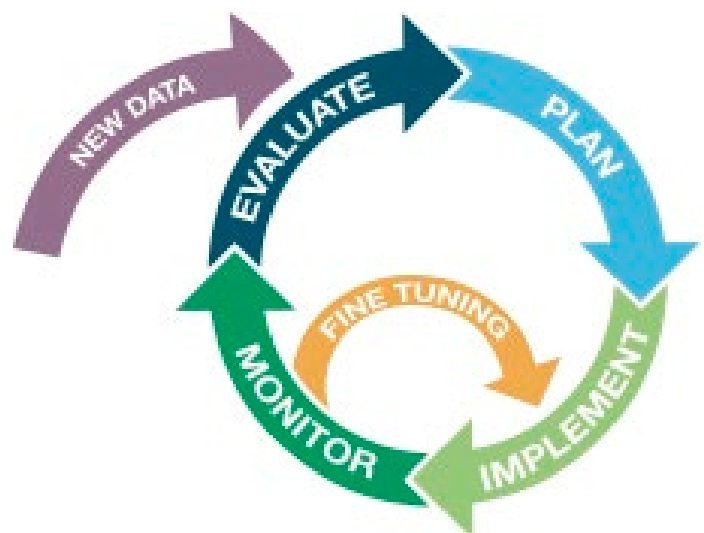
The ultimate goal of the ACCWM *Taking Care of Caribou Process* (the Management Plan, Annual Status Meeting Activities, Meeting Summary and the Action Plans) is to ensure that there are caribou for today and for future generations.

The management goals 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 Cape Bathurst, Bluenose-West, and Bluenose-East 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. Certain factors, such as climate change, are difficult to influence, but all require cooperation and coordination

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.)

for effective action. The Management Plan was developed because the ACCWM identified a need to:

- Develop a cooperative approach to management 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).

The Management Plan provides an overall framework for how this cooperation can take place. An inclusive, consensus-based approach is used at all stages of the planning process. Sometimes, management topics can be controversial and coming to an 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. To increase understanding and help us remain aware and respectful of differences in points of view throughout the planning cycle, the Action

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

Sharing Perspectives: Naming Caribou

Each Indigenous region in NWT and Nunavut has a traditional name for barren-ground caribou. Some within the Bluenose-East range include: tuktuvaluk, tuktuṭ, ʔedə, ʔekwé, and ʔekwò in Inuvialuktun, Inuinnaqtun, K'áhsho Got'İne/Dela Got'İne, Délİne Got'İne, and Tłıchq dialects and languages. Indigenous names are mostly based on an understanding that ‘caribou are caribou’ – that is, that there are no real differences amongst herds. As a result, Indigenous names tend not to reflect scientific understandings or naming protocols of distinct herds based on calving grounds.

To coordinate management actions across different regions, we needed to develop a shared understanding of which caribou we were talking about. ACCWM members agreed to use the scientific definition of three herds and prepare separate action plans with specific management directives for Cape Bathurst, Bluenose-West, and Bluenose-East caribou. The framework and principles laid out in the Management Plan apply to the entire range of the three herds together.

These differences in language and points of view can lead, at times, to confusion in co-management settings. As a result, some Indigenous communities are developing more specific terms to differentiate among herds. For example, Délİne has suggested ʔehdaɭla Goʔekwé as an appropriate Délİne Got'İne term for barren-ground caribou within Bluenose-East range. Similarly, the Tłıchq term Sahtı ʔekwò more clearly describes caribou within the area of Sahtı (Great Bear Lake).

While it is acknowledged and respected that the use of correct Indigenous names can help to convey traditional understandings of caribou, as these Action Plans span several regions, incorporating first languages into the main body of the plans is challenging. As the ACCWM refines the action planning process and regions expand their inputs, inclusion of Indigenous languages and perspectives may evolve over time.

Plans include information on “**sharing perspectives**”. These are glimpses into some of the ways in which our culture, training, or beliefs influence our approach to management or our worldview. They are based on discussions that arose during planning and are intended to provide further insights into the ‘hot topics’ described in the Management Plan.

Each ACCWM Member Board is responsible for approving 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. All Member Boards recognize that implementation of the Action Plans needs to be collaborative, effective only with community input and support.

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.

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 toward 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.

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, Tłı̨chǫ 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.

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)
- ʔehdzo Got'Inę Gots'ę Nákedı (Sahtú Renewable Resources Board (SRRB))
- Wek'èezhìi Renewable Resources Board (WRRB)
- Kitikmeot Regional Wildlife Board (KRWB), and
- Tuktut Nogait National Park Management Board (TNNPMB)

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 (GWNT-ENR), 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.

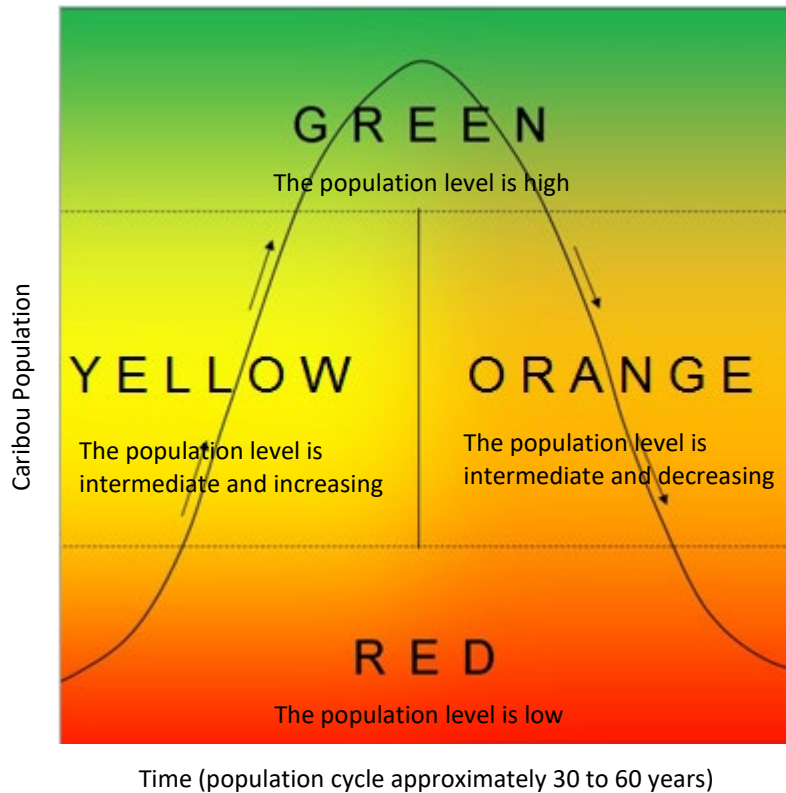


Figure 2: Phases of the population cycle with the colour-coded "traffic light" approach used in the Management Plan and associated Action Plans.

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 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 about the ACCWM and its processes and outputs will include efforts from the ACCWM as a collective and its individual Member Boards, the territorial governments, local resource management organizations such as HTC, HTO, and RRCs, 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**.

CAPE BATHURST CARIBOU

– *YELLOW STATUS* –



Tuktuvialuk (Inuvialuktun, Siglitun dialect)
Vadzaih (Teet'it and Gwichya Gwich'in)

Understanding Current Cape Bathurst Herd Status

The ACCWM met on November 17th, 2020 to review information pertaining to the status of the Cape Bathurst caribou herd. Prior to that, Member Boards reviewed information available and held discussions in preparation for the annual status meeting. During status meeting discussions about Cape Bathurst caribou, scientific knowledge was provided by ENR biologists. Community knowledge was provided from two regions: the Inuvialuit Settlement Region (ISR) and the Gwich'in Settlement Area (GSA).

The 2020 Management Setting

At the start of the 2020 status meeting, a roundtable was held to give participants an opportunity to provide a brief update on some of the management actions and developments that arose in their region over the course of the last year.

Within the range of the Cape Bathurst caribou, people shared positive comments from community members with respect to weather and conditions for the caribou. The summer of 2020 was a wetter cooler season, limiting insect harassment. In addition to these ongoing management concerns, several items that could have implications for Cape Bathurst caribou were also brought forward to the group:

- **Species at Risk Assessments:** COSEWIC has assessed barren-ground caribou as Threatened. The federal SARA listing has not been undertaken yet. Depending on the listings, work on recovery planning and identification of critical habitat may need to happen.
- **Caribou Recovery Strategy:** The NWT Barren-ground Caribou recovery strategy recommends objectives for the conservation and recovery of caribou. It also recommends approaches to achieve those objectives. It includes a description of threats and positive influences on the species and its habitat.²
- **Completion of the ITH:** The highway opened in November 2017 and may be leading to increased access to Cape Bathurst caribou on their winter range and problems with dust on vegetation. ENR is using existing collars and monitoring data to analyze the impacts of the road on caribou.
- **Rise in signs of climate change:** There are more landslides, slumping, and warmer temperatures; the impacts on caribou are hard to predict.
- **COVID-19:** The global pandemic has had impacts to air travel and has caused changes to how much time harvesters have spent on the land. The pandemic has also impacted the ability of member boards to conduct in person consultation and interviews, as well as impacted ENR's ability to conduct aerial surveys.

² https://www.nwtspeciesatrisk.ca/sites/enr-species-at-risk/files/barren-ground_caribou_recovery_strategy_final_8april2020.pdf

Status Decision 2020

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 3 along with the approximate thresholds for the Cape Bathurst (CB) herd.

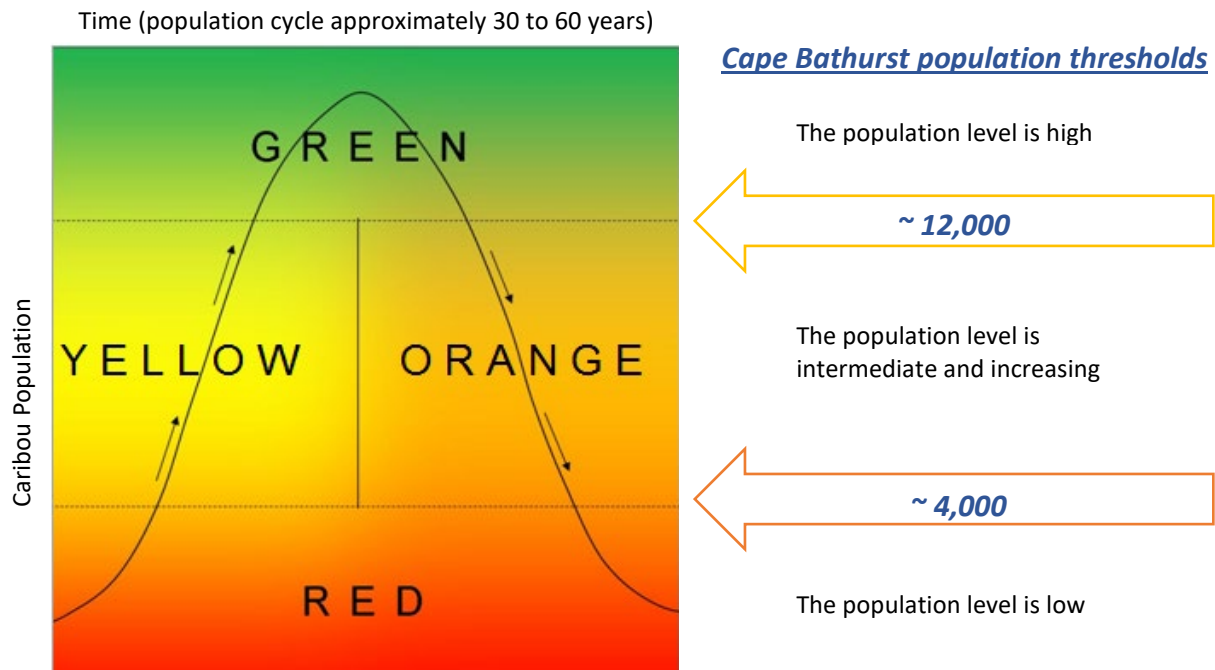


Figure 3: Phases of the population cycle with the colour-coded "traffic light" approach used in the Management Plan and associated Action Plans with defined Cape Bathurst population thresholds.

According to the process outlined in the Management Plan, numerous criteria are used to make an annual status decision. Information considered by the ACCWM in making the 2020 decision is summarized in Table 6 below.

Based on the information provided, the ACCWM determined the Cape Bathurst herd status colour zone should be changed to **Yellow (intermediate and increasing)**. The last scientific estimate is above the approximate threshold between red and yellow, but this estimate may be biased high and has fairly large confidence intervals. The ACCWM noted that the population appears to be slowly recovering based on the community observations presented. This was the second year in a row where community knowledge indicated that the status of the herd was improving while there were limited new data from scientific sources. Based on the available information, the ACCWM felt that there was sufficient evidence that the status for the herd should be upgraded to **Yellow (intermediate and increasing)**. While

the herd status colour zone has been upgraded, the Member Boards agreed to maintain the action priorities from the red zone with the hopes that this would help the herd's population numbers to continue to improve.



In 2021/22

the Cape Bathurst caribou population status is

Yellow: intermediate and increasing

Presentations Given at the 2020 Annual Status Meeting

Both scientific and community knowledge helped to inform the 2020 status decision; further details on some of the relevant survey methods are included in **Appendix D**. ENR provided the most recent scientific information; the data included here were presented at the meeting.

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

Inuvialuit Settlement Region (ISR), NWT – Due to COVID-19 constraints information provided for this region was summarized only from the public meeting held in Tuktoyaktuk during a community tour with representatives from WMAC (NWT); However, WMAC (NWT) representatives made note that the hunters from Tuktoyaktuk make up the majority of those harvesting from this herd.

Gwich'in Settlement Area, NWT – The Gwich'in Renewable Resources Board was unable to hold community meetings to gather information. Instead, they relied upon 6 phone interviews and one in person interview with harvesters and RRC coordinators. Shared information is included in the table as "GRRB". GRRB representatives participated in the annual status meeting.

Representatives of other regions did not provide information specific to Cape Bathurst monitoring, as people living in those areas did not regularly encounter or use these caribou.



Figure 4: Graphic recording of the Cape Bathurst Knowledge presentations. Credit: Nigit'stil Norbert

Inuvialuit Community Knowledge Presentation

Larry Carpenter & Rosemin Nathoo (WMAC-NWT)

The Inuvialuit Community Knowledge Presentation is largely covered in Table 6. A community tour was planned in order to gather local knowledge for the presentation but due to COVID -19 only the Tuktoyaktuk meeting could be held prior to the ASM.

Rosemin noted that most of what they heard at the meeting in Tuktoyaktuk was similar to the information from the previous year. In particular, it looks like the population has been steadily increasing over the last 4-6 years for both the Tuktoyaktuk Peninsula and Cape Bathurst herds. Generally, the caribou are clumped in groups of 15-20 scattered all over the range. This contrasts with the large herds of the 70s and 80s that congregated in one area.

Due to low caribou numbers the harvest is currently paused. It is recognised that there are more caribou being harvested than reported and a few people are poaching to sell meat in town. More enforcement is needed to reduce this activity. Larry emphasised that there are three or four poachers harvesting for the purpose of selling the meat and that they waste some of the less valuable meat. In addition to better enforcement, education is needed for new hunters so that this poaching activity doesn't continue into the next generation.

Larry Adjun (KHTO) commented that many of the observations presented by WMAC-NWT mirrored what hunters in Kugluktuk were seeing, especially that there are a lot of calves this year.

Larry Carpenter (WMAC-NWT) agreed:

We're hearing [the same] in Tuktoyaktuk. We get quite a number of people coming and making comments. If we look back at the last couple years, they're seeing more caribou each year, and they seem to be healthier than previous years. They joked that [the caribou] are getting obese!

Gwich'in Community Knowledge Presentation

Jozef Carnogursky (GRRB), Édouard Bélanger (GRRB)

Jozef Carnogursky highlighted that COVID-19 restrictions limited the GRRB's ability to collect community information. Rather than hold community meetings, Édouard contacted RRC coordinators and harvesters by phone directly in October and early November.

This presentation focused mainly on the data presented in the status table (see Table 6 below). Community data was limited as very few people are hunting in the area where Cape Bathurst caribou are present. It was noted that with the relative ease of access to the Porcupine Herd, (which had wintered near the Dempster highway) and the restrictions on hunting the Cape Bathurst herd, few hunters were able to make observations on the status of the herd.

The GRRB comments for the Cape Bathurst Herd mirror their comments for the Bluenose-West as the harvesters are going to the I/BC/06 where the ranges of the two herds overlap. Based on the comments of the five hunters that visited the area, there weren't many caribou around and there was little evidence that other hunters were harvesting caribou there (E.g.: no gut piles and few snowmobile tracks) in late winter.

Presentation on Scientific Information

Tracy Davison (ENR Inuvik)

ENR's most recent post-calving ground survey was conducted in 2018. The post-calving population survey results were used to calculate the size of the Cape Bathurst herd by using the Rigest method instead of the historically utilized Lincoln-Peterson. Of the two population estimation methods, ENR and the boards agreed at the 2016 meeting that the Rigest is the preferred estimation method, as it takes into account group size along with the data from collars and photo surveys.

The estimate for 2018 was likely biased high because there were a number of collared bull caribou that didn't aggregate with the main group. The number of groups with a group size of 1 influences the statistics.

The population survey results (the number of adult caribou) were:

Adult Population Estimate: 4,521 ± 875

Although the population estimate places the Cape Bathurst herd status within the yellow zone, the lower confidence interval places the herd in the red zone, as the threshold between the yellow and red zones for this herd is 4,000 animals.

While there is no new population data this year, ENR is hopeful that the other factors indicate that the population may be recovering somewhat.

Population trend and rate of change

The 2018 Rivest population estimate of 4,521 ± 875 caribou (95% CI) is higher than the previous 2015 estimate, but the 4% yearly increase (between 2005–2018) is not statistically significant due to the wide confidence intervals (-3 to 10%). The herd has been relatively stable between 2005 and 2015 at low numbers. Rivest population estimates (with 95% confidence intervals) as well as minimum counts for the period from 2000 to 2015 are shown in Table 1 and Figure 5.

Table 1: CB Rivest population estimates (2000–2018).

Year	Rivest Estimate
2018	4,521 ± 875
2015	2,524 ± 284
2012	2,447 ± 350
2009	2,925 ± 1,252

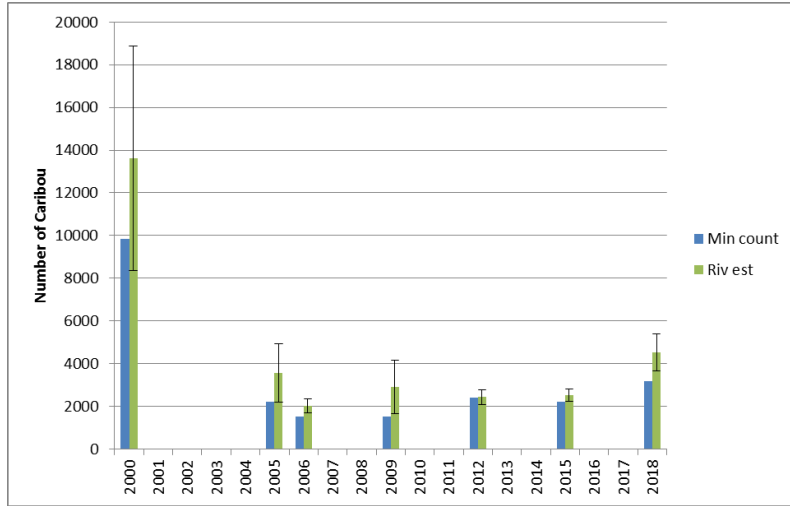


Figure 5: Cape Bathurst herd Rivest population estimates from post-calving surveys since 2000. Minimum counts are included for comparison purposes.

Productivity and recruitment

A recruitment survey was completed in 2019. This data was presented at the 2019 ACCWM meeting. The 2020 survey was cancelled due to COVID-19.

Recruitment surveys show the number of calves that have survived their first winter to be “recruited” into the adult population. This can vary greatly from year to year; in harder winters, fewer calves will survive. Generally, ratios of greater than 30 calves per 100 cows are considered good.

Recruitment surveys were conducted on Tuktoyaktuk Peninsula and Cape Bathurst caribou together in 2017, as the herds are mixed during the survey period; a very high ratio of 41 ± 6.7 (95% CI) calves to 100 cows was found. Recruitment estimates (number of calves per 100 cows) over time are shown in Figure 6. In the years 1983–1994, “Bluenose” includes Cape Bathurst, Bluenose-West, and Bluenose-East.

Calf-to-cow ratios can be impacted by the harvesting of females. For example, if a large proportion of cows are harvested and the calves are not, then the number of calves per 100

cows left in the herd will be inflated and will be an inaccurate reflection of actual calf survival. Based on the management actions, a portion of the range used by the caribou in the survey is closed to harvest; however, the total harvest and sex ratio of the harvest is not known for the open area. Therefore, it is possible that the calf-to-cow ratio may be skewed. Good harvest data, including the sex of the animals, date of harvest, and location, is needed to better assess the impact of this harvest on the calf-to-cow ratios.

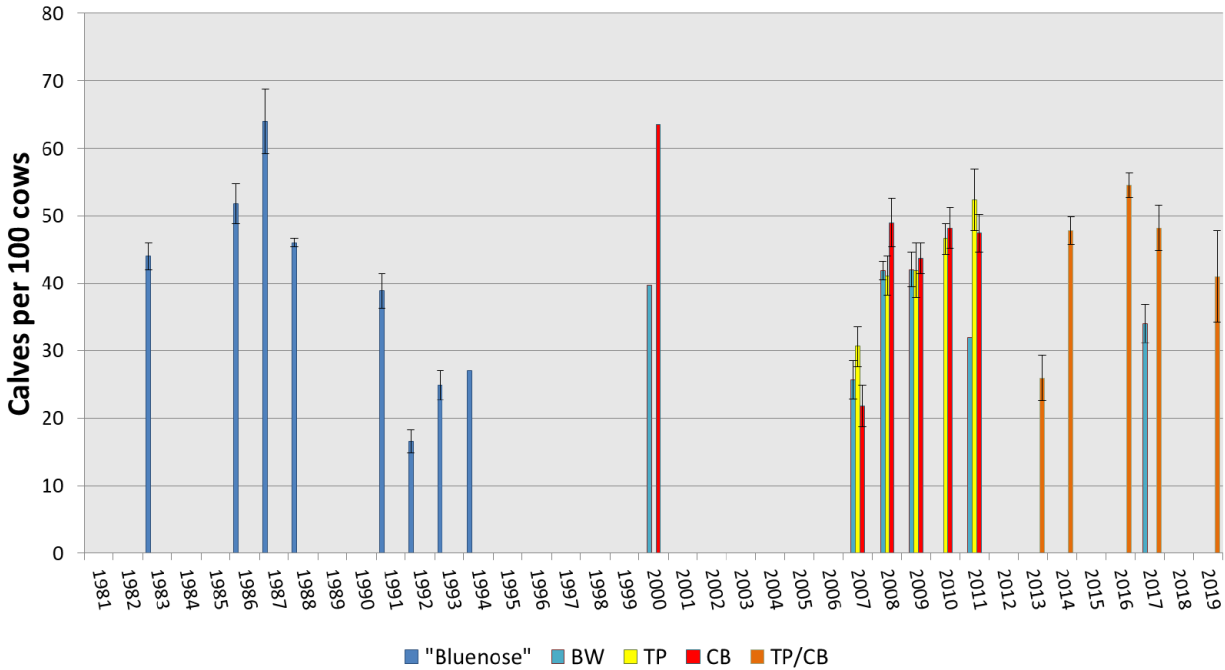


Figure 6: Recruitment estimates (calves per 100 cows) for the Tuktoyaktuk Peninsula (TP), Cape Bathurst (CB), and "Bluenose" barren-ground caribou herds, 1983–2019.

Adult composition

No new data on adult composition was provided. Data from previous years was presented and is summarised below.

A fall composition survey was conducted in October/November of 2015 as part of the monitoring program for the Cape Bathurst herd. Fall surveys to classify caribou are conducted during the rut to obtain a bull-to-cow ratio. Information is presented as the number of bulls per 100 cows.

The number of bulls per 100 cows was 43 ± 4.6 (SE) for the Cape Bathurst and Tuktoyaktuk Peninsula herds combined in 2015. There are no fall composition data from these herds to use for comparison. The 2009 results for the Bluenose-West and Bluenose-East herds showed bull-to-cow ratios of 70 and 42.9 ± 3.4 (SE) respectively.

Body condition and health

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. Scientific information is based on harvester reports and samples for the Tuktoyaktuk Peninsula and Cape Bathurst herds combined.

Table 2: Results from hunter harvest body condition sampling for Tuktoyaktuk Peninsula and Cape Bathurst caribou combined.

Season	Average Condition Code (number of samples)	
	Female	Male
2019/20*	2.7 (83)	2.4 (44)
2018/19*	3.1 (32)	2.9 (34)
2017/18*	2.7 (70)	2.2 (34)
2016/17*	2.6 (74)	2.0 (44)
2015/16*	2.0 (57)	2.3 (27)
2014/15*	3.2 (40)	2.3 (28)
2013/14	2.7 (26)	3.2 (15)
2012/13	2.1 (10)	(0)
2011/12	(0)	(0)
2010/11	(0)	4.0 (4)
2009/10	1.9 (11)	1.5 (2)
2008/09	2.5 (11)	2.1 (7)



Figure 7: Average condition codes for the Tuk Peninsula/Cape Bathurst herds, assessed by hunters on a scale of 1–4 with number of samples noted at the top of the bar.

* Samples submitted from I/BC/08 harvests plus from 2014/15 to present include I/BC/06 samples from Inuvik and Tuktoyaktuk because, based on collar data, the change of zone boundary means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst Herds.

Condition information was reported for 83 cows and 44 bulls; back fat information was reported for 68 cows and 56 bulls in the 2019/20 season. The back-fat measurements indicate that cows were of good condition and the males lower when sampled. In general, in 2019-2020 condition was between fair and good. This is slightly lower than the observations from the last few years. It was noted that condition can change based on when you harvest.

Table 3: Results from hunter-collected back fat and health sampling for the Tuktoyaktuk Peninsula and Cape Bathurst caribou herds combined.

Season	Back Fat in cm (number of samples)	
	Female	Male
2019/20	1.42(68)	0.95(56)
2018/19*	1.28 (32)	1.24 (34)
2017/18*	1.90 (80)	0.72 (26)
2016/17*	1.43 (76)	0.73 (45)
2015/16*	2.7 (65)	1.06 (30)
2014/15*	2.13 (37)	1.21 (37)
2013/14	1.31 (25)	3.42 (18)
2012/13	1.22 (6)	(0)
2011/12	(0)	(0)
2010/11	(0)	4.03 (4)
2009/10	0.62 (10)	0.25 (2)
2008/09	0.8 (11)	0.00 (7)

* Samples submitted from I/BC/08 harvests plus from 2014/15 to present include I/BC/06 samples from Inuvik and Tuktoyaktuk because, based on collar data, the change of zone boundary means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst Herds.



Figure 8: Reported back fat measurement (in centimeters) and average (diamond). Includes: I/BC/08 harvests plus from 14/15 to present harvest by Inuvik and Tuktoyaktuk harvesters.

Table 4: Results from marrow fat sampling for the Tuktoyaktuk Peninsula and Cape Bathurst caribou herds combined.

Season	Marrow Fat % (number of samples)	
	Female	Male
2019/20	90 (68)	82 (56)
2018/19*	88.8 (32)	89.7 (34)
2017/18*	86.7 (77)	84.7 (37)
2016/17*	85.8 (73)	82.3 (50)
2015/16*	78.4 (24)	84.5 (16)
2014/15*	89.3(27)	87.4(30)
2013/14	90.0(21)	90.7(9)
2012/13	92.1 (16)	88.8(3)
2011/12	92.88(3)	93.1(1)
2010/11	0	92.0 (4)
2009/10	91.1 (11)	88.2(13)
2008/09	87.8(17)	89.0(10)

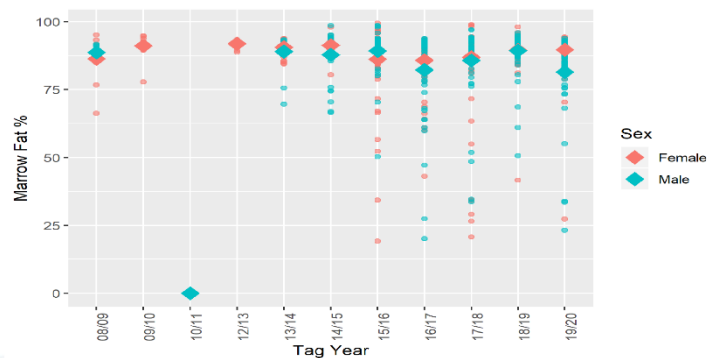


Figure 9: Marrow fat percent and average (diamond). Includes: I/BC/08 harvests plus from 14/15 to present harvest by Inuvik and Tuktoyaktuk harvesters.

Results for average body condition ratings for Tuktoyaktuk Peninsula and Cape Bathurst caribou herds combined are presented in Table 2 and Figure 7.

Back fat measurements for Tuktoyaktuk Peninsula and Cape Bathurst caribou herds combined are presented in Table 3 and Figure 8. Marrow fat measurements are shown in Table 4 and Figure 9. Marrow Fat observations for 2019/20 showed that the males were lower than females but still in the same range as the last few years.

Harvest levels

Determining harvest levels for the Cape Bathurst herd is complicated due to changes in management zone boundaries. Prior to 2005 the harvest between Tuktoyaktuk and Inuvik was estimated at about 1,600 caribou, with the majority cows. In 2007, the mainland caribou management area in the ISR – area I/BC/06 was adjusted to reflect core areas of the herds based on recommendations from the WMAC (NWT). Area I/BC/06 was divided into three zones: I/BC/08 to reflect the core area of the Tuktoyaktuk Peninsula herd; I/BC/07 was described to reflect the core area of the Cape Bathurst herd; and I/BC/06 to reflect the core portion of the Bluenose-West herd in the ISR.

In 2007, harvesting was closed in I/BC/07 and G/BC/02 based on recommendations from the WMAC (NWT) and the GRRB. Harvesting in I/BC/08 was closed seasonally from April 15 to June 15 to allow the Cape Bathurst herd to migrate to the calving grounds.

In 2009, the boundary between the Tuktoyaktuk Peninsula area (I/BC/08) and Cape Bathurst area (I/BC/07) was moved south to the Diamond Lake Trail to make it simpler for harvesters to identify the zone boundary out on the land. At the same time, the seasonal closure was extended to April 1 to protect migrating Cape Bathurst caribou.

In 2014/15, the eastern boundary of I/BC/07 was moved to Husky Lakes; 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 Total Allowable Harvest (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 which herd harvested animals in this expanded area of the I/BC/06 zone are from; Cape Bathurst, Tuktoyaktuk Peninsula, and some Bluenose-West herds all use this expanded area.

Data reported to ENR for 2019/20 showed 221 tags possibly used in Tuktoyaktuk Peninsula/ Cape Bathurst area. Sex was reported for 124 of the caribou harvested (58 males and 66 females)

Predator populations

ENR collects samples from wolves harvested by hunters in the Inuvik Region (Table 5); samples are mostly from the winter season, when wolves tend to be hunted. In the past, stomach contents were sampled, and of all the Inuvik region mainland wolf samples submitted at that time, 68% of the stomach contents was caribou. 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., will reveal more information about wolves' year-round diet).

Other scientific information

Overall, the scientific information indicates the following:

- Summer range – cows and bulls tend to be more mixed and found in same areas.
- During fall migration, there is little difference in the movements of cows and bulls, although bulls will go further south.
- There are some differences in winter range used between cows and bulls; bulls tend to be farther south.
- In spring there is considerable overlap of range with some differences; cows are generally ahead of the bulls.
- Cape Bathurst caribou have tended to winter together with the Tuktoyaktuk Peninsula herd in recent years. However, the collar data showed 98% fidelity of cows to calving grounds in 2020 for the Cape Bathurst herd, with 1 of the 18 collared females heading to Tuktoyaktuk Peninsula herd's calving grounds.
- 96% of collared Cape Bathurst cows have returned to the same calving grounds year after year between 2010 and 2020.
- The largest habitat disturbance is the new highway. Now that it has been open for a couple of years, ENR is currently using the collars and monitoring data to assess any impacts. This will be presented when complete.
- 2020 was a very quiet year for fire disturbance with only 5 fires in the region.

Table 5: Number of wolf carcasses/samples submitted to ENR by Tuktoyaktuk and Inuvik hunters, 2007–2018.

Year	Inuvik	Tuktoyaktuk
2007/2008	20	8
2008/2009	11	22
2009/2010	15	12
2010/2011	24	16
2011/2012	21	15
2012/2013	16	15
2013/2014	19	14
2014/2015	17	23
2015/2016	33	21
2016/2017	8	21
2017/2018	21	9
2018/2019	29	0
2019/2020	14	9
Total	234	176

Table 6: Criteria used to assess Cape Bathurst herd status in 2020³

Criteria	Community-Based Information ⁴	Scientific Information ⁵	Comments
Population size	<p>Tuktoyaktuk (WMAC-NWT): Lots on Tuk Pen - thousands of cows, lots of bulls, cows and calves all over and right until mid September still heading north. When we first went to Tuk Pen in spring could see 500 caribou along the ridges with binoculars, mostly cows and calves. A few weeks later they went back and farther inland but still lots of caribou in the whole area. Early August to mid-September there were caribou all over.</p> <p>This spring: travelled all over range from Smoke River and Anderson River, can see caribou all over right from Liverpool bay, all the way North-Northeast on Cape Bathurst, past few years now (before that it was pretty quiet). Herds of 25-50 scattered all over the whole range. Past few years noticed increase.</p> <p>GRRB: The five hunters either did not see any caribou or saw a small bunch of around 10. It seems that this small group was seen by several hunters on and around the ITH</p>	Estimated number of adult caribou in 2018 Rivest: 4,521 ± 875	Estimated based on July post-calving ground survey

³ This table is populated with information presented to the ACCWM to assess herd status in 2020 and is adapted from the monitoring criteria table included in *Taking Care of Caribou*.

⁴ Cape Bathurst caribou usually migrate through two settlement areas/regions and are typically harvested by four communities: Aklavik, Inuvik, Tsiigehtchic and Tuktoyaktuk.

⁵ All scientific information and comments were provided by Environment and Natural Resources (ENR) (GNWT) unless otherwise noted.

	between Inuvik and Jimmy Lake.		
Population trend and rate of change	<p>Tuktoyaktuk (WMAc-NWT): Over the past 4-6 years, community members have seen more and more caribou all the way from Mason river up along Tuk peninsula. On Tuk Peninsula, traveling back from Mason river, a hunter saw lots of caribou with young ones, some just dropped. Right from Mason River to Cape Bathurst, from Cape Dalhousie to Tuk, last spring lots more caribou sighted than previous years.</p> <p>Not seeing the one big herd traveling like in the 70s-80s, but more than before – not one giant group but lots of smaller (30-50) groups that add up across the range.</p> <p>GRRB: One hunter mentioned that there is not enough BNW, let them repopulate. This was mentioned in relation to Porcupine caribou being readily available on the highway.</p>	<p>Between 1992 and 2005 population dropped from over 19,000 to ~2,500 adult caribou.</p> <p>Between 2005 and 2018 the herd shows a non-statistically significant increase of 4% per year (CI -3 to 10%).</p>	<p>Trend analysis is based on Rivest estimates:</p> <p>2015 2,524 ± 284</p> <p>2012 2,447 ± 350</p> <p>2009 2,925 ± 1,252</p> <p>2006 2,039 ± 319</p> <p>2005 3,566 ± 1,373</p>
Productivity and recruitment	<p>Tuktoyaktuk (WMAc-NWT): Lots of young ones with cows. Lots of twins. More calves, more caribou</p>	<p>No recruitment survey completed in 2020 due to COVID.</p>	<p>2019 recruitment survey included both CB and Tuktoyaktuk Peninsula herds Estimated number of calves per 100 cows in 2019: 41 ±</p>

			6.7 (95% CI).
Adult composition	<p>Tuktoyaktuk (WMAc-NWT): Lots of young bulls, and cows and calves. If you go out end of September start seeing more big bulls. 3-4 year old bulls are very healthy. really fat, good shape</p>	<p>There is only one bull to cow ratio for CB (2015) so trend is unknown but the 2015 results is considered normal.</p> <p>Estimated number of bulls per 100 cows in 2015: 43 ± 4.6 (SE)</p>	<p>Increasing herds in NWT in the early 1980s had sex ratios of about 65 bulls: 100 cows.</p>
Body condition and health	<p>Tuktoyaktuk (WMAc-NWT): "obese"</p> <p>Fat, healthy – bulls and cows – all of them.</p> <p>Way less warble flies in the skin. Even toward end of season (March), hardly any warble flies on the back. Cold summers past two years, warbles moving south</p> <p>No observations of sick ones or bad legs.</p> <p>Used to open throat and be full of warble flies but now we just don't see them anymore, maybe that's why they're so healthy. When you watch them graze, they act like nothing is bothering them, don't jump around (less insect harassment).</p> <p>"Getting fatter"</p>	<p>The condition of both bulls and cows was on average 'good' in the 2019/2020 harvest season.</p> <p>Average back fat in 2019/2020 season was 1.42 cm (range 0 to 5 cm) for cows and 0.95 cm (range 0.95 to 9 cm) for bulls.</p> <p>The average Condition code was 2.7 for cows and 2.4 for bulls (range 1 to 4). The average percent marrow fat for cows was 90% (range 27 to 94%) for cows and 82% (Range 23 to 94%) for bulls</p>	<p>Scientific information based on harvester reported samples harvested in range of the Tuk Peninsula and CB herds. In 2019/2020 season, condition information was reported for 83 cows and 44 bulls, back fat information was collected for 86 cows and 50 bulls, and Marrow fat information collected for 84 cows and 49 bulls.</p>
Harvest levels	<p>Tuktoyaktuk (WMAc-NWT): Only reporting is with tags because harvest study paused</p>	<p>I/BC/07 is a closed zone for CB.</p>	<p>In 2014/15, the I/BC/06 area was enlarged and now</p>

	<p>Much more being harvested than being reported because of poaching & selling.</p> <p>Less harvested on Tuk Pen this fall</p> <p>Good sample returns in tag zone</p> <p>Need enforcement for tag attachment</p> <p>GRRB: 6 caribou (tags) were harvested out of the 34 tags available. No BNW caribou were harvested amongst the 5 hunters interviewed. One harvester went around Sitidgi Lake for fish. He saw several old tracks, some old skidoo tracks, but no gut piles.</p>	<p>A total of 221 I/BC/06 tags were possibly used in the wintering area of the Cape Bathurst herd in 2019/2020 – (124 of those have reported sex: 56 males, 68 females)</p>	<p>includes some of the winter range of the Tuk Peninsula and CB herds. Some of the I/BC/06 tags are now being used on these herds</p>
<p>Predator populations</p>	<p>Tuktoyaktuk (WMAC-NWT): Less wolves than 3 years ago.</p> <p>More wolverines</p> <p>More and more sightings of grizzly bears – will have impact on caribou</p> <p>More eagles around town</p> <p>Not large number of grizzly bears on Tuk Pen – some big dominant boars this fall– 3 taken this fall – and sows with cubs – maybe more juvenile grizzlies coming</p> <p>GRRB: Most hunters</p>	<p>Tuktoyaktuk and Inuvik submitted 23 wolves in the 19/20 season.</p>	<p>A change in wolf harvest does not necessarily reflect changes in wolf abundance.</p>

	<p>mentioned that they did not see any predators and predator tracks. One mentioned that he has not seen many predators.</p>		
<p>Range and movement patterns</p>	<p>Tuktoyaktuk (WMAC-NWT): Coming south later and later in the fall.</p> <p>Later and later coming out of treeline in spring</p> <p>If too much snow, they stay later on the Tuk Pen in spring</p> <p>Mid-September they were still moving north end of Tuk Pen</p> <p>Small groups (25-50) all over the range</p> <p>Closer to Tuk side there were a lot less, had to go past McKinley bay to get caribou more easily</p> <p>GRRB: Based on one harvester observations, the caribou had been grazing around, lots of tracks and trampling by Sitidgi. This was late spring. The only harvester seeking BNW mentioned that the caribou were too far away in late spring to access them.</p>	<p>In 2020, 18 CB collared cows were still active from the 2018 deployment and all but one returned to CB calving ground.</p> <p>Between 2010 and 2020, 98% of collared CB cows (168 records) returned year after year to calving ground.</p>	
<p>Environment and habitat</p>	<p>Tuktoyaktuk (WMAC-NWT): Cooler, wet summers past 2 years, less bugs, makes healthier caribou</p> <p>Freezing rain past couple years, but last few years don't think we had bad enough</p>	<p>There were very few fires in the 2020 season.</p>	

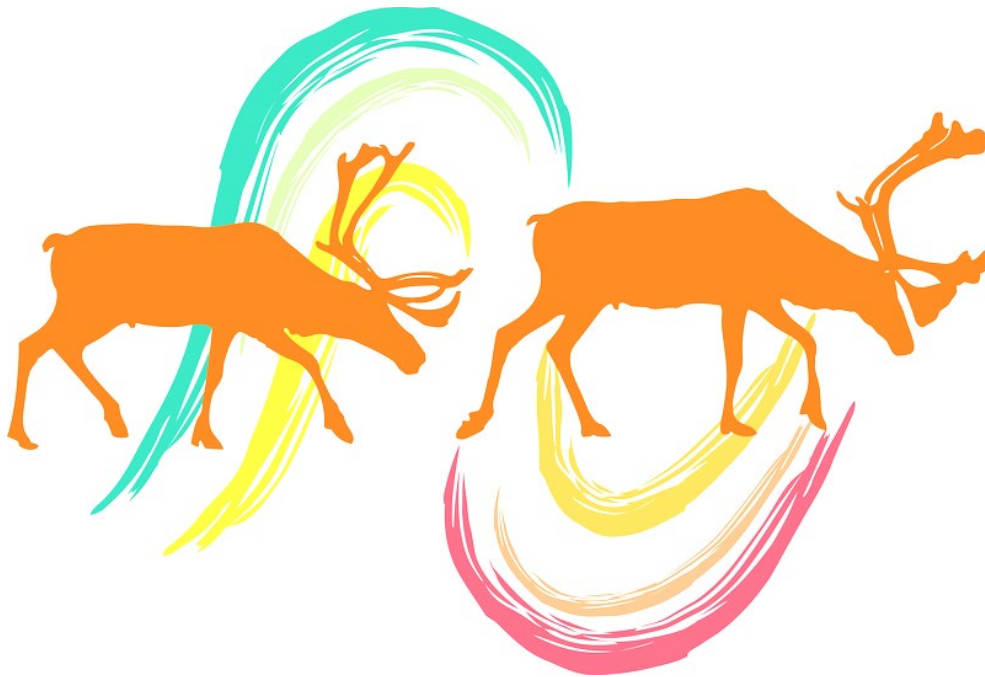
	<p>freezing rain that made crust on snow that limits access to food. some past years got hit harder than others.</p> <p>Changes in permafrost – slumping. Walking on land – land is soft underfoot in summer – harder to travel.</p> <p>Not as much snow as we usually have in winter.</p> <p>Snow came late last year. Wasn't much snow right until November.</p> <p>GRRB: Most hunter mentioned that the environment and habitat were similar to last year. No notable changes were recorded. One harvester mentioned that during his hunt for BNW, there was too much snow further away from the ITH and he had to turn back. The caribou were too far. One hunter mentioned that when he was out in April, it was getting warm, snow was melting fast.</p>		
<p>Human disturbance</p>	<p>Tuktoyaktuk (WMAc-NWT): Flights reduced because of COVID, less disturbance.</p> <p>Fighter jets really loud though (military training). DND helicopters coming and going from Dewline sites right during breakup.</p>	<p>The largest development in the range of the CB herd is the Inuvik – Tuktoyaktuk highway that opened in November 2017 and passes through the winter range of</p>	<p>The Wildlife Effects Monitoring Program is using caribou collar data to assess impacts of the road.</p>

	<p>Seeing unknown aircrafts flying around, can't see to record aircraft numbers</p> <p>ENR caribou surveys and others</p> <p>6mo out of year flights around disturbing them</p> <p>Observed mainliner making caribou run</p> <p>Wastage. When travelling on land run into caribou only hindquarters and front taken off. huge impact.</p> <p>Need ENR presence really badly. Only dealing with 3-4 poachers in each community now, but need to educate the new hunters or next generation there will be 10 poachers. a lot of people know who's doing what but don't want to come forward. it will only get worse and worse. make an example of somebody.</p> <p>GRRB: When asked about human disturbance, all hunters either skipped the question or had no comments to bring forward.</p>	<p>the herd. The largest development in the range of the CB herd is the Inuvik – Tuktoyaktuk highway that opened in November 2017 and passes through the winter range of the herd.</p> <p>Proposed liquid natural gas processing plant within winter range.</p>	
Competitors	GRRB: Hunters mentioned that there is no competition in this area [ITH/Sitidgi and Jimmy Lake]. One mentioned that		

	<p>species mind their own business, and another said: <i>'There is no competition between moose and caribou. For muskox, shot them and eat them. One of the reasons why I was talking about caribou-moose is because I was in Deline. They talk about caribou going down. They were not sure about the relationship for barren-ground and moose.'</i></p>		
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BLUENOSE-WEST CARIBOU

– *ORANGE STATUS* –



Tuktuvialuk (Inuvialuktun, Siglitun dialect)
Vadzaih (Teet'it and Gwichya Gwich'in)
ʔedə (K'áhsho Got'ıne, Dela Got'ıne)
ʔehdaıla Goʔekwé (Délıne Got'ıne)

Understanding Current Bluenose-West Herd Status

The ACCWM met on November 19th, 2020 to review information pertaining to the status of the Bluenose-West caribou herd. Prior to that, Member Boards reviewed information available and held discussions in preparation for the annual status meeting. During status meeting discussions about Bluenose-West caribou, scientific knowledge was provided by Environment and Natural Resources (ENR-GNWT) biologists. Community knowledge was provided from three regions: the Inuvialuit Settlement Region (ISR), the Gwich'in Settlement Area (GSA), and the Sahtú Settlement Area (SSA).

The 2020 Management Setting

At the start of the 2020 status meeting, a roundtable was held to give participants an opportunity to provide a brief update on some of the management actions and developments that arose in their region over the course of the last year. During the roundtable, a number of management topics were raised that could have implications for Bluenose-West caribou and their habitat, including:

- **Divergent management systems (tags/community management plans):** While each of the Member Boards seeks to ensure the viability of the herd, divergent management systems have the potential to increase tension. This highlights the need for structures that build trust between organizations, communities, and Member Boards.
- **Species at Risk Assessments:** COSEWIC has assessed barren-ground caribou as Threatened. The federal SARA listing has not been undertaken yet. Depending on listings, work on recovery planning and identification of critical habitat may need to happen.
- **Caribou Recovery Strategy:** The NWT Barren-ground Caribou recovery strategy recommends objectives for the conservation and recovery of caribou. It also recommends approaches to achieve those objectives. It includes a description of threats and positive influences on the species and its habitat.⁶
- **A rise in signs of climate change:** There are more landslides, slumping, and warmer temperatures; the impacts on caribou are hard to predict.
- **Community-led conservation planning:** The SRRB adopted a community conservation planning approach, and Colville Lake is in the process of finalizing their caribou management plan.
- **COVID-19:** The global pandemic has had impacts to both air travel and has caused changes to how much time harvesters have spent on the land. The pandemic has also impacted the member boards ability to conduct in person consultation and interviews, as well as impacted ENR's ability to conduct arial surveys. On a positive note, programs such as CERB may have allowed more harvesters to spend more time on the land.

⁶ https://www.nwtspeciesatrisk.ca/sites/enr-species-at-risk/files/barren-ground_caribou_recovery_strategy_final_8april2020.pdf

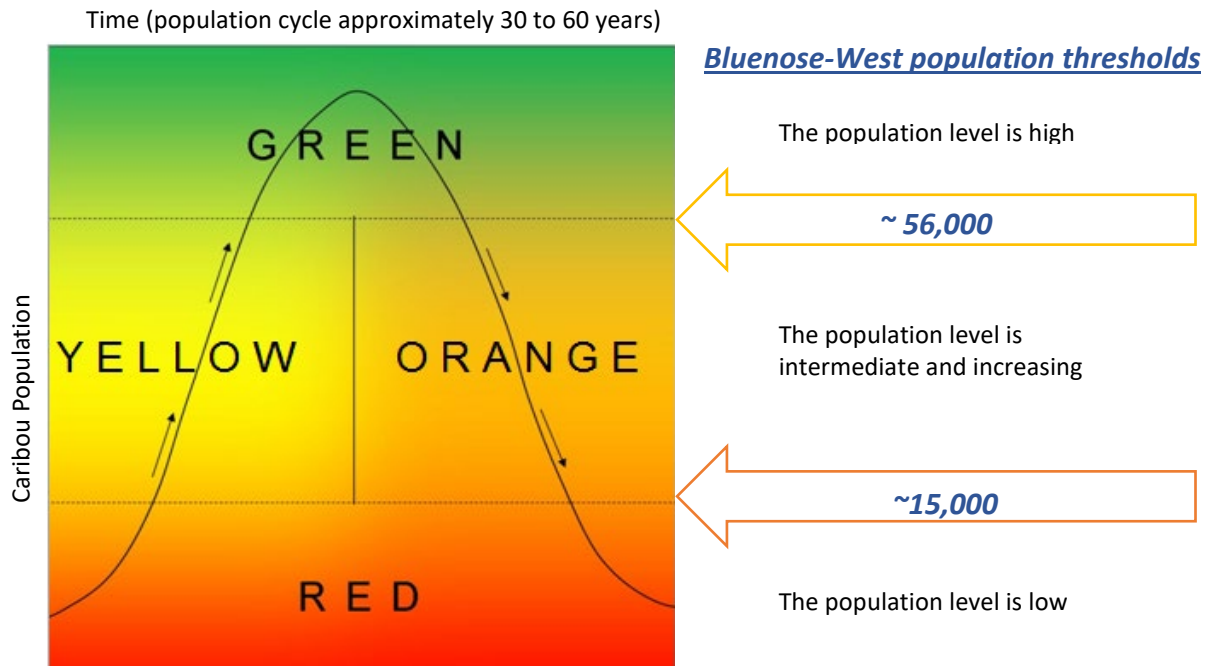


Figure 10: Phases of the population cycle with the colour-coded "traffic light" approach used in the Management Plan and associated Action Plans.

Status Decision 2020

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 10 along with the approximate thresholds for the Bluenose-West (BNW) herd.

According to the process outlined in the Management Plan, numerous criteria are used to make an annual status decision. Information considered by the ACCWM in making the 2020 decision is summarized in Table 12 below.

Based on the information provided, the ACCWM determined the Bluenose-West herd status colour zone to be **orange (intermediate and decreasing)** in November 2020. Member Boards noted that while there are some positive factors described by both the community and scientific presentations, the lack of any indicators strongly showing signs of population growth pushed the ACCWM members to err on the side of caution and maintain the previous year's status designation. This decision recognizes that the herd size appears to be stable and that ongoing conservation actions are needed to help the Bluenose-West herd recover.



In 2021/22

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

Presentations Given at the 2020 Status Meeting

Both scientific and community knowledge helped to inform the 2020 status decision; further details on some of the relevant survey methods are included in **Appendix D**. ENR provided current scientific information; the data included here were presented at the meeting. The TNNPMB presented on some of the future research that is planned within the park.

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

Inuvialuit Settlement Region, NWT – Due to COVID-19 constraints information provided for this region was summarized only from the public meeting held in Tuktoyaktuk during a community tour with representatives from WMAC (NWT); However, WMAC (NWT) representatives made note that the hunters from Tuktoyaktuk make up the majority of those harvesting from this herd.

Gwich'in Settlement Area, NWT – The Gwich'in Renewable Resources Board was unable to hold community meetings to gather information. Instead, they relied upon 6 phone interviews and one in person interview with harvesters and RRC coordinators. Shared information is included in the table as "GRRB". GRRB representatives participated in the annual status meeting.

Sahtú Settlement Area, NWT – Behdzi Ahda First Nation (BAFN) representatives presented most of the information for this herd as they are the main Sahtú community that harvests this herd. SRRB representatives participated in all of the status meetings as well.

Representatives of other regions did not provide information specific to Bluenose-West monitoring, as people living in those areas do not regularly encounter or use these caribou.



Figure 11: Graphic recording of the Bluenose-West Knowledge presentations. Credit: Nigitt'il Norbert

Inuvialuit Community Knowledge Presentation

Larry Carpenter (WMAC-NWT), Ray Ruben (TTNMB, PHTC)

Larry advised that the Inuvialuit Community Knowledge collect by WMAC-NWT would be largely identical to the data presented for the Cape Bathurst Herd and is covered in Table 13. Due to Covid-19 restrictions WMAC-NWT was unable to hold meetings in Paulatuk. Ray Ruben provided comments as a member of the Paulatuk HTC.

Ray expressed that he had talked to other harvesters and their observations are really positive. The herd had migrated very close to the community. "They were just 3km south of town. There were thousands. The hills were rolling." They hadn't seen caribou like this since the 80s.

Ray noted that the majority were cows, but with lots of bulls mixed in. Despite the abundance of cows, harvesters are only hunting bulls now. In the past they used to almost take cows exclusively. To Ray, this shows that the current management actions seem to be working and that the people are supporting them.

Bears are becoming a significant predator and Ray has been asking to see more actions taken to control the bear population.

There was some expectation that with the stabilizing caribou population there would be increase in quota for the caribou harvest. From a community perspective the population is there, and it is healthy and vibrant.

Ray finished with the following comment highlighting that there is some conflict between what is being requested by ENR through the co-management process and the traditional practices of the community:

There's varying levels of connectedness to the environment and the animals. We always envision ourselves as a community with a high level of connection. I say that mostly to explain the status of the management, and the [willingness] to be connected to studies. Still, it is a voluntary state only. We don't want to impose science on people. I like the hooves, and the jaw that ENR wants us to give them for sampling. I know ENR wants to promote more participation. But like I said that's at a sacrifice of our culture.

Gwich'in Community Knowledge Presentation

Édouard Bélanger (GRRB)

Édouard Bélanger provided a review of the information covered in Table 13. He noted that he had put an emphasis on data provided by a hunter that went into a core BNW area. Otherwise, the community information is very similar to what was provided for the Cape Bathurst herd as some people don't see a distinction. This community knowledge data was collected through interviews with five harvesters and two RRC coordinators.

Most harvesters filled their freezers with the more accessible Porcupine caribou instead of CB and BNW caribou. There have been six caribou harvested using BNW tags by Gwich'in. Only one hunter went specifically for BNW. A second went to fish and goose hunt around Stitigi lake and took tags but did not harvest any caribou. Harvesters have seen a bunch a of small groups of around ten caribou around Jimmy and Stitigi Lake. They chose to not harvest them with the hopes that it would help the population.

In the Stitigi Lake area, the hunters saw old skidoo tracks and found no gut piles, indicating that no caribou had been harvested there. Observations were made in late winter.

Sahtú Community Knowledge Presentation

David Codzi (BAFN), Joseph Cochon (BAFN)

The Sahtú Community Knowledge presentation was delivered by Joseph Cochon and David Codzi of Behdzi Ahda First Nation (Colville Lake). They expressed that the data collection process was still in development for their community. The data that they presented came from their own experiences and conversations with other harvesters in their community. Every year those harvesters spread out in an area around 150 km from Colville Lake, providing a good perspective of what is going on.

Joseph reported that the population this year is basically the same as the previous year. In the last ten years things have changed though. He noted that the migration routes had been the same for hundreds of years but ten years ago they started to shift further away from the community, more the north. This may be happening as a result of warming weather patterns. Joseph gave the example of March 2019 which warmed up unexpectedly fast, causing the caribou to leave a month before they would in a normal year.

Joseph explained that the caribou are more advanced than we give them credit:

It seems that the caribou are way more advanced than us. I don't know how they communicate with nature. They knew the hot spell was coming. They were gone. We had to go right the edge of the barrens to find them. The weather patterns we are having, they are reacting to. So, the changes are the main thing we are keeping an eye on. Wherever we travel from here or there we don't see much change on the land itself but the caribou do.

People are finding small groups of caribou on the winter road but otherwise they often too far away and not as many members go out to hunt them. When they are successful, they are finding that most of the harvested caribou were healthy and fat.

Another thing that trappers are noticing is the change in wolf numbers. When there are trappers on the land the wolves fear people and tend to stay away even if there are caribou around. With less people trapping, there are more wolves in places they wouldn't normally be found. So, BAFN encourages trappers to go on the land in these areas. Joseph explained that people 'get spoiled' by the winter road and do not head to other areas where the deep snowpack makes it hard to travel. He suggested that they should work with communities like Paulatuk, to share knowledge and to work together. They'd like to meet halfway between the two communities to share food and stories.

Noting changes in other wildlife, Joseph said they'd seen moose and beaver at Horton Lake which is uncommon or completely new. During the summertime, they are starting to see more moose around Colville Lake too. "There are moose everywhere. That's kind of a big thing."

Muskoxen are also expanding everywhere, and some people are concerned that they bother the caribou:

They are a real pest and eat what the caribou rely on. They are noisy, when we see muskox there are no moose around. So many things that are changing over the last 30-40 years. It used to be good when they hanged out over near the barrens. Nobody really eats them around here. -Joseph Cochon

Richard Cochon and Walter Bezha noted that there are reports of caribou that are not migrating. They are staying the mountains or on islands on Great Bear Lake even though they

are Barren-ground caribou. Further involvement with the communities to study these caribou was seen as a priority.

Ray Ruben commented that they would still like to see people from Colville Lake and Paulatuk get together as there seems to be interest in both communities.

Bobby Klengenber (KHTO) also remarked on the changes in wildlife that they are seeing in Kugluktuk. They had a lot of moose, beavers and pelicans showing up there this year.

Tuktut Nogait National Park Management Board Presentation

Colleen Arnison (Parks Canada), Tom Nesbitt (TNNP management board member)

Tom Nesbitt gave a brief description of the TNNPB and its mandate. He described how the agreement negotiated in 2001 established a decision-making process for the federal government, the park, the board, and ENR. The agreement compels the superintendent, acting as representative of the Minister, to participate in all TNNPB meetings.

One of the major projects the park is working on involves compiling all the data that they get from ENR along with decades' worth of satellite images. They are also adding higher resolution imagery sourced by drone. These drones go out and record features of the places the caribou are visiting.

The goal is to more accurately map the habitat in the core calving grounds, and to develop a model for using the photos to interpret the old satellite data. This will allow Parks Canada to understand how the core calving grounds have changed over the past decades. There are factors such as bugs, temperature, precipitation, caribou movement patterns, and altitude, but now they are primarily looking at forage quality and availability. Currently, their model is not sufficiently accurate. They plan to do more ground plots and move to a higher resolution satellite imagery database. The previous model was built using 5m resolution imagery while the new imagery will have a 50cm resolution. The hope is that by next year's meeting they will be able to provide a significantly improved model system for analysing the caribou habitat.

Presentation on Scientific Information

Tracy Davison (ENR)

Much of the data presented below was presented at previous meetings.

ENR's most recent post-calving ground survey was conducted in 2018. The post-calving population survey results were used to calculate the size of the Bluenose-West herd by using the Rivest method instead of the historically utilized Lincoln-Peterson. Of the two population estimation methods, ENR and the boards agreed at the 2016 meeting that the Rivest is the preferred estimation method as it takes into account group size along with the data from collars and photo surveys.

The population survey results (the number of adult caribou) were: Total Adult Population Estimate: 21,011 ± 4,602.

Estimates place the Bluenose-West herd status well within the orange zone at the low end of the population estimates confidence interval, as the threshold between the orange and red zones for this herd is 15,000 animals.

Table 7: BNW Rivest population estimates (2000–2018).

Year	Rivest Estimate
2018	21,011 ± 4,602
2015	21,535 ± 5,136
2012	32,326 ± 15,482
2009	21,773 ± 4,884
2006	28,461 ± 7,431
2005	26,228 ± 5,878
2000	118,472 ± 45,177

Population trend and rate of change

The 2018 Rivest population estimate of 21,011 ± 4,602 caribou (95% CI) represents that between 2005 and 2018 the herd experienced a non-statistically significant decrease of 2% per year (CI -4 to 1%).

Rivest population estimates (with 95% confidence intervals) as well as minimum counts for the period from 1986 to 2018 are shown in Table 7 and Figure 12.

Productivity and recruitment

No new data on productivity and recruitment was provided. Data from previous years was presented and is summarized below.

Recruitment surveys show the number of calves that have survived their first winter to be “recruited” into the adult population. This can vary greatly from year to year; in harder winters, fewer calves will survive. Generally, ratios of greater than 30 calves per 100 cows are considered reasonable.

In 2017, a recruitment survey was conducted for the Bluenose-West caribou herd, and a good ratio of 34 ± 2.8 calves per 100 cows was found.

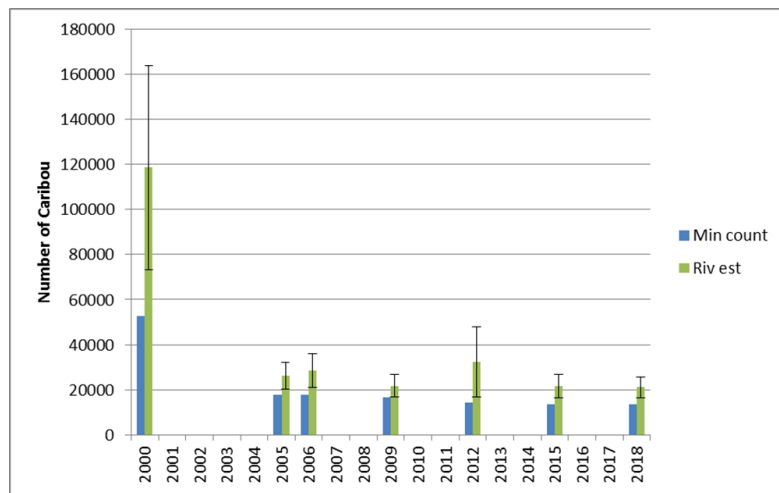


Figure 12: Bluenose-West herd Rivest population estimates from post-calving surveys since 2000. Minimum counts are included for comparison purposes.

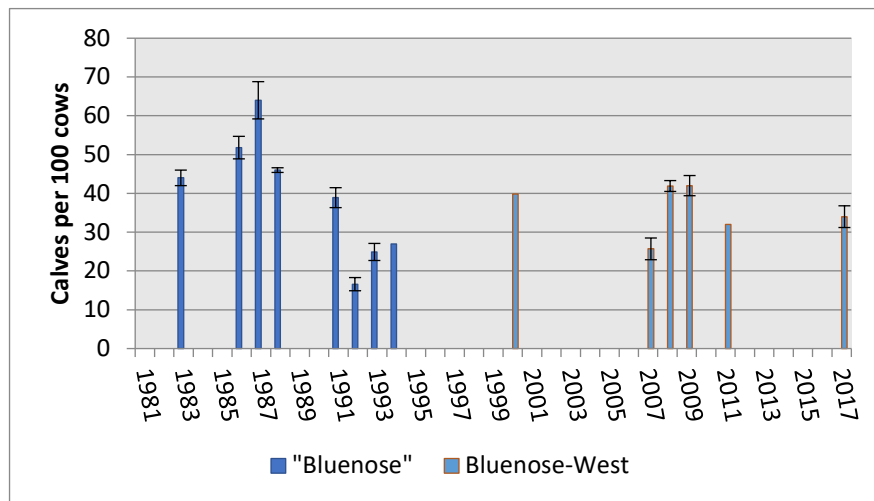


Figure 13: Recruitment estimates for Bluenose-West caribou, 1981–2017.

Recruitment survey data presented during the status

meeting is shown in Figure 13. In the years 1983–1994, “Bluenose” includes Cape Bathurst, Bluenose-West, and Bluenose-East.

Calf-to-cow ratios can be impacted by the harvesting of females. For example, if a large proportion of cows are harvested and the calves are not, then the number of calves per 100 cows left in the herd will be inflated and will be an inaccurate reflection of actual calf survival. Good harvest data, including the sex of the animals, date of harvest, and location, is needed to better assess the impact of this harvest on the calf-to-cow ratios.

Adult composition

No new data on productivity and recruitment was provided. Data from previous years was presented and is summarized below.

The last fall composition survey conducted in 2009 found a bull-to-cow ratio of 70 bulls per 100 cows.

Body condition and health

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. Scientific information is based on harvester reports and samples for the Bluenose-West herd.

Twelve samples were submitted from Paulatuk, 10 of which had a condition score.

Table 8: Results from hunter-harvest body condition sampling for Bluenose-West caribou.

Season	Average Condition Code (number of samples)	
	Female	Male
2019/20*	2.4 (10)	3 (3)
2018/19*	0	0
2017/18*	4.7 (6)	2.1 (8)
2016/17*	n/a	2.7 (6)
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)



Figure 14: Average condition codes for the Bluenose-West herd, assessed by hunters on a scale of 1–4 with number of samples noted at the top of the bar.

* Includes only samples from Paulatuk since 2014/2015 because based on collar data, the change of the harvest zone boundary in 2014 means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst herd caribou.

Results for average body condition ratings data from previous years was presented and is summarized for the Bluenose-West herd in Table 8 and Figure 12 Please note that samples were submitted from I/BC/06 harvests, since the change of zone boundary in 2014 means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst caribou. Only Paulatuk samples are included since the 2014/2015 season.

Back fat measurements for the Bluenose-West caribou herd are presented in Table 9 and Figure 15 below. Marrow fat measurements are shown in Table 10 and Figure 16. Marrow Fat observations for 2019/20 were in the healthy range.

Table 9: Results from hunter-collected back fat and health sampling for the Bluenose-West herd combined.

Season	Back Fat in cm (number of samples)	
	Female	Male
2019/20*	2.04 (7)	2.55 (18)
2018/19*	0	0
2017/18*	1.35 (9)	0.52 (6)
2016/17*	n/a	1.79 (6)
2015/16*	2.00 (1)	0.13 (4)
2014/15*	2.21 (17)	2.94 (20)
2013/14	1.77 (11)	2.39 (25)
2012/13	1.66 (17)	1.30 (36)
2011/12	0.75 (2)	1.00 (1)
2010/11	2.01 (9)	3.31 (25)
2009/10	0.70 (12)	1.20 (22)
2008/09	0.00 (5)	2.40 (6)

* Includes only samples from Paulatuk since 2014/2015 because based on collar data, the change of the harvest zone boundary in 2014 means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst herd caribou.



Figure 15: Average reported back fat measurement (in centimeters) for the Bluenose-West herd, with number of samples noted at the top of the bar.

Table 10: Results from marrow fat health sampling for the Bluenose-West herd combined.

Season	Marrow Fat % (number of samples)	
	Female	Male
2019/20*	88 (6)	91 (15)
2018/19*	0	0
2017/18*	91 (9)	77 (12)
2016/17*	0	91 (7)
2015/16*	88 (6)	91 (15)
2014/15*	90 (26)	90 (23)
2013/14	90 (10)	91 (20)
2012/13	90 (19)	91 (31)
2011/12	93 (3)	93 (1)
2010/11	92 (8)	87 (19)
2009/10	89 (12)	88 (19)
2008/09	90 (7)	90 (8)

* Includes only samples from Paulatuk since 2014/2015 because based on collar data, the change of the harvest zone boundary in 2014 means Inuvik and Tuktoyaktuk harvesters were mainly accessing Tuktoyaktuk Peninsula and Cape Bathurst herd caribou.

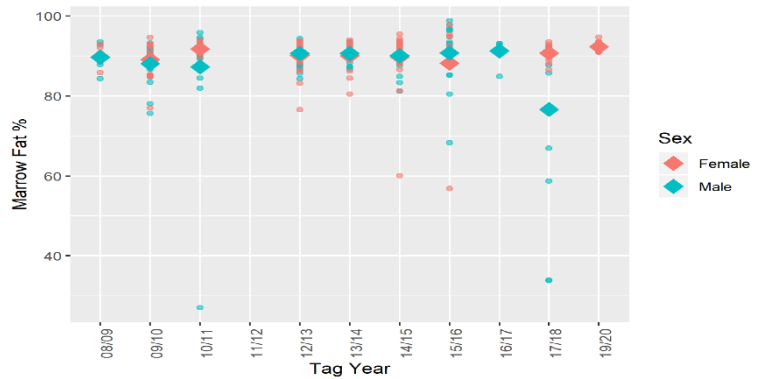


Figure 16: Marrow fat percent and average (diamond). Includes: I/BC/08 harvests plus from 14/15 to present harvest by Inuvik and Tuktoyaktuk harvesters.

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. The 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. The TAH was revised for the 2019/2020 season based on the 2018 estimate and set at 840 animals. Harvest allocations to each region are: 34 Gwich'in (4%), 403 Inuvialuit (48%), and 403 Sahtú (48%). This recommendation also included a bull-dominated harvest with a target of 80% bulls to encourage herd recovery.

Table 11 includes the harvest data collected to date by ENR, Inuvik Region using tag returns since 2007.

Table 11: Harvest data for Bluenose-West collected by ENR, Inuvik Region since quota implementation in 2007.

	Season ^a												
	07 /08	08 /09	09 /10	10 /11	11 /12	12 /13	13 /14	14 /15 ^b	15 /16	16 /17	17 /18	18 /19	19 /20
Aklavik	0	0	0	0	0	11	0	3	0	0	5	27	5
Inuvik	33	17	52	41	8	41	0	73	42	94	79	71	95
Tuk.	37	63	14	17	24	27	12	75	75	95	87	70	117
Paulatuk	198	150	230	239	279	261	150	97	171	72	122	143	118
Ulu.	0	0	0	0	3	0	0	0	0	0	0	0	0
Sachs Harbour	0	0	0	0	0	0	0	9	0	0	0	0	6
	268	230	296	297	314	340	162	254	288	261	293	311	341
Gwich'in	2	1	13	22 ^c	22 ^c	0	0	3	5	4	12	11	6

^a Season changed from Sept 1 to Aug 31 in 2010, to Oct 1 in 2013, and to 1 July in 2017

^b Tags misplaced, assumed all used

^c Boundary change between I/BC/06 and I/BC/07

Predator populations

ENR collects samples from wolves harvested by hunters (Table 12; samples are mostly from the winter season, when wolves tend to be hunted). In previous years, stomach contents were sampled, and of all the Inuvik region mainland wolf samples submitted, 68% of the stomach contents was caribou. 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., will reveal more information about wolves' year-round diet).

Table 12: Number of wolf carcasses/samples submitted to ENR by Paulatuk hunters, 2007–2019.

Year	Paulatuk	Colville	Fort Good	
		Lake	Hope	Unknown
2019/20	0	0	n/a	n/a
2018/19	0	2	n/a	n/a
2017/18	1	7	n/a	n/a
2016/17	7	n/a	n/a	n/a
2015/16	4	4	3	4
2014/15	26	n/a	n/a	n/a
2013/14	15	30	2	2
2012/13	11	21	6	8
2011/12	12	19	2	0
2010/11	16	22	3	1
2009/10	1			
2008/09	n/a			
2007/08	3			
Grand Total	95	98	16	15

Other scientific information

Overall, the scientific information indicates the following:

- Collars are used to monitor whether the calves and cows return to the same calving grounds year after year. Between 2010 and 2019, 99% have gone back to the same place year after year, showing a very high-fidelity rate.
- There were not many new fires in the Bluenose-West range.
- Industrial work is minimal in the Bluenose-West range. For the most part it is limited to a few helicopter flights, mostly by local communities and researchers in the range.

Table 13: Criteria used to assess Bluenose-West herd status in 2020⁷

Criteria	Community-Based Information ⁸	Scientific Information ⁹	Comments
Population size	<p>GRRB: Hunters either did not see any caribou or saw a small bunch of around 10. It seems that this small group was seen by several hunters on and around the ITH between Inuvik and Jimmy Lake.</p> <p>Colville Lake (Sahtú): The population is about the same as previous years. Not many people have gone out as other years as the herd is more spread out.</p> <p>Paulatuk (ISR): Observations were quite positive; There were thousands. The hills were rolling.</p>	Estimated number of adult caribou at least 1.5 year old in 2018 Rivest: 21,011 ± 4,602	Estimated based on July post-calving ground survey
Population trend and rate of change	<p>Délı̄ᅇ (Sahtú): Haven't seen any Ɂekwé this year; they don't want to see us these days. Tried looking for Ɂekwé at ʔehajla and Neregha in fall and summer 2-3 times in 2020 and saw nothing.</p> <p>GRRB: One hunter mentioned that there is not enough BNW, and to let them repopulate. This was mentioned in relation to Porcupine caribou being</p>	Between 2005 and 2018 the herd shows a non-statistically significant decrease of 2% per year (CI -4 to 1%).	TAH updated based on 4% of the most recent estimate (2018 Rivest estimate 21,011) Trend analysis is based on Rivest estimates 2015 21,535 ±

⁷ This table is populated with information presented to the ACCWM to assess herd status in 2020; and is adapted from the monitoring criteria table included in *Taking Care of Caribou*.

⁸ Bluenose-West caribou usually migrate through two settlement areas/regions and are typically harvested by four communities: Aklavik, Inuvik, Tsiigehtchic and Tuktoyaktuk.

⁹ All scientific information and comments were provided by Environment and Natural Resources (ENR) (GNWT) unless otherwise noted.

	<p>readily available on the highway.</p> <p>Colville Lake (Sahtú): No change from previous year.</p>		<p>5,136</p> <p>2012 32,326 ± 15,482</p> <p>2009 21,773 ± 4,884</p> <p>2006 28,461 ± 7,431</p> <p>2005 26, 228 ± 5,878</p>
Productivity and recruitment	<p>Délıne (Sahtú): No harvest, so no knowledge on this topic.</p> <p>Colville Lake (Sahtú): The herds are spread out and hunters have to travel farther to get to them, so it is hard to make observations.</p>	Last recruitment survey was 2017 so no current information available.	2017 recruitment survey estimated was 34 + 2.8 (SE) calves per 100 cows.
Adult composition	<p>Délıne (Sahtú): No sightings, so no knowledge on this topic.</p> <p>Colville Lake (Sahtú): About 1:1</p> <p>Paulatuk (ISR): The majority were cows, but with lots of bulls mixed in.</p>	<p>There is only one bull to cow ratio for Bluenose-West (2009) so trend is unknown but the 2009 result is considered high.</p> <p>Estimated number of bulls per 100 cows in 2009: 70</p>	The bull ratio is monitored because a bull dominated harvest was recommended.
Body condition and health	Délıne (Sahtú): No sightings, so no knowledge on this topic.	The condition of both bulls and cows was on	Scientific information based on harvester reported samples

	<p>Colville Lake (Sahtú): Our caribou are healthy and are fat. The more isolated they are from people, the more stressed they are by wolves. So, local hunters are encouraged to spend more time in these areas.</p> <p>Paulatuk (ISR): We're not noticing any numbers of unhealthy caribou, maybe one or two here or there.</p>	<p>average 'good' in the 2019/2020 harvest season.</p> <p>Average back fat in 2019/2020 season was 2.08 cm (range 1 to 3 cm) for cows and 3.63 cm (range 1 to 5.8 cm) for bulls.</p> <p>The average Condition code was 2.4 (range 1 to 4) for cows and 3 for bulls (range 1 to 4). The average percent marrow fat for cows was 92% (range 91 to 95%) for cows and 74% (Range 33 to 95%) for bulls</p>	<p>harvested in range of the Bluenose-West herds. In 2019/2020 season, condition information was reported for 12 cows and 3 bulls, back fat information was collected for 10 cows and 3 bulls, and Marrow fat information collected for 12 cows and 3 bulls</p>
<p>Harvest levels</p>	<p>Délıne (Sahtú): Zero harvest in 2020.</p> <p>GRRB: 6 caribou (tags) were harvested out of the 34 tags available. No BNW caribou were harvested amongst the 5 hunters interviewed. One harvester went around Sitidgi Lake for fish. He saw several old tracks, some old skidoo tracks, but no gut piles.</p> <p>Colville Lake (Sahtú): Far people less went hunting. People who hunt as a subsistent living got CERB and may have chosen to stay home. Less than 130 caribou</p>	<p>Total harvest uncertain.</p> <p>Sex of harvest is not always reported ENR believes the 80% bull target is not being met.</p>	<p>TAH tag returns in Inuvik Region 2019/2020</p> <p>Inuvialuit: 403 Quota, 341 harvested</p> <p>Gwich'in: 34 quota, 6 harvested</p> <p>Sahtú: harvest unknown</p>

	<p>were harvested. Community did not go hunting in Horton Lake but about 5 caribou were harvested while fixing up camp. For the first time in oral history, a moose was seen in Horton Lake. Did a scouting flight a week and a half later saw caribou spread out with groups of 5 to 50. One big herd of muskox was seen in the area.</p> <p>More woodland caribou closer to the community.</p> <p>Paulatuk (ISR): Lots more caribou around, harvest has shifted to mainly bulls during a community harvest. 18 bulls and two cows were harvested.</p>		
<p>Predator populations</p>	<p>Délı̄ne (Sahtú): No observations.</p> <p>GRRB: Most hunters mentioned that they did not see any predators and predator tracks. One mentioned that he has not seen many predators.</p> <p>Colville Lake (Sahtú): Lots of wolves. Bears seem healthy and hardly show up in the community. When there are more hunters and trappers on the land, then the wolves have less of an impact on the caribou.</p> <p>Paulatuk (ISR): Monitoring of predators, including eagles, is happening. Wolves are following</p>	<p>Paulatuk submitted 0 wolves and Colville lake submitted 0 wolves in the 19/20 season.</p>	<p>Changes in wolf harvest does not necessarily reflect changes in wolf abundance.</p> <p>Raptors are being monitored along a small section of the Hornaday River by Parks Canada.</p>

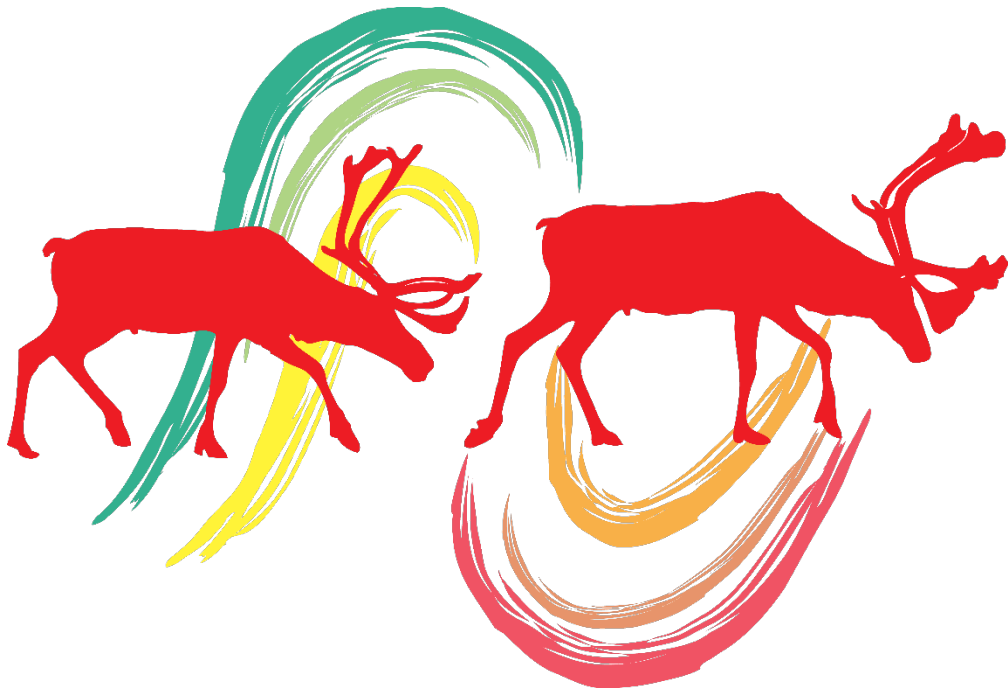
	<p>the herds into the calving grounds. Hunters have been asking for more tags for grizzly bears as the population appears high.</p>		
<p>Range and movement patterns</p>	<p>Délıne (Sahtú): No observations.</p> <p>GRRB: Based on one harvester observations, the caribou had been grazing around, lots of tracks and trampling by Sitidgi. This was late spring. The only harvester seeking BNW mentioned that the caribou were too far away in late spring to access them.</p> <p>Colville Lake (Sahtú): Different movement pattern this year as we have less snow than in previous years.</p> <p>Paulatuk (ISR): The caribou are resilient and move large distances when they need to find good habitat. Observations are really positive. Their migration is close to the community. This hasn't been seen this since the 1980s. They were just 3km south of town.</p>	<p>In 2020, 12 BNW collared cows were still active from the 2018 deployment and all returned to BNW calving ground.</p> <p>Between 2010 and 2020, 99% of collared BNW cows (208 records) returned year after year to calving ground.</p>	
<p>Environment and habitat</p>	<p>Délıne (Sahtú): Lots of rain and no fires, both of which can be good for caribou, but there was rain in December which would have been hard on them.</p> <p>GRRB: Most hunter mentioned that the environment and habitat were similar to last year. No notable changes were</p>	<p>There were very few fires in the 2020 season.</p>	

	<p>recorded. One harvester mentioned that during his hunt for BNW, there was too much snow further away from the ITH and he had to turn back. The caribou were too far. One hunter mentioned that when he was out in April, it was getting warm, snow was melting fast.</p> <p>Colville Lake (Sahtú): No fires. Permafrost melts have led to changes in habitat.</p>		
Human disturbance	<p>Déljñę (Sahtú): Not applicable within Déljñę District.</p> <p>GRRB: When asked about human disturbance, all hunters either skipped the question or had no comments to bring forward.</p> <p>Colville Lake (Sahtú): Hardly any disturbance.</p>	Minimal human disturbance.	
Competitors	<p>GRRB: Hunters mentioned that there is no competition in this area [ITH/Sitidgi and Jimmy Lake]. One mentioned that species mind their own business, and another said: <i>'There is no competition between moose and caribou. For muskox, shot them and eat them. One of the reasons why I was talking about caribou-moose is because I was in Deline. They talk about caribou going down. They were not sure about the relationship for</i></p>		<p>March 2020 in Muskox survey completed in the Sahtú</p> <p>March 2021 surveys in more regions.</p>

	<p><i>barrenground and moose.'</i></p> <p>Délıne (Sahtú): There are concerns about the impacts of muskoxen in making caribou move away.</p> <p>Colville Lake (Sahtú): Lots of muskox and bigger herds are seen some closer to the community. The muskoxdn are everywhere and eat up a lot of the food the caribou rely on.</p>		
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BLUENOSE-EAST CARIBOU

– RED STATUS –



Tuktuvialuk (Inuvialuktun, Siglitun dialect)
Tuktut (Inuinnaqtun, Kugluktuk, Western Kitikmeot)
ʔedə (K'áhsho Got'jne, Dela Got'jne)
ʔehdaɣla Goʔekwé (Déljne Got'jne)
Sahti ʔekwò (Tłjchq, Wek'èezhì)

Understanding Current Bluenose-East Herd Status

The ACCWM met on November 19th, 2020 to review information pertaining to the status of the Bluenose-East caribou herd. Prior to that, Member Boards reviewed information available and held discussions in preparation for the annual status meeting. During status meeting discussions about Bluenose-East caribou, up-to-date scientific knowledge was provided by ENR and Government of Nunavut Department of Environment (GN-DOE) biologists, and community knowledge was provided primarily by representatives from three regions: Wek'èezhìi (Tłı̄chq̄), the Sahtú Settlement Area, and the Western Kitikmeot region of Nunavut.

The 2020 Management Setting

At the start of the 2020 status meeting, a roundtable was held to give participants an opportunity to provide a brief update on some of the management actions and developments that arose in their region over the course of the last year. During the roundtable, a number of management topics were raised that could have implications for Bluenose-East caribou and their habitat, including:

- **Species at Risk Assessments:** COSEWIC has assessed barren-ground caribou as Threatened. The federal SARA listing has not been undertaken yet. Depending on listings, work on recovery planning and identification of critical habitat may need to happen.
- **Caribou Recovery Strategy:** The NWT Barren-ground Caribou recovery strategy recommends objectives for the conservation and recovery of caribou. It also recommends approaches to achieve those objectives. It includes a description of threats and positive influences on the species and its habitat.¹⁰
- **Increase in predator population:** Representatives from many the regions mentioned that there is increasing concern about the level of predation.
- **Kugluktuk HTO initiatives:** Between 2007 and 2018, the KHTO led initiatives to reduce harvest pressure on the Bluenose-East caribou herd, such as:
 - Education (public meetings, workshops, posters)
 - Stopping organized community hunts on caribou
 - Promoting harvesting of alternate species (e.g., muskox)
 - Stopping caribou sport hunts
 - Active involvement in interjurisdictional meetings
- **Community-led conservation planning:** The KHTO Integrated Community Caribou Management Plan includes a local plan for managing the harvest allocation. Additional changes in Nunavut regulations that could influence caribou include: increased moose hunts, no beneficiary tag requirement for grizzly bears, no tags or season requirement for wolf harvesting, and an increased muskox TAH to offset caribou harvesting

¹⁰ https://www.nwt-species-at-risk.ca/sites/enr-species-at-risk/files/barren-ground_caribou_recovery_strategy_final_8april2020.pdf

restrictions.¹¹ In 2017 a community conservation plan was put into effect in Délı̨nę to guide peoples' actions toward Bluenose-East caribou,¹² and a community caribou conservation plan for Colville Lake was being finalised at the time of the meeting.

Status Decision 2020

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 2019 decision is presented below and summarized in Table 14 at the end of this section. Additional historic information can be found in two companion reports available from ACCWM members and on the ENR website.¹³

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.**

Based on the information provided, the ACCWM determined the Bluenose-East herd status colour zone to be **red (low)** in November 2020. This decision recognizes that though there are some positive community and scientific observations, but the observed population level is still near or below the ~20,000 threshold between red and yellow. There was limited community data on the status of the herd as a result of the herd remaining far from each of the communities throughout the year. Additionally, scientific observations were limited by the Covid-19 pandemic. As such, it was felt that it was best to use the maintain the status of the herd at the same level as last year. The forthcoming 2021/22 actions will be based on this determination.

¹¹ The Kugluktuk management plan is available from the Kugluktuk Angoniatit Association (Hunters and Trappers Organization), kugluktuk@kitikmeothto.ca.

¹² The Belare Wı̨le Gots'ę ʔekwé plan is available from the Lands, Resources and Environment Department of the Délı̨nę Got'ı̨nę Government.

¹³ 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. 81 pp.

Advisory Committee for Cooperation on Wildlife Management. 2014. We Have Been Living with the Caribou All Our Lives: A report on information recorded during community meetings for 'Taking Care of Caribou: The Cape Bathurst, Bluenose-West, and Bluenose-East Barren-ground Caribou Herds Management Plan'. Yellowknife, NT. 196 pp.



In 2021/22

the Bluenose-East caribou population status is

RED: low

Presentations Given at the 2020 Annual Status Meeting

Both scientific and community knowledge helped to inform the 2020 status decision; further details on some of the relevant survey methods are included in **Appendix D**. ENR provided current scientific information at the status meeting; the data included here were presented at the meeting.

Community information was provided on each of the ten monitoring criteria. The following groups presented their community data to the gathering:

Western Kitikmeot Region, NU – Kugluktuk information was documented and shared by Larry Adjun and Amanda Dumond of the KHTO during the meeting.

Sahtú Settlement Area, NWT – Sahtú information was provided by Walter Bezha of the DGG as Délıne is the Sahtú community that predominately harvests this herd. SRRB representatives participated in all the status meetings as well.

Wek'èezhìı (Tłıchq), NWT –Stephanie Behrens of the TG presented on data collected in the Tłıchq region.

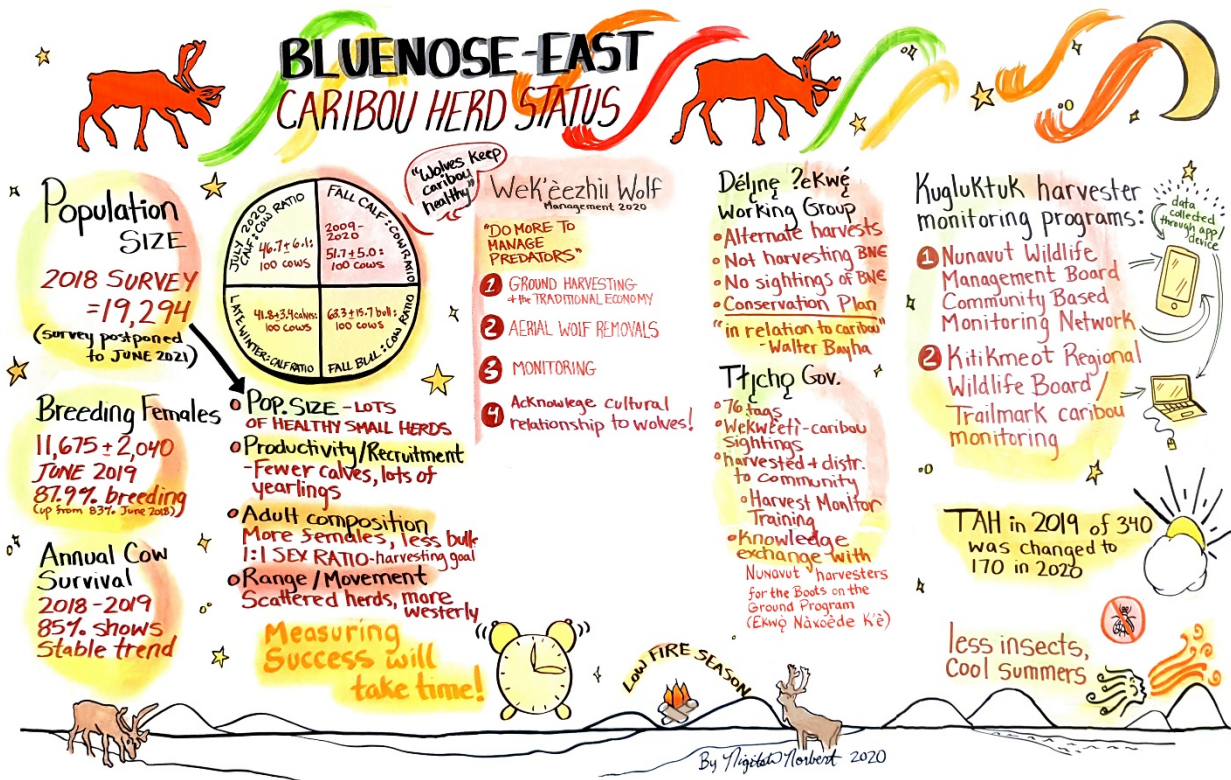


Figure 17: Graphic recording of the Bluenose-East Knowledge presentations. Credit: Nigit'stil Norbert

Sahtú Community Knowledge Presentation
Walter Bezha (DGG)

Walter Bezha reported that the people of Déljñę have not harvested many BNE caribou for a number of years. This year there was little that they could say regarding the criteria requested for assessing the status of the herd as the caribou stayed far from the community again, as could be seen in the animation presented by ENR.

Still, Walter emphasised that his community has a great interest in what is happening with the herd. Community members devour any information that they can get on the herd from ENR or the other communities as they want to understand why the declines have been so steep and what the community can do to help.

The Déljñę Got'jñę Government is supporting alternative harvests of several species including fish, moose, muskox and boreal caribou.

Walter reiterated that Déljñę community caribou conservation plan was being implemented. This means while they are moving away from tags-based system, that they will be able support their harvesters' relationships with caribou. This system works better for their community and is building a foundation of trust that will eventually lead to better data when harvesters are once again able to hunt BNE caribou.

The conservation plan says that wildlife should be harvested if it is available but if it is not then the community will concentrate on fishing or other alternatives. Walter highlighted that their land claim also provides for trade. As such, if they can't harvest caribou, they'd love to trade fish with communities that have an abundance of moose and caribou available. In the future, they would like to improve their relationship with neighbouring regions through this kind of trade.

The information provided by Walter was reviewed by the Délı̄nę Ekwa Working group on Nov 5.

Tłı̄chq Community Knowledge Presentation

Stephanie Behrens (Tłı̄chq Government)

Due to COVID-19 and pressure from other programs, there was not enough time to complete the monitoring criteria table this year. Tłı̄chq Government monitors are getting trained on data collection that will feed into this process and will provide more data for next year's meeting.

Stephanie explained that that since the herd was only found near the community of Wekweèti that the other Tłı̄chq communities gave their tags to Wekweèti to be used there. Of the 176 tags distributed in the region, 76 were used. Most of the caribou that were harvested were on the winter road near Wekweeti. Wekweeti held a community hunt and sent meat to each Tłı̄chq community. This meat was distributed to elders, single mothers and those who can't get wild meat on their own. The community hunt, which took place 20km south of Wekweèti in May, was all bulls. There was no other harvest recorded during the year.

There was a lot of activity on the winter road this year. The Tłı̄chq Government has stationed harvest monitors out there. On top of monitoring the harvest, they are trained to collect samples and educate harvesters against wastage and wounding animals.

Stephanie noted that it is a priority to continue educating hunters to respect caribou and follow traditional laws. So, they have the harvest monitors working in the community doing outreach and communications on top of their monitoring activities on the land. Some of this work is done in partnership with ENR in Wekweèti and they hope to expand to other the communities in the future.

A joint management plan aimed at reducing the wolf population on the winter ranges of the Bluenose-East and Bathurst caribou herds was put into action this year. The management plan also includes provisions for training harvesters, such as how to prepare pelts, as well as a goal to monitor wolves with tracking collars to learn more about them. This year, the Tłı̄chq Government stationed hunters 50 km east of Wekweèti in an area that was expected to have lots of wolves, but they ended moving camp closer to Wekweèti after they were unsuccessful in

their initial wolf hunt. Monitors observed that the wolves were using the winter road more than the other areas. This season only three wolves were harvested.

Stephanie stressed that Tłıchq̓ people are not usually wolf harvesters. They have strong cultural ties to wolves and a lot of families do not approve of hunting wolves. The Tłıchq̓ Government worked hard to get approval to have people out hunting wolves. This year they had eight rotations of 2-3 weeks, with six hunters, two cooks and a camp helper. They hope to repeat the program this year with more input from knowledge holders so that they can build on their experience from last year and can be more successful. This includes working with knowledge holders from Nunavut once they can travel again.

Larry Adjun (KHTO) remarked that they'd be happy to collaborate with the TG.

Stephanie also noted that Ekwò Nàxoède K'è: Boots on the Ground caribou monitoring program has been expanded to include the BNE herd. Last year, they were out at Point Lake in September. They saw no caribou, but they did see lots of wolf tracks.

Walter Bahya (DGG) noted that his community members have some similar views and interests regarding the wolf management plan:

We do have a long history of wolves and people here. So, yes, in terms of getting to people aware of programs going on with wolves, there's a huge interest at looking at the traditional areas of harvest. Especially with wolves. Like Stephanie said, there are a lot of families that have issues with the wolf harvest. They are certainly interested of what happens in overlap areas and what happens with caribou numbers. That was the issue. They didn't say anything specific, but they wanted to be part of the consultation.

David Codzi (BAFN) added, "wolves keep the caribou healthy."

Ray Ruben (TTNMB) commented that they have heard lots of comments regarding the connection people have to wolves and caribou. He noted that there has been more scientific work done on caribou than on predators. People in his community feel that they are still well connected with caribou and feel that they understand what is going on with the caribou. They want future research to be focus on predators. Ray added that they are starting to look more at wolves in the Park and he is interested to see the information that comes out of the programs in other regions.

Kugluktuk Community Knowledge Presentation
Amanda Dumond (KHTO), Larry Adjun (KHTO)

Due to COVID-19 restrictions, the KHTO was unable to do a community meeting or interview to collect community knowledge. As such the data presented at the meeting comes from the KHTO board members, who are in constant contact with local hunters.

Amanda Dumond was the main presenter of the Kugluktuk community knowledge presentation, the content of which was mostly covered in the in Table 15.

Amanda reported that the caribou have been west of the community and not as accessible as they had been in other years. This may have limited some hunters’ ability access the herd and as such limited some of the data they were able to provide.

Larry Adjun added there is a Grizzly Bear sample incentive program that pays hunters to submit sample kits. In the past there was just an incentive for wolf and wolverine samples but in July 2019 the incentive for samples from Grizzlies was added.

Presentation on Scientific Information

Heather Sayine-Crawford (ENR)

Population size and rate of change

ENR’s most recent calving ground survey was conducted in 2018 year. ENR switched from post-calving ground surveys (still used for Bluenose-West and Cape Bathurst herds) to calving ground surveys for the Bluenose-East herd in 2010. Heather noted that the ENR is increasing the frequency of surveys to every two years for the Bluenose-East and Cape Bathurst herds but due to COVID-19 the next scheduled survey will be in 2021.

The following data, presented in 2019, reflect the most to date scientific population data.

The 2018 population estimate of 19,294 ± 4,729 caribou (95% CI) represents that between 2015 and 2018 the herd experienced a statistically significant decrease of 50%. Survey results from earlier years are available in *Taking Care of Caribou* and in the ENR technical report.

Table 14: BNE population estimates (2000–2018).

Year	Estimate
2018	19,294 ± 4,729
2015	38,592 ± 4,733
2013	68,295 ± 18,041
2010	102,704 ± 39,965

In 2019 the proportion of breeding females is high at 87.5% of the 5,347 caribou spotted during the June composition survey.

In a stable herd, cow survival rates are in the 82–85% range. In 2013–2015 the rate was at 71%, and it is likely that the survival rate in 2015–2018 is similar. Similarly, calf survival rates in a stable herd are 30–40:100. In 2019, ENR reported that while the average survival rate is in this range, at 37.9 ± 3.9:100, this may still not be high enough when coupled with the poor rates of survival for adults.

Productivity and recruitment

In July 2020, a composition survey was conducted. A calf-to-cow ratio of 46.9 calves to 100 cows was observed. Little calf mortality is happening between July to October. Most mortality occurs in the first 4 weeks.

The fall cow:calf ratio going back to 2009, is trending higher in recent years and ENR is observing increases in collared cow survival rates.

ENR also does a late winter cow:calf survey. Last winter, ENR observed 41.8 calves to 100 cows, which indicates an improving trend.

Adult composition

The fall bull-to-cow ratio was quite high compared to previous years (63.3 ± 15.7 bulls: 100 cows). The survey was timed to match the peak of the rut and a lot of prime bulls were sighted. Last year, the survey was a bit late, occurring in early November. This may have affected the ratio a bit. This high ratio may be an indication of a high survival rate. In June 2021, ENR plans to do a population survey and another composition survey in fall 2021.

Range

During the presentation, Heather showed a series of maps showing collar location data for the herd through out the year. Walter Bezha mentioned that it would be good to see an animation showing how migration routes are changing over time and if there is a change in the landscape usage by the caribou as their numbers change.

Harvest levels

According to ENR, harvest levels were very low in the North Slave Region. Previously, 15 bulls were taken in the winter of 2016–2017 and 10 bulls in 2017–2018. As the herd generally stayed away from areas that are easily accessed by hunters, people tended to focus their hunt on the Beverly herd, which can be accessed via the winter roads to the mines.

Predator populations

As a response to the dramatic decline in caribou numbers and concerns for survival rates for both cows and calves, ENR has enacted a number of programs to help reduce pressure on the caribou. These include harvest restrictions, habitat management (such as aggressive wildfire mitigation) and now they are working on reducing predation pressure. Community members and co-management partners have made strong calls to do something.

The first step was to review predator control programs in adjacent regions and then a technical feasibility study was completed 2017. In 2019, the WRRB recommended increasing wolf management actions to the GNWT and TG. They submitted a joint proposal for 2020-2025 to enhance support for wolf harvesters and traditional economy.

ENR did Tłı̄ch̄ trapper training, with an ongoing community-based program with the goal to increase the predator harvest levels and maximize the value of pelts.

The best available information shows that wolf population numbers rebound quickly. So, a 60-80% reduction for 5 years is needed to have any significant effect on the wolf population.

In 2018-2019, 60 wolves were taken in the region, 50 more were taken in 2019-2020. This year Nunavut harvesters could also get the NWT harvest incentive in their traditional areas in the region. An aerial harvest was used in areas where the target harvest was not reached by hunters.

Due to COVID-10 surveys are postponed until 2021.

In response to Heather’s presentation on the wolf harvest program, Larry Adjun (KHTO) noted that the bad weather limited Kugluktuk-based hunter’s ability to participate in the wolf harvest. They look forward to being more active in the coming year and noted that there is a lot of potential for people to cooperate on monitoring and predator harvesting programs across the regions.

Table 15: Criteria used to assess Bluenose-East herd status in 2020¹⁴

Criteria	Community-Based Information ¹⁵	Scientific Information ¹⁶	Comments
Population size	<p>Kugluktuk: It was hard to make an observation as the herds were scattered herds; Lots of healthy smaller herds though.</p> <p>Délıne (Sahtú): Haven’t seen any ɔekwé this year; they don’t want to see us these days. Tried looking for ɔekwé at ɔehajla and Neregha in fall and summer 2-3 times in 2020 and saw nothing.</p>	<p>Estimated number of adult caribou at least 1.5 year old in 2018: 19,294 ± 4,729.</p> <p>Estimated number of breeding cows 11,675 ± 2,040.</p>	Estimated based on June 2018 calving ground survey and October composition survey to estimate sex ratio.

¹⁴ This table is populated with information presented to the ACCWM to assess herd status in 2020 and is adapted from the monitoring criteria table included in *Taking Care of Caribou*.

¹⁵ Bluenose-East caribou usually migrate through four settlement areas/regions in the Northwest Territories and into the western portion of the Kitikmeot Region, Nunavut. The herd may be harvested by nine communities: Wrigley, Norman Wells, Tulít’a, Délıne, Whatı, Gamèti, Behchokò, Paulatuk, and Kugluktuk.

¹⁶ All scientific information and comments were provided by Environment and Natural Resources (ENR) (GNWT) unless otherwise noted.

	<p>Wekweèti (Tłjchq): There are less animals than before and they are seen in smaller groups than before.</p>		
<p>Population trend and rate of change</p>	<p>Kugluktuk: Hard to say as they are staying together in smaller herds.</p> <p>Déljñę (Sahtú): The community continues to be concerned about lack of availability. This concern has heightened from 2019.</p>	<p>Estimated 19-20% annual rate of decrease 2015 to 2018; same rate of decline 2010-2013 and 2013-2015.</p>	<p>Herd declined by half 2015-2018.</p>
<p>Productivity and recruitment</p>	<p>Kugluktuk: Saw quite a few small herds. Fewer calves. Lots of yearlings.</p> <p>Déljñę (Sahtú): No harvest, so no knowledge on this topic.</p>	<p>Percent breeding females June 2019 on calving ground: 87.5%. (83.0% in June 2018).</p> <p>Pregnancy rate of captured cows 2019: 7/10 (70%).</p> <p>2014-2018: 46/49 (94%).</p> <p>Calf to cow ratios:</p> <p>March 2020: 41.8 ± 3.4: 100</p> <p>July 2020 46.9 ± 6.1: 100</p> <p>Oct. 2020 51.7 ± 5.0: 100</p>	<p>2018 & 2019 results suggest good initial productivity (June), i.e. high pregnancy rate.</p> <p>Calf:cow ratio March 2020 good.</p> <p>July 2020 calf:cow ratio suggests most calf mortality in first 4-5 weeks. Similar July and October calf-cow ratios suggests little mortality summer-fall.</p> <p>October ratio suggests improving recruitment. Average March calf: cow ratio 2014-2018: 30.1.</p> <p>Bluenose-East June 2019 Composition Survey occurred a few days after the peak of calving,</p>

			resulted in a calf to cow ratio of 69.8 calves: 100 cows.
Adult composition	<p>Kugluktuk: More females; less bulls. Most observations made in August-October.</p> <p>Déłıne (Sahtú): No sightings, so no knowledge on this topic.</p>	<p>Fall bull to cow ratio:</p> <p>Nov. 2019: 35.3 ± 5.5: 100</p> <p>Oct. 2020: 63.3 ± 15.7: 100</p>	<p>Fall 2019 survey past peak of rut; Fall 2020 survey close to peak of rut.</p> <p>Higher bull: cow ratio a positive sign. Increasing herds in NWT in the early 1980s had sex ratios of 65 bulls: 100 cows (or higher).</p>
Body condition and health	<p>Kugluktuk: Healthy; lots of fat; nice meat colour. Not too many sick ones. No data collected this year with sampling kits due to COVID-19.</p> <p>Déłıne (Sahtú): No sightings, so no knowledge on this topic.</p>	<p>No new information – minimal harvest N Slave Region last 2 winters.</p>	
Harvest levels	<p>Kugluktuk:</p> <p>NE – TAH 170 – 88 harvested</p> <p>BC – TAH – 10 – 2 harvested</p> <p>DUC – TAH 10 – 0 harvested</p> <p>Beverly – no TAH – 2 harvested</p>	<p>Harvest very low in N. Slave region 2018-2019</p> <p>Total reported winter harvest N Slave region NWT:</p> <p>2016-2017: 15 bulls.</p> <p>2017-2018: 10 bulls.</p>	<p>BNE caribou have been mostly in remote areas last 3 winters while in the NWT (in N Slave region); most N Slave hunters have harvested Beverly caribou in east on mine winter roads.</p>

	<p>Moose – 10 harvested</p> <p>Muskox – TAH 245 (all zones) 11 harvested</p> <p>Déłıne (Sahtú): Zero harvest in 2020.</p> <p>Tłıchq: Total tags = 76 Total harvest:</p> <p>Behchokq: 20 Wekweèti: 28 Gamèti: 13 Whati: 15</p> <p>The animals harvested were all bulls.</p>	<p>2018-2019: n/a</p> <p>2019-2020: n/a</p>	
Predator populations	<p>Kugluktuk: Grizzly bear population high; excellent body conditions (except 1); lots of grizzly bears around where young caribou are; 15 harvested. There is now an incentive for providing samples from harvested Grizzly Bears</p> <p>High wolf population; healthy – 8 harvested</p> <p>Wolverine – 9 harvested</p> <p>Polar Bear – TAH 6 – 0 harvested</p> <p>Déłıne (Sahtú): No observations.</p> <p>Wekweèti (Tłıchq): The wolves are using the</p>	<p>Limited Information.</p> <p>Incidental sightings during June caribou composition surveys:</p> <p>2019 14 grizzly bears, 3 wolves 2018 21 grizzly bears, 1 wolf</p> <p>No survey June 2020 (COVID-19)</p> <p>54 wolves removed from Bluenose-East range in 2020</p>	<p>Continuing trend of more grizzly bears than wolves seen on BNE calving grounds 2010-2019.</p>

	road more than other areas.		
Range and movement patterns	<p>Kugluktuk: Scattered and fragmented herds. Caribou more westerly</p> <p>Déłjñę (Sahtú): No observations.</p> <p>Wekweèti (Tłjchq): BNE Caribou are in the Wekweèti region but little data is available at time of meeting.</p>	Fidelity of BNE collared cows to calving ground 2008-2018: 97-98%.	Some years BNE has mixed a lot with Bathurst caribou to west. Recent winters BNE has been mostly separate and remote.
Environment and habitat	<p>Kugluktuk: Excellent this year. Including berries. Cool summer – insects minimal</p> <p>Déłjñę (Sahtú): Lots of rain and no fires, both of which can be good for caribou, but there was rain in December which would have been hard on them.</p>	Overall, 2018, 2019, and 2020 have been below average for fires. Very few fires on BNE range.	*July insect season not severe BNE range – based on Kugluktuk observations 2018-2019-2020
Human disturbance	<p>Kugluktuk: Minimal; no industry/exploration.</p> <p>Déłjñę (Sahtú): Not applicable within Déłjñę District.</p> <p>Wekweèti (Tłjchq): No new disturbance with respect to exploration or development.</p>	Very limited, no active mines.	

<p>Competitors</p>	<p>Kugluktuk: Healthy muskox populations; MX-9 & MX-11.</p> <p>Healthy moose populations.</p> <p>Déljñę (Sahtú): There are concerns about the impacts of muskoxen in making caribou move away, and climate change</p>		
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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 Nations¹⁷
- 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
- Parks Canada Agency
- Sahtú Renewable Resources Board
- Tłıchq Government
- Tuktut Nogait National Park Management Board
- Wek'èezhì Renewable Resources Board
- Wildlife Management Advisory Council (NWT)

¹⁷ 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 harvest year of July 1 to June 30.

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 the 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 the preceding year
 - Review and evaluate implementation of actions under communications strategy
 - Introduce and discuss actions that are proposed for the 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 comments. Once approved by all the Member Boards, the amended Terms of Reference shall supersede any previous versions.

Appendix C: Communication Plan

This communication 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 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 great deal 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 information on how to participate
- Changes to policy or regulations
- Newly completed 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
- Encouraging 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 included 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
- Storytelling

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 communication 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: Background to Some Survey Information Used in the Action Plans

Scientific Knowledge: Background to post-calving survey methods

The post-calving ground survey method is used to obtain a population estimate for the Cape Bathurst 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 Rivest method, including:

- Other jurisdictions are using Rivest estimates to estimate population size
- The Rivest method always provides confidence intervals
- The Lincoln-Peterson method tends to have a bias toward low estimates
- Larger confidence intervals resulting from the Rivest method may be more realistic measures of uncertainty; the Lincoln-Peterson method may not represent actual uncertainty

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.

Traditional and Community Knowledge: 2018 community engagement or survey methods

Traditional knowledge and community knowledge (TKCK) make important contributions to the annual status assessment and decision. In order to compare this type of information from year to year and across different regions, it is important to have as much consistency as possible in how it is documented and compiled.

In 2017 the ACCWM Working Group developed a slide show and list of questions that could be used as a template for conducting community engagement at public meetings and documenting discussions about caribou. Some of the regions adopted this format for their engagement; others used different tools, such as surveys and targeted exercises, at smaller meetings or in expert focus groups. Details on how engagement was achieved in each region can be obtained from the individual Member Boards.

We hope to find ways to support methods and approaches that can be adapted to best suit each region, but to also ensure that we are using rigorous methods that produce reliable, accurate and comparable information and are appropriate for including/bridging Indigenous knowledge and science. In 2020 we plan to review current best practices in this field of research.

Appendix E: 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.