

# **Bluenose-East Caribou (Sahti Ekwò): Status & Proposed Management 2019-2021**

## **Presentation to WRRB for Hearing April 2019:**

### **Draft Speaking Notes**

April 1, 2019

#### **Slide 1 (Title Slide)**

Good morning, Mr. Chair, board members and staff, elders, community members, and all participants in this hearing.

My name is Rita Mueller, I am the Assistant Deputy Minister of Operations with Environment and Natural Resources, Government of the Northwest Territories. With me this morning are:

- Dr. Brett Elkin, Director of the Wildlife Division
- Bruno Croft, Superintendent of ENR's North Slave regional office
- Heather Sayine-Crawford, manager of Wildlife Research and Management with the Wildlife Division
- Jan Adamczewski, Ungulate Biologist with the Wildlife Division
- Sarah Kay, legal counsel with GNWT Justice
- John Boulanger, a contractor statistician and modeler who has worked with ENR for many years.
- We appreciate the opportunity to speak to the board and to present the management proposal submitted jointly with the Tlicho Government to the WRRB in January 2019 focused on the BNE caribou herd.
- We will present the information we have on the BNE herd and the main points of the management proposal, and the Tlicho Government will present their information and further details on the management actions proposed.

I will now turn over to Jan Adamczewski to present the first part of our presentation.

## **Slide 2 (Presentation Outline)**

This presentation will cover the following subject areas:

- Overview of barren-ground caribou in the NWT
- Management context for the BNE herd
- Status of the BNE herd in 2018, including the June 2018 calving photo survey
- The joint management proposal for the BNE herd from TG and ENR (Jan. 2019)
- Main sections of the joint management proposal, including
  - Harvest
  - Predators
  - Land use, habitat and fire management
  - Education
  - Monitoring and research
- We will also talk briefly about working with our partners in the Sahtú Settlement Area and Nunavut about shared caribou herds

## **Slide 3 (NWT Caribou Herd Ranges)**

- This map shows the ranges of the 9 barren-ground caribou herds that have all or part of their range in the NWT.
- These migratory herds have very large ranges and several of them are shared by the NWT and Nunavut, and in a few cases they range into Saskatchewan and Manitoba.
- Each herd has a calving ground at the north end, shown here as the darker smaller shape in each range.
- The herd we are most interested in today is the Bluenose-East herd.
  - The Bluenose-East range is the purple range in the middle, with the calving grounds west of Kugluktuk in NU.

## **Slide 4 (Herd Ranges & Status – stable, declining, increasing)**

- This is the same map as on the last slide, but now it shows the trend of each herd:
  - Red is declining, Orange is a slow decline, Yellow is a stable herd, Green is increasing, and Grey is unknown (no recent information)
- Overall, 2 herds are increasing: the Porcupine and Cape Bathurst herds
- The Bluenose-West herd is roughly stable
- The Tuk Peninsula herd continues to decline
- The Bathurst and Bluenose-East herds are declining rapidly
- The Beverly herd is on a slow decline
- The Qamanirjuaq herd is most likely on a slow decline or stable
- Overall, several of our herds are at low numbers and several continue to decline.

### **Slide 5 (BG Caribou Status – COSEWIC, SARC)**

- The declines of our barren-ground caribou herds have been recognized not only by the NWT but also at the federal level.
- In 2016, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed barren-ground caribou in the NWT and Nunavut as Threatened.
- The status of barren-ground caribou under federal Species at Risk legislation is currently under review.
- Within the NWT, the NWT Species At Risk Committee assessed barren-ground caribou as Threatened in 2017.
- They were then listed as Threatened under the NWT Species at Risk Act in 2018.
- These listings are a reminder that some of our herds are at very low numbers.
- We need to work together to give them the best possible opportunity to recover.

### **Slide 6 (BNE Management Context – Governments, Boards)**

- We would like next to provide some management context for the Bluenose-East herd.
- In the middle of this slide is a map of the herd's range.
- The calving grounds and much of the summer range are in Nunavut.
- In Nunavut the Government of Nunavut has management authority along with the Nunavut Wildlife Management Board.
- On the NWT side, the herd's range is within 3 land claim areas.
  - A small portion of the herd's range overlaps with the Inuvialuit Settlement Region where the Wildlife Management Advisory Council has wildlife management responsibilities.
  - The area around Great Bear Lake falls within the Sahtu Settlement Area. In this area the SRRB has key responsibilities for wildlife management.
  - Further east is the Tłıchq land claim area or Wek' èezhì. There the Tłıcho Government and the WRRB have key responsibilities for wildlife management.
- The GNWT has management authority across the NWT and both these land claim areas.

## **Slide 7 (BNE Management Plans)**

- There are 3 management plans that are important for the Bluenose-East herd.
- There is an overall management plan called Taking Care of Caribou, which was finalized in 2014.
  - It was put together by a group of co-management boards in the NWT and NU.
  - This plan is for 3 caribou herds – the Bluenose-East, the Bluenose-West and the Cape Bathurst herds.
  - The boards have also developed action plans for each herd.
  - The boards hold an annual fall meeting to review the status of each herd.
  - The boards determined the BNE herd status to be in the red zone of low numbers.
- Two communities – Deline in the Sahtu and Kugluktuk in NU – have developed community-based BNE caribou management plans for their areas.
- In 2016 the NWMB endorsed the Kugluktuk plan for management of the herd in that area.
- The SRRB endorsed the Deline plan for the herd in that area.
- Management of the BNE herd thus needs to follow the processes set up in 3 land claim areas.

## **Slide 8 (BNE and Bathurst surveys Dates)**

- In June 2018 ENR flew surveys over the calving grounds of two herds (BNE and Bathurst). These surveys are designed to tell us how many females are in each herd.
- Normally in June the females gather on their traditional calving grounds. We later add in the estimated number of males, very few of which are on the calving grounds in June.
- In 2018 both the Bathurst and Bluenose-East surveys were flown at the same time, between June 2 and June 16. The main base of operations was Kugluktuk and we had one crew based at Ekati.
- A key part of the surveys is bringing in specialized photo planes that take pictures of the areas where most of the cows are. This photography was done on June 8 for both herds, near the peak of calving.
- At the bottom you can see all the people that were part of the survey. The bigger group was in Kugluktuk and the smaller group was at Ekati.
- We had 13 community observers flying on the surveys, from several communities in the NWT and from Kugluktuk.

### **Slide 9 (BNE Survey Blocks)**

- This map shows the area that was flown for the June 2018 BNE caribou survey. All areas that have blank or coloured squares were flown as part of the reconnaissance survey. Each square represents a 10 km segment along a flight line.
- White squares are areas where no caribou were seen, grey squares are areas where low numbers of caribou were seen, and blue squares are areas where medium numbers were seen.
- We flew outlying areas north, south, east and west to make sure that no substantial numbers of female caribou were missed.
- The main concentrations of cows were in the Rae and Richardson valleys west of Kugluktuk, similar to previous surveys.
- The yellow stars are locations of collared BNE cows. There were 30 collared cows in total and all were within the survey area.
- Most of the cows were in the 2 blocks that were identified in the middle for survey by the photo plane; these are outlined in red and blue.
- We also identified two blocks with lower numbers of cows in the north and south; these are outlined in orange and green. These areas were flown visually with 2 observers on each side.
- There were also areas to the south with generally low numbers of caribou. These were mostly bulls and yearlings; the focus of this survey is on the cows.

### **Slide 10 (BNE North Photo Block)**

- This slide shows the photo strips that were flown on the Photo North block of the BNE survey. We had flown the area previously and we knew that this was where many of the cows were. The collared female caribou also confirmed where most of the cows were.
- A little over 4,400 photos were taken in total on the 2 BNE photo blocks.
- The cameras that are used for this aerial photography are specialized and the resolution is very high. The photos are taken continuously and they overlap. This allows the photos later to be viewed with special 3-D glasses on a computer.
- Caribou, other animals, trees and rocks are easier to find because they project from the background.
- The photos can be searched slowly and carefully. Double checks of photo counts were also done to verify the counts.
- This approach has been used consistently on calving photo surveys since the early 1980s.
- Flying strips or transects like this is part of wildlife survey methods used all over the world for many species.

### **Slide 11 (BNE North Photo Block Zoomed in)**

- On the right side you can see one small part of one photo with some caribou on it.
  - Each caribou can be seen clearly and you can see its shadow on the ground.
  - With the 3-dimensional glasses, the caribou really stand out.
  - The photos are very high resolution and they can be checked over many times to make sure nothing is missed.
  - The caribou found on the two photographed blocks accounted for about 90% of the caribou found on the survey.
- Because of the very high quality of the photos and the chance to look at them as many times as we want, we are confident that very few caribou were missed on the photographed areas.

### **Slide 12 (Adding Bulls to Cows)**

- The calving photo survey is designed to provide an estimate of the females in the herd. Very few of the males are on the calving ground; the bulls are usually to the south of the calving grounds.
- To get an overall herd estimate, we use an additional survey in October during the breeding season. At this time all parts of the herd are mixed together.
- This survey is meant to give us the proportion (or percentages) of males, females and calves in the herd. The results are expressed as a ratio of bulls:100 cows and a ratio of calves:100 cows.
- We flew a survey in Oct. 2018 for the BNE herd that gave us a ratio of 38 bulls: 100 cows. Using this sex ratio, we can then add the estimated number of bulls to the estimate of cows from the June survey to get an overall herd estimate.

### **Slide 13 (BNE Female Estimates graph)**

- This graph shows the estimated numbers of cows in the BNE herd in 2010, 2013, 2015 and 2018. The survey methods have stayed consistent over this time.
- Each bar shows the number of breeding cows (that gave birth) in green and the number of non-breeding cows (that did not give birth) in orange.
- The total number of cows is then the sum of the breeding and non-breeding cows.
- Unfortunately, I want to bring to your attention the overall trend. The herd has been in a steep decline since 2010 with an average annual reduction of about 20%.
- The number of breeding cows in 2018 was a little more than half what it was in 2015.
- The proportion of cows that were breeders was 83% in 2018, higher than in 2015 and the preceding surveys.

#### **Slide 14 (BNE Herd Estimates graph)**

- This graph shows the estimated herd size of the BNE herd since 2010.
- 2010 was the first time that we used the calving ground survey on this herd.
- The estimate for 2018 was 19,300 caribou, almost exactly half the number in 2015. The decline from 2010 to 2018 is 84%.
- These results are a big concern, as they show that the decline 2015-2018 has continued at about the same rate of 20% per year as from 2010 to 2015.

#### **Slide 15 (BNE Vital Rates)**

- In caribou and other similar kinds of wildlife, the balance between an increasing trend and a decreasing one usually depends on a few indicators called vital rates. These rates help us understand what is going on within the herd, whether it is increasing, declining or stable.
- In a stable herd, the deaths are exactly balanced by the additions of young animals into the population.
- On this slide we have information about the BNE herd's vital rates in 2018.
- In healthy herds, the breeding-age cows usually have a pregnancy rate of 80% or more. In June 2018, the proportion of breeding females in the BNE herd was 83%, which suggests a healthy pregnancy rate.
- Calves usually die at much higher rates than adults in their first year. A good indicator of calf survival rates is the ratio of calves to 100 cows in October.
- It should be about 35-45 calves: 100 cows in a stable herd. In Oct. 2018, the BNE herd had a ratio of 25 calves: 100 cows. This suggests that the calves were born but very few of them survived the first few months.
- The third vital rate is the survival rate of the adult cows. Experience has shown that this rate needs to be at least 83-87% for a stable herd.
- In the BNE herd, recent estimates of the cow survival rate have been 72-78%, well below the levels in a stable herd.
- Overall, these vital rates suggest that survival rates of both calves and adults would have to improve substantially for the herd to stabilize.

## Slide 16 (Collars an Important Tool)

- I would like to talk a bit about the satellite collars that we use on these migratory caribou herds. They are a very important part of the monitoring and management programs we have. Each collar sends a signal every day to a satellite and we can tell within a few meters where that caribou is.
- These caribou range over very big areas and can move many miles in a day, but the collars allows us to track them closely. We can learn which areas are important to them.
- They are essential for all our surveys so that we know where to fly.
- We can get an idea of how long caribou are surviving and when and where they die.
- We can assess how caribou respond to mines and roads.
- In the case of the Bathurst herd, we depend on the collars to define where the herd is and where the no-harvest area should be.
- The collars are usually designed to last 3 years, and they have a timed drop-off before the battery runs out.
- The photo at the top shows an older satellite collar on the left and a newer one on the right. The technology has improved and the collars are getting smaller and lighter.
- Captures are done by specialists and normally last 10-15 minutes. Drugs are not used. The GNWT has high standards on all animal captures to minimize risks to the animals and to the field crews.

## Slide 17 (BNE calving ground loyalty collars)

- This slide provides information on two ways that we use the satellite collar information from caribou. On the right is a map that shows spring-time movements of collared female caribou to their calving grounds in June.
- The blue lines are trails of Bathurst cows, the red lines are trails of BNE cows and the violet lines are trails of Bluenose-West cows.
- The satellite collars show us how they separate out during the calving season.
- Where we have more than one year of information for a collared cow, we can look at consecutive June locations for that caribou. We did this for the collar data we have for the BNE herd for 2010 to 2018. There were 150 cases where a collared cow went back to the BNE calving ground one year after the next.
- There were 3 BNE cows that switched to the BNW calving ground over this time, and 3 BNW cows that switched in the reverse direction. There were no BNE caribou that switched to the Bathurst calving ground, and 2 Bathurst cows that switched to the BNE calving ground.
- Overall, loyalty (or fidelity) of BNE collared cows to their calving ground was high, about 95%. We have seen this low rate of switching between neighbouring herds over the years, and it usually is about equal in both directions. These results suggest that BNE cows moving east or west to other ranges is not likely to account for the decline.
- *Go to animation of collar movements (outside of Powerpoint presentation)*

## **Slide 18 (BNE Joint Management Proposal and previous proposals)**

- We would like to talk next about the joint management proposal from TG and ENR sent to the WRRB in Jan. 2019 on BNE caribou.
- There is a history of previous joint management proposals from TG and ENR on caribou management that started in 2009 and 2010. The last joint management proposal on the BNE herd from the 2 governments to WRRB was in Dec. 2015.
- The new BNE proposal is for a 2-year period. In the past these proposals were for a 3-year period. The shorter period is in part because population surveys are proposed to be 2 years apart in the next years. It will be essential to keep a close eye on the herds and know whether our management actions are effective, and these herd estimates are key in management decisions.
- In addition, the 2 governments recognize that the herd is in a very difficult period of low numbers, and that we need to track the herds even more closely. We are also proposing that monitoring and management be reviewed annually or as new information becomes available.
- Each proposal has 5 main sections: harvest, predators, land use and habitat, education, and monitoring and research. In the next slides we will talk about each of these topics in the proposal.

## **Slide 19 (BNE Harvest Management 2016)**

- This slide shows the previous harvest and harvest management of the BNE herd.
- Between 2010 and 2014, annual harvest of this herd was estimated at 2500-4000 caribou/year, with most of these being cows in the winter.
- After the 2015 survey showed that the herd was below 40,000 and declining rapidly, TG and ENR sent a joint management proposal to WRRB proposing a herd-wide harvest of 950 bulls. The WRRB in 2016 held a hearing and determined that BNE harvest should be lower at 750 bulls herd-wide, although the board recognized that it had no authority outside Wek'èezhìi.
- In the Sahtú Settlement Area, the SRRB also held a hearing and endorsed a community-based caribou plan from Délinę that included a harvest limit of 150 caribou and 80% bulls.
- In NU, the NWMB held a hearing in 2016 and endorsed a community-based based caribou plan for Kugluktuk that included a harvest limit of 340 caribou with no gender specified.
- Because the herd ranges across land claim areas, management has to follow the processes specific to each land claim agreement.

## **Slide 20 (BNE harvest 2016-2018 table)**

- This table shows the estimated or reported harvest of the BNE herd since 2016, when the 3 co-management boards made their decisions about harvest limits for the BNE herd. In general, the numbers of caribou taken have been well below those 2016 harvest limits.
- These harvest numbers were documented by either wildlife officers, monitors or the community organizations.
- In the 2016-2017 harvest season, harvest estimated for the North Slave region by wildlife officers was 15 bulls. Most hunters in the region traveled east to access Beverly caribou from the winter roads to the diamond mines.
- The Déliné RRC reported that 93 bulls and 33 cows were taken by Déliné hunters, and the Kugluktuk HTO reported 232 caribou taken by Kugluktuk hunters, with no gender specified.
- The overall total was 373 BNE caribou.
- In 2017-2018, totals reported were 142 bulls by Tłı̄ch̄ hunters, and 7 caribou taken by Déliné hunters (which may have been boreal caribou) and 174 caribou taken by Kugluktuk hunters, for a total of 323 caribou.
- In the North Slave region, most caribou harvest in winter was again from the Beverly herd east and south of the Bathurst mobile no-harvest zone, accessed by the winter roads to the diamond mines.

## **Slide 21 (2017 map of collars and harvest areas)**

- This map shows the distribution of Bluenose-East, Bathurst and Beverly satellite radio-collars in the winter of 2016-2017. Collar locations are cumulative from Jan. 1 to April 1, 2017.
- It is important to be aware that the relative numbers of collar locations do not represent herd size; they only represent collared caribou in those areas.
- Bluenose-East collars are in blue, Bathurst collars are in green, and Beverly collars are in red. The Bathurst mobile no-harvest zone is shown with a blue outline. The mobile zone moves with the Bathurst collared caribou. Only one mobile zone outline from March 2017 is shown.
- Overall, most of the BNE collared caribou were mixed with the Bathurst collars and thus most of the BNE herd was within the no-harvest zone.
- A number of BNE collars were north and east of Great Bear Lake, which is likely where Déliné hunters accessed them.
- Most Indigenous hunters in the North Slave region accessed Beverly caribou south and east of the Bathurst mobile no-harvest zone.

## **Slide 22 (2018 map of collars and harvest areas)**

- This map shows the distribution of Bluenose-East, Bathurst and Beverly satellite radio-collars in the winter of 2017-2018. Collar locations are cumulative from Jan. 1 to April 1, 2018.
- Bluenose-East collars are in blue, Bathurst collars are in green, and Beverly collars are in red. The Bathurst mobile zone again moved around with the Bathurst collars; one mobile zone from March 2018 is shown, with a blue outline.
- Overall, in this winter the BNE herd wintered separately from neighbouring herds and was in relatively remote areas.
- Only two BNE collars were north and east of Great Bear Lake, which may in part account for the low Déliné harvest in the winter of 2017-2018.
- Most Indigenous hunters in the North Slave region accessed Beverly caribou south and east of the Bathurst mobile no-harvest zone from the winter roads to the diamond mines.

## **Slide 23 (Projected BNE herd 2021 with various harvest)**

- To assist in assessing a level of caribou harvest that TG and ENR could recommend for the BNE herd in 2019, we asked statistician John Boulanger to simulate the herd's likely trend from 2018 to 2021 with various levels of harvest. The outcomes of this modeling are in the survey report sent to the WRRB and posted on their registry.
- Cow survival was kept at a constant 71.6%, the level estimated for 2018 from collars and population modeling, and calf productivity varied over 3 levels (high, medium and low). Harvest varied from 0 to 2000 caribou/year, and harvest sex ratio varied from 100% bulls to 100% cows.
- This graph shows a selection of the modeling outcomes with cow survival at 71.6% and average calf productivity of 0.301. The dotted violet line at the top shows the herd's size in 2018, about 19,300 caribou. A harvest of all cows is shown in orange and a harvest of all bulls is shown in blue.
- With no harvest, the herd is projected to be about 11,000 in 2021, a little more than half its size in 2018. Essentially the herd would continue to decline as it has between 2015 and 2018.
- As harvest increases from 0 to 950 and 2000, the incremental decline of the herd increases. At low levels of harvest (100-300), the incremental effects on herd size are limited, basically because the harvest is small as a percentage of the herd. 100 caribou is 0.5% of a herd of 19,300 and 300 caribou is 1.5% of the herd. The difference between an all-bull harvest and an all-cow harvest becomes larger as the level of harvest increases.
- Harvest of 300 bulls is outlined in red as this is the harvest that was proposed by TG and ENR in their January joint management proposal.

## Slide 24 (Harvest allocation pie chart)

- This slide shows the allocation formula or sharing percentage that has been used by ENR and others since 2016 for the BNE herd. It was developed based primarily on past records of harvest by various indigenous groups.
- This approach was similar to the approach used in developing the Porcupine caribou harvest management plan.
- Overall, 3 groups have been the main harvesters of the BNE herd: the Tłıchǰ communities, Délinę and Kugluktuk on the NU side. The largest share was 39.3% for Tłıchǰ harvesters, followed by 35.7% for Kugluktuk harvesters and 17.2% for Délinę harvesters.
- TG and ENR propose to continue to use this allocation formula for BNE harvest.
- We also recognize that any decisions about caribou harvest in NU will have to be made by management authorities on that side, where TG and ENR have no authority. Likewise, any changes to Sahtú harvest of BNE caribou will need to follow land claims processes in the Sahtú Settlement Area.

## Slide 25 (BNE proposed harvest 2019 – 300 bulls)

- The January 2019 joint management proposal from TG and ENR includes a herd-wide harvest limit of 300 bulls. This is a reduction of a little more than half from the 750 bulls determined (and recommended) by WRRB in 2016.
- This recommendation is a balance between the need to conserve the herd by limiting harvest from a herd declining rapidly, and ensuring that the cultural importance of some continued caribou harvest by Tłıchǰ and other Indigenous groups can be maintained.
- The table shows the percentage or proportionate allocation among caribou user groups that has been used since 2016. The table also shows the number of caribou that would be available to each group if the total was 750 bulls (from the WRRB in 2016) and if it was 300 bulls, the number that TG and ENR have proposed.
- Again it is important to remember that possible harvest reductions in the Sahtu region and in NU will have to be identified through the appropriate processes in those land claim areas.

## **Slide 26 (Predator Management 2010-2019)**

- This slide is about management of predators for the BNE and Bathurst herds. In recent years, Bathurst harvest has been very low and BNE harvest has also been low. However, adult and calf caribou are still dying at high rates, potentially as a result of wolf and bear predation. Reducing predators could help promote caribou recovery.
- From 2010 to 2018, the GNWT had in place incentives for wolf harvesters across the territory to reduce predation on caribou. However, these did not result in any measurable increase in wolf harvest in the North Slave region or elsewhere.
- TG developed a program in 2016 to train wolf harvesters in culturally appropriate ways, however to date this program so far has not resulted in many wolves being taken.
- In 2017 a collaborative feasibility assessment of wolf management options for the Bathurst range was completed by a working group that included WRRB, TG and ENR. The results are also applicable to the BNE herd.
- In 2019, TG and ENR are proposing to increase the efforts to reduce wolves to promote caribou recovery. These include continuing the TG program to train wolf harvesters. The GNWT has implemented the new Enhanced North Slave Wolf Harvest Incentive Program, which applies to the area where the Bathurst and BNE caribou are spending the winter.
- TG and ENR are also developing a further wolf reduction management proposal this winter. In addition, there will be further discussions with partners in NU about possible collaboration on predator management.

## **Slide 27 (Wolf Incentives & \$\$ amounts)**

- This chart shows the Enhanced North Slave Wolf Harvest Incentive Program. The higher incentives only apply in areas where we know the Bathurst and Bluenose-East caribou are.
- A wolf hunter can get \$900 for a dead unskinned wolf.
- If the wolf is skinned using traditional methods, the pelt will be worth an extra \$400. If the wolf pelt is skinned to taxidermy standards and sells for at least \$200, an additional \$350 is available.
- The maximum that a hunter may get for a dead wolf and a high-quality pelt is \$1,650.

### **Slide 28 (Wolf Incentives Area map)**

- This map shows the area in the North Slave region proposed for the Enhanced North Slave Wolf Harvest Incentive Program for winter 2018-2019.
- It is built around the wintering ranges of the Bathurst and BNE herds, as defined by collared caribou locations. The higher incentives would only apply in this area. We expect that wolves associated with the caribou herds will be in this area.
- Wolf hunters will need to check in and out of the area at winter check-stations. Hunters will get a receipt for all wolf carcasses or pelts turned in, and each wolf will be identified with a unique number (tattoo).

### **Slide 29 (Habitat and Land Use – Habitat conservation)**

- Healthy habitat will be important for the BNE herd to recover.
- TG and ENR propose the following as key parts of maintaining healthy habitat for the 2 herds. The Taking Care of Caribou plan includes the BNE herd and has recommendations on habitat and land use; this plan and the associated Action Plan are the main guides for habitat management.
- Some of the key points for habitat conservation for the BNE herd are:
  - Promoting conservation of areas where habitat and/or caribou have been identified as sensitive, including water crossings, land crossings and the calving grounds, recognizing the calving grounds are in Nunavut, and
  - Environmental assessments and land use planning in NWT and NU are key ways of working to conserve caribou habitat.
  - Caribou need healthy old forests as winter ranges and a greater effort is needed to protect key unburned winter ranges.

### **Slide 30 (Habitat – Disturbance map)**

- This map shows the Bluenose-East caribou range with active mineral claims, active mineral leases, remediation sites, active prospecting permits, winter roads and communities. Active mineral claims are currently 1.9% of the herd's range, active mineral leases are currently 0.4% of the herd's range, and remediation sites are 0.1% of the herd's range.
- Winter road access is limited to the roads to Délīnē, Gamèti and Wekweèti, and the trail to Hottah Lake and the south end of Great Bear Lake.
- Tundra Copper was active at the south end of the calving ground a few years ago but there has been no activity for 4 years.
- Overall, the scale of development has been limited when compared to the Bathurst range to the east and many areas in the provinces.

### **Slide 31 (BNE range and fire)**

- This map shows the range of the BNE caribou herd and the fires that have happened on this herd's range since the 1960s. The most recent fires from 2012 to 2017 are in red and most of these happened in 2014.
- Overall, fires have mostly been small in size and limited in extent, particularly when compared to areas further south.
- Fire is a normal part of the boreal forest ecosystem. Most of the fires that have occurred have been near the south end of the range.
- In recent years with the herd being much lower in numbers, its range has become smaller and the caribou are wintering far from most fires and near the tree-line. However, if the herd recovers to higher numbers, its range may expand southward.
- ENR will work with the communities on this herd's range to identify important parts of the winter range that should be included in Values at Risk that should be protected during the fire season.

### **Slide 32 (Caribou & Climate Change)**

- We have included here a summary of some of the potential effects of climate change on the BNE herd.
- Because weather affects caribou at all times of year and in many ways, the effects of a changing climate are likely to be many and to occur at different times of year. Although studies of climate change and the BNE herd specifically have been limited, studies elsewhere are relevant to the BNE range.
- Among documented and potential changes are the following:
  1. Earlier Start to Plant Growing Season,
  2. Greater Plant Growth in Summer,
  3. Warmer Summers,
  4. More Summer Drought & More Severe Insect Seasons,
  5. More Big Fire Years like 2014,
  6. Tundra Vegetation Shift to More Shrubs and less lichen,
  7. Warmer winters,
  8. More Snow in Winter, and More Icing Events.

Overall it is expected that weather will be More Extreme and Less Predictable.

### **Slide 33 (Caribou & Education)**

- Public education about the status of our caribou herds, and management to promote recovery will be important. There are existing programs and past management proposals have included key activities and programs that TG and ENR planned to carry out.
- ENR supports an increase in on-the-land traditional monitoring programs through its new On-the-land unit.
- Hunter education will continue to be important so that the limited caribou harvesting is respectful, wounding losses are minimized and full use is made of the harvested caribou.
- Radio updates and interviews, posters, community meetings, internet and social media all provide ways of communicating with Tł̓ch̓q and other Indigenous communities and the general public about caribou and how people can contribute to conservation of caribou.

### **Slide 34 (Monitoring and Research)**

- We would like to talk next about monitoring and research on the 2 caribou herds. It will be essential to keep a close eye on the herds and know whether our management actions are effective. ENR will support increased traditional monitoring programs.
- Population surveys have been done every 3 years and now we are planning to do them every 2 years to keep a closer eye on the herds.
- We will also keep a closer eye on calf production and survival by monitoring relative calf numbers in June, October and March/April.
- We are proposing to increase the number of collared caribou in each herd. Currently there is a maximum of 50 collars per herd. We are proposing to increase that to 70 collars, with 50 on cows and 20 on bulls. This will help us monitor and manage the harvest, improve our knowledge of where and when caribou cows are dying, and track where the herds are at all times of year.
- We are proposing to increase the number of collared caribou in each herd from the present 50 maximum to 70, with 50 on cows and 20 on bulls. This will help us monitor and manage the harvest, improve our knowledge of where and when caribou cows are dying, and track where the herds are at all times of year.
- We also want to increase research efforts that will help us understand why caribou numbers are still going down, both by TK and scientific research. Predators, weather and climate change, disturbance on the land, all these things affect caribou and we need to understand them better.

### **Slide 35 (Déliņę Management & Working with Sahtú)**

- One of the key communities for BNE caribou management is Déliņę in the Sahtú Settlement Area. In 2016 the Déliņę RRC developed a community based caribou management plan for BNE caribou in their area.
- The SRRB held a hearing on BNE caribou in 2016 and accepted the Déliņę plan as the best way to manage BNE caribou in their area. The GNWT also accepted this plan. To date, ENR has attended meetings of the Déliņę RRC on December 2018 and January 2019 and presented updates on the status of the BNE herd. ENR also presented on the BNE caribou by phone at a meeting of the Tulita RRC and the SRRB in Feb. 2019 on the status of the BNE herd.
- ENR will work with the Déliņę RRC and processes under the Sahtú Land Claim on BNE management in the Déliņę area.

### **Slide 36 (Working with Nunavut)**

- It will be important to continued and increase the discussions and collaborations we have with the GN, the NWMB and other co-management partners in NU.
- Among the key points we need to emphasize are:
  - Calving grounds.
  - Participating in environmental assessments and land use planning on both sides of the border will be important for the ranges of both herds.
  - We hope to see a consistent approach to harvest management of the two herds across their ranges.
  - Predation may be limiting the BNE herd and it will be important to explore collaborative efforts to reduce predators on the NU side.
  - The GNWT and GN already collaborate extensively on monitoring of shared caribou herds.
- A meeting is planned for April 15-16 in Kugluktuk that will include Environment ministers with GNWT and GN to talk about increased collaboration on caribou and other wildlife.

### **Slide 37 (Engagement & Consultation)**

- Caribou herds like the BNE are important to many communities and Indigenous cultures in the NWT. On this slide we have listed some of the key community meetings in recent months, since the 2018 survey, where information on the herds and on management proposals was shared and discussed.
- An update on the status of the BNE herd was provided to the boards making up the ACCWM (Advisory Committee for Cooperation on Wildlife Management) in November 2018.
- ENR staff attended meetings of the Déliné RRC in Dec 2018 and January 2019.
- In January 2019, there was a tour of the 4 Tłıchǫ communities that included the Tłıchǫ Grand Chief and the 4 chiefs, the ENR Minister and Deputy Minister, and technical staff from both governments.
- A similar meeting was held with the YKDFN chiefs and Elders Council and ENR senior officials in January 2019.
- Meetings were held in Ft Smith with Salt River First Nation, the Ft Smith Métis Council and Smith's Landing First Nation in January 2019.
- A presentation was made to a meeting of the Tulita RRC and the SRRB in January 2019.
- Meetings with LKDFN and the NSMA were held in February 2019.
- An information-sharing meeting was held in Kugluktuk in February 2019.

### **Slide 38 (Summary)**

- We have now reached the end of the presentation from ENR on Bluenose-East caribou. We would like to summarize the main points that we've covered in the presentation.
- First of all, the BNE caribou herd is still declining quickly and has reached very low numbers, so we need to do more to promote recovery.
- Second, a joint management proposal from TG and ENR was submitted to the WRRB in Jan. 2019 on the BNE herd.
- The main sections in the proposal are on harvest, predators, habitat and land use, education, and monitoring and research. We have provided information on each of these subjects and you will hear additional information and perspectives from the Tłıchǫ Government in their presentation.
- Because this herd ranges across many land claim areas, it will be important to work with co-management partners in the Sahtú, particularly with the community of Déliné, on BNE management in their area.
- ENR has also increased the collaborative aspects of monitoring and management with our partners in NU, at technical levels and at senior management levels, as the BNE herd is one of several key trans-boundary caribou herds that range between NWT and NU. Kugluktuk is a key community in NU in management of the BNE herd.
- Thank you very much for listening to us and we will do our best to answer any questions you may have. Masi Cho.