

**Community and Hunter and Trapper Organization Consultations on
Baffin Island Caribou**

December 2013 - January 2014



Department of Environment, Government of Nunavut
Iqaluit, Nunavut

September 2014



Executive Summary

The Department of Environment, Government of Nunavut, together with Qikiqtaaluk Wildlife Board, Nunavut Tunngavik Inc., and the Nunavut Wildlife Management Board, conducted community consultations across Baffin Island and the adjacent communities of Hall Beach and Igloolik concerning the distribution and abundance of caribou on Baffin Island. The purpose of the consultations was to:

- Summarize the results of the scientific and Inuit knowledge studies conducted by the Department of Environment
- Provide an overview of the *Working Together for Baffin Island Caribou 2013 Workshop*
- Obtain community views on the abundance of caribou and the need for management actions to ensure their long term existence
- Discuss the Spring 2014 Aerial Survey and complementary ground surveys and obtain community information to ensure that they meet their intended objectives; and to,
- Discuss the development a conservation strategy to promote the recovery of the critically low caribou population on Baffin Island.

Every Hunter and Trapper Organization (10 HTOs) and over 380 community members attended the meetings. Participants included hunters, interested community members, Elders and youth.

HTOs that we met with during the consultation tour were of the general view that management actions should await the results of the aerial and ground surveys. They voiced support for a follow-up workshop to share the findings later in 2014. That said, they have agreed to give further consideration to the types of management actions that are necessary, either at the community level or island-wide. Some of the potential actions that were mentioned during the consultations included:

- Limit or regulate the sale of caribou meat
- Restrict the harvest of females during calving and post calving, pregnant females, females accompanying calves, and calves
- Impose seasonal harvest restrictions
- Establish limits on the number of caribou harvested per household
- Introduce a bounty for harvesting wolves
- Eliminate the commercial harvest
- Establish a moratorium until caribou numbers recover
- Implement Harvest Reporting and monitoring – Utilize Conservation Officers to provide information on harvesting activities in each community, or the use of hunter booklets to record harvest and observations of disease
- Implement a quota or Tag System (Total Allowable Harvest (TAH)). Tags to be issued by HTOs and work with GN to enforce
- Protection of identified calving grounds from development
- Impose hunting restrictions in especially important areas for caribou
- Introduce reindeer and/or muskoxen, or relocate additional caribou to Baffin Island

HTOs agreed to continue discussions within their community and neighbouring communities as appropriate regarding what types of management actions they can consider. The information provided by the Baffin-wide aerial survey will help further inform the HTOs and community members as to what management actions may be needed.

The Department of Environment remains committed to working with all co-management partners to promote the conservation, sustainable management and recovery of caribou on Baffin Island.

Preface

This report represents the Department of Environment's best efforts to accurately capture and translate all of the information that was shared during consultation meetings with the Hunters and Trappers Organizations and the general public.

The views expressed herein do not necessarily reflect those of the Department of Environment, Nunavut or Government of Nunavut.

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1.0 Introduction

Caribou are an extremely valuable resource to Nunavummiut, and an important part of the arctic ecosystem. Baffin Island caribou are used by all eight communities on Baffin Island plus Igloolik and Hall Beach. These communities constitute 60% of all Nunavummiut.

Currently on Baffin Island there is a pressing conservation and management concern due to the decline of caribou to very low numbers. Harvesters, Elders and other community members have told us that caribou are becoming increasingly difficult to find, and have also expressed concerns about the negative impacts of land use, changing climate and icing events, disease, health concerns and other factors on caribou and their habitat. Social science research and Inuit knowledge collected through HTO and community consultations consistently highlighted community concern for caribou, difficulties locating caribou, and recent year declines in caribou numbers and distribution.

Anecdotal reports by Inuit to biologists have suggested that more than 100,000 caribou inhabited Baffin Island in 1985. The estimate was updated in 1991 when it was suggested that South Baffin caribou were stable at 60,000 -180,000, Northeastern Baffin caribou were about 10,000 in number, and North Baffin caribou numbered 50,000 -150,000. An aerial survey of South Baffin Island was conducted in 2012 to determine caribou abundance and distribution using distance sampling techniques. Survey findings provided an abundance density of 5.3 caribou per 1,000 square kilometers, or less than 5,000 caribou on South Baffin Island, the most populated area for caribou on Baffin Island. This critically low abundance indicates a caribou decline of more than 90% since the 1990s, when previous abundance estimates were in the 60,000 to 180,000 range.

A Spring 2013 meeting of the Elders' Advisory Committee (EAC) discussed the critically low numbers of caribou on Baffin Island. At that time DOE sought the Committee's advice on traditional knowledge and managing caribou, and harvesting in times of scarcity. The Elders provided valuable information and advice. For example, they stated the caribou do have a cycle of reducing in numbers and increasing in numbers again over long periods of time. They said it is important to begin planning now to make sure the caribou come back and that harvest controls should be put in place to keep them from depleting further, especially given the improvements in hunting techniques/efficiency in modern years. The Committee also stated that they would like to see caribou surveys done in all regions, not just in the Baffin region (EAC Minutes, May 28, 2013).

In the spring of 2013, a Baffin Island Caribou Co-Management Steering Committee, comprised of representatives from the Government of Nunavut's Department of Environment (DOE), the Qikiqtaaluk Wildlife Board (QWB), the Nunavut Wildlife Management Board (NWMB) and Nunavut Tunngavik Inc. (NTI), was formed. It organized a workshop funded by the Department entitled *Working Together for Baffin Island Caribou* in July, 2013. This workshop brought together more than 60 representatives from the Baffin HTOs, the Department and invited speakers and Elders to:

- Share Inuit and scientific knowledge about Baffin Island Caribou.
- Share knowledge on traditional community-based practices for managing harvest in times of scarcity and share/discuss successes and challenges from other regions (e.g. Peary Caribou HTO and community hunting moratorium around Grise Fiord; Southampton Island HTO Total Allowable Harvest controls and enforceability with GN Conservation Officers).

- Address key stewardship and caribou management questions for Baffin Island.
- Identify conservation measures to be taken by individuals, communities and management authorities
- Work together to come up with recommendations for management action.

Workshop participants identified a community-based approach that supports Inuit self-management as the preferred system for caribou management on Baffin Island. Under this system, local Hunters and Trappers Organizations (HTOs) will work with community members to establish community restrictions and management actions, in partnership with various wildlife co-management partners, including the Government of Nunavut. The participants recognized their responsibility to share with their community members the information they received during the workshop so that the communities can be informed and participate in the decision-making processes concerning their caribou. They agreed that the information shared at the workshop should form a starting point for a management planning framework and that there should be community consultations beginning in Fall 2013 to further develop a conservation, revitalization and management strategy for Baffin Island caribou.

As per the recommendations from the workshop and the need for follow-up management discussions amongst the HTOs and communities, the DOE, QWB, NTI, and NWMB conducted consultations with all communities on Baffin Island, in addition to Hall Beach and Igloolik. The purpose of these meetings was to:

- Summarize the results of the scientific and Inuit knowledge studies conducted by the Department of Environment
- Provide an overview of the *Working Together for Baffin Island Caribou 2013 Workshop*
- Obtain community views on the abundance of caribou and the need for management actions to ensure their long term existence
- Discuss the Spring 2014 island-wide Aerial Survey and complementary ground surveys, and obtain community information to ensure that they meet their intended objectives; and to,
- Discuss the development of a conservation and management strategy to promote the recovery of the critically low caribou population on Baffin Island.

2.0 Methodology

2.1 Role of the Baffin Island Caribou Co-Management Steering Committee (BICSC)

The BICSC is comprised of one to three representatives from each of the co-management partner organizations, including the Government of Nunavut's Department of Environment, Qikiqtaaluk Wildlife Board, Nunavut Wildlife Management Board, and Nunavut Tunngavik Inc.. The Steering Committee is tasked with providing ongoing guidance and direction during the community consultation and caribou management processes. It played an important role in building the objectives and format of the consultation meetings and their implementation. This Committee will continue to work closely to steer the co-management process and education, communication and outreach.

2.2 Consultation Meeting Format and Discussions

Two consultation meetings were conducted during each community visit. The first was with the board members of the local Hunters and Trappers Organizations (HTOs), and the second with the general public. During each of the consultations, presentations were provided on each on the following:

- July 2013 Caribou Workshop Summary
- Social Science Research Results for Baffin Island Caribou
- Overview of 2011 and 2012 Community Consultations
- Results of the 2012 South Baffin Caribou Survey
- Proposal for 2014 Baffin-wide aerial and community-based ground surveys.

Discussions were also held on the goals and objectives of a Baffin Island Caribou Management Plan and the types of conservation and management actions that could be taken at the community level and island-wide to conserve caribou into the future.

The material and information presented was first delivered to the board members of the HTO. They were given an opportunity to ask questions, provide input, and discuss the results of the presentations. Discussions regarding future management, research initiatives, the status of caribou on Baffin Island and other issues also took place. The public consultation meetings were held following the HTO meetings. The structure of the public meetings mirrored that of the HTO meetings with the assistance of the local HTO chairman acting as the chair for the public meetings. Although the order of the presentations and agenda underwent minor modifications throughout the consultation tour to improve the efficiency of delivery and allow adequate time for discussion, all of the intended presentations and information were covered during each meeting.

2.3 Aerial Survey and Mapping Exercise

At both the HTO and community meeting a presentation outlining the methods and planned survey activities was delivered. This was followed by an open discussion centred around maps of the area during which hunters and Elders provided valuable input and advice into the survey design and its implementation. HTO members, experienced hunters, and Elders were also encouraged to share information about caribou distribution and behaviour. Participants were asked to outline areas on a large map where they expected there to be high densities of caribou, medium-low densities of caribou, low densities of caribou, and no caribou during the spring when the survey was to take place. This information was of key importance to the design of the survey strata that would help biologists prioritize areas to

focus survey effort. Areas identified as having high caribou density were surveyed using flight lines spaced 7 km apart; medium-low density areas at 8 km; low density areas at 10 km; and areas identified as not likely to have caribou were not surveyed. Areas where participants were uncertain if caribou would be found were selected for the HTO-led ground surveys. If the ground surveys found caribou then the area would be included in the aerial survey.

The aerial survey findings will be presented to the Hunters and Trappers Organizations, Qikiqtaaluk Wildlife Board, Nunavut Tunngavik Inc., and the Nunavut Wildlife Management Board when they become available. The survey results will be used to inform management decisions and community-based conservation actions to promote the recovery of the population.

** Refer to Appendix for the Baffin-wide Aerial survey presentation slides.*

2.4 Consultation Schedule

Community	Meeting	Date & Time	Location	Approximate Attendees
Iqaluit	Amarok HTO	December 10, 2013, 1:00 PM	HTO Office	Joshua Kango (Chair), Methusalah Kunuk, Martha Padluq, Jetaloo Kakee
	Public	December 10, 2013, 7:00 PM	Navigator Inn	10-15 people
	Public	January 18, 2014, 7:00 PM	Parish Hall	15-20 people
Cape Dorset	Aiviq HTO	December 12, 2013, 1:00 PM	HTO Office	Quvianatuliaq Tapaungai (Chair), Simigak Suvega, Qjmiataq Nunatsiutuq, Timmy Milikigali, Aningmiuq Samayualie, Adamie Nuna, Oqituk Ashoona
	Public	December 12, 2013, 7:00 PM	Peter Pitseolak School Gymnasium	40 people
Pangnirtung	HTO	December 13, 2013, 1:00 PM	HTO Office	Noah Mosese (Chair), Patrick Kilabuk, Jacopie Maniapik, Andrew Nakashuk, Zebedee Qarpik
	Public	December 13, 2013, 7:00 PM	Hamlet Community Hall	60 people
Qikiqtarjuaq	Nattivak HTO	January 20, 2014, 1:00 PM	Hamlet Chamber Room	Loasie Aliqatuqtuq, Robbie Qulluali, Lisa Kooniloosie (Manager), Joanie Nutarala, Jacopie Nuqinga, Philipuusi Sangoya, Aimuusi Qutsia
	Public	January 20, 2014, 7:00 PM	School Gymnasium	35-40?
Clyde River	HTO	January 21, 2014, 1:00 PM	HTO Office	??
	Public	January 21, 2014, 7:00 PM	Hamlet community Hall	55-60
Pond Inlet	HTO	January 22, 2014, 1:00 PM	GN Boardroom	Gerald Kunuk (Chair), Moses Kunuk, Tommy Aglak, Elijah Panipakoocho, Paniloo,
	Public	January 22, 2014, 7:00 PM	Nassivik School Gymnasium	40-45
Arctic Bay	HTO	January 23, 2014, 1:00 PM	Hamlet Chamber Room	Qaumayuk Oyukuluk (Acting Chair), Paul Ejaniaq, Koonoo Oyukuluk, Simeonie Olayuk, Andrew Muckpa, Norman Pauloosie, Levi Barnabas, Koonar'k Enoogoo, Ikey Kigutukajuk,

	Public	January 23,2014, 7:00 PM	Hamlet Community Hall	50-55
Igloodik	HTO	January 24, 2014, 1:00 PM	HTO Office	??
	Public	January 24, 2014, 7:00 PM	Hamlet Community Hall	25-30
Hall Beach	HTO	January 27,2014, 1:00 PM	HTO Office	Manasie Naullaq (Chair), Levi Kaunak, Sam Arnarjuaq, Daniel Arvaarluk, Luba Nangmalik (Manager)
	Public	January 27,2014, 7:00 PM	Hamlet Community Hall	15-20
Kimmirut	HTO	January 28, 2014, 1:00 PM	HTO Office	Pitseolak Qimiipi, Kolola Pitseolak (Manager), Malikto Lyta, Joannie Ikillua, Palanga Lyta, Josepi Palluq, Joe Arluktuq (Chair)
	Public	January 28,2014, 7:00 PM	School Gymnasium	20-25

3.0 Joshua's Report

1. The theory of Disappearance of the Caribou:
 - They are not Immobile
 - Since they Follow their Food
2. Inuit have the knowledge that they gain by obtaining information that was passed down from their ancestors, by story-telling, and by personal observations.
3. It was historically a long time before the Caribou returned to their grounds. It is a belief that they did not return to their original place because their food, the plants, take a long time to grow. It takes about 50-60 years for them to return. There are a few caribou that are roaming around, but they are not in their original numbers.
4. Here is another reason why the Caribou start disappearing. When winter arrives, ice forms and the weather gets colder. When the land freezes, the top layer becomes frozen. Then when the caribou have no other alternative food options, a great number of them start dying. That fact has been known to many for a long time.
5. Further, Inuit also know that wolves prey on caribou. They hunt as much as they can catch during the winter season. Even those who are not hungry catch caribou. Also, they catch a caribou only to harvest their tongue.
6. There have been reports where people have seen a large number of herds that have died, including small herds. They speculate that they have died from diseases. Inuit know that when there is a population explosion of any kind of animals, they tend to transmit their diseases.
7. Caribou start calving and they have their calves only in small number. It is commonly known that they tend to have only one calf, but a few of them have more than one calf. It is rare for people to report having seen a caribou with three calves.
8. It is also know that caribou calves die right after they are born because of their vulernability to their environment right after they are born. They get hypothermic when they are born when the weather is too cold. It is not that warm in the month of May. It may be a bit warm during the day during that month, but it does really get cold during the night. It is said that is why they die when it gets cold in the night; also, during that month, the snow still falls and it tends to get windy, and we are even hit by a blizzards during that time. It is when the weather is like that, the calves die off.
9. People also say that the caribou die off when they fall off an incline or fall off a cliff. They walk anywhere, and especially when they walk on ice and the ice is not strong enough yet and is too thin, they will fall through and die of hypothermia. It is also said that they can also be carried by a strong current if they fall through the ice and cannot climb onto the land anymore.
10. It seems that the caribou have disappeared when they migrate to another region. For example, the Baffin caribou can migrate to the Kivalliq region. It is not surprising that they would move into an area where there is more food and then not return for a long time.
11. The caribou do not stay in one area because of their migration. For example, when spring arrives, they start walking towards the south to their grounds. Perhaps in May or April, they will be at their calving grounds. When autumn arrives, maybe in October, they will head inland towards

the west and they start gathering at the mating grounds. The male caribou start rutting and start to smell strong. Some people do not like the taste of their meat when they start rutting because they smell too strong. The females do not rut.

12. The male caribou's antlers start changing sometime in April. Their antlers change, they start growing; their winter fur/hair starts falling and it is called "Kangalaruqtut" in Inuktitut. When autumn starts, then their fur becomes thin and around October, their antlers are fully replaced by the new growth. About October, when winter starts, their antlers have re-grown. As the winter progresses, their antlers start falling off.
13. Inuit are now speculating that the presence of on-going air traffic is starting to disturb the behaviour of the caribou, since there is too much noise.
14. Inuit are also wondering if the mining activity is moving the caribou further and further away from their grounds. There is too much noise from their activities. Due to today's developmental activities, the mining companies are disturbing the caribou's environment and their calving grounds.
15. Community concerns: the wolf population is too large.
16. Helicopters are causing too much noise pollution.
17. The foods that the caribou rely on are growing too slowly.
18. If there is a ban on catching caribou, we have to be compensated by our government.

4.0 Shared Inuit Knowledge and Summary of Comments: HTO and Public Meetings

This section outlines some of the main comments that were heard in more than one community during the HTO and Public consultation meetings (bullets) and the general response of the steering committee to the comments (italics). Community-specific summaries can be found following this section.

4.1 Introduction Comments and Responses

Agenda

- 1) No changes to the agenda.

Aerial Survey

- 2) How were the months for the proposed aerial survey decided on?
 - a. *Caribou do not move large distances during that time of the year so caribou shouldn't move from one survey line to another and we should see them all.*
- 3) Research in February might be when there's not enough snow for using tracks and bad weather increases in March. April and May are more conducive to tracks and caribou stop being so pale.
 - a. *February/March weather is fairly stable. Later in the year you start to get more unfavorable weather for flying. Hope to have a period of about two weeks to do the entire island with four aircraft. In April/May of 2012 we had awful weather and later on, the caribou were moving more. That's why we decided to go with March.*

- 4) We are going to be asked where the caribou will be, but we do not know right now. People have not been going caribou hunting.
- 5) Caribou are likely to be in rough terrain and not in flat areas. They are also likely to be besides large lakes.
- 6) You are not going to go to areas where there are no caribou?
 - a. *We don't want to spend time surveying areas where you know that there are no caribou. We want to go where you think there will be caribou. We have never before surveyed all of Baffin Island at one time. It's going to be a major challenge. We're going to use four aircraft in different locations flying at the same time and will need good weather and reliable planes for it to be a success.*
 - b. *As Inuit we sometimes have concerns with researchers. For example, we wonder why are they searching that area that isn't promising? They prepared it according to their priorities and we're minimally, not truly, involved. Today, we're trying to hear directly from Inuit and community members what people think are promising or non-promising areas. Further, last spring, the transect line gaps of 5 mile being too wide was a concern and that caribou in between would not be seen. Now we're preparing to look in areas where communities want them to look. Researchers will do as they traditionally do, no doubt, but where you suspect they are and are not, are what we're interested in hearing.*
- 7) Are they going to try and cover all of Baffin Island now?
 - a. With three fixed wing aircraft and one helicopter, we should be able to survey the entire Island in a short time period. We want to do the survey before the caribou start to move for calving so that we don't count them twice or miss them.
- 8) Cameras are able to see wildlife well. Perhaps the aircraft can go higher up?
 - a. You make a good suggestion about using digital cameras. We are experimenting with using satellite photographs for wildlife studies.
 - b. Photographic surveys are usually on calving grounds where there's a large concentration of caribou. For here, it hasn't been tested or used before. There would be a lot of photographs and images to go through. Still need someone to review the images. Mounting cameras on the helicopter have a lot of vibrations and have limitations. We explore it with other species and hopefully will move in that direction. Some cameras may be able to do a good job but it's not been tested.
 - c. The eyes of an experienced hunter may not be surpassed by a camera. Hunters do a very good job at picking caribou out in a helicopter.
- 9) Wolves are too much right now. They are decreasing caribou throughout Baffin Island.

Collaring

- 10) When there were many caribou around Cape Dorset, collars were put on caribou. Are there still collars on caribou?
 - a. I don't think there are any caribou on this part of the island that have any collars today. The last collars that were put out in the south Baffin were put out in the south Baffin between 1989 and 1991. In north Baffin, the last collars fell off in 2011 so we shouldn't have any collars on caribou on the island that we know of.

- b. (HTO Member) The last time we did a bit of caribou collaring, they were killed. They used to go large distances, up to Nettiling and down to here. It was harvested. Some caribou that were too old were avoided to put collars on and we'd try to put collars on younger ones.
- c. The use of collars provides very good movement information. But when the numbers are low, like currently, we would prefer not to put collars on caribou because it could impact on them. Would prefer to work with you on how many caribou there are and where they are.

Consultation Participation

11) We're included as part of Baffin Island but we don't go there that often. We likely won't have much to say about that because we don't hunt from there that often but rather from towards the Kivalliq region.

- a. *That's true. But perhaps this area may not continue to have abundant caribou and perhaps the Baffin region may become abundant again and you shall resume harvesting from that region. So for us, because you harvested from that area in the past, it seemed better to us if you participate and are informed even if you may not have much to say.*

4.2 Workshop Summary Comments

Aerial Survey

- 1) What will happen with the 2012 Aerial survey results? Will they just be discarded or will they be used?
 - a. *We'll verify those results with the new survey.*
 - b. *As well, many HTO chairmen and community members expressed a strong desire to be part of the design and preferred that the whole island be surveyed. HTO want to provide input on where the caribou are concentrated so that narrower transects can be used 5km rather than 10km. That's one of the reasons that we're here, to get your input on where to have tighter transect lines.*
- 2) February/March seem like good timing to me.
- 3) If possible, please use infrared sensors to search.
- 4) How high were helicopters flying?
 - a. We flew about 400 feet.
- 5) I hear three things are killing caribou. Hunters are killing caribou throughout Baffin Island. Wolves are killing caribou throughout Baffin Island and eating only the tongue if it's not hungry. Outside Kimmirut and within Cape Dorset's hunting range and around Qikiqtarjuaq's hunting range caribou are dying. Will past research be discarded and a good start made? The Inuit will have to be informed, if it has to be over the radio? Has that been thought about?
 - a. You mentioned that dead carcasses were observed. Because of icing events, disease, or wolves?
 - i. I can only answer in this way: When wildlife becomes too abundant that's what they do. In two ways because of ice or because there were too many.
 - a. Now with the low densities and the behaviour change of less movement, we've heard a lot of concerns about survey questions, a general desire for all of Baffin Island to be surveyed. With your help on where they're concentrated and where they are not, we can do it.
- 6) My knowledge is that they are occasionally dead caribou, particularly in places without mountains when there has been freezing snow. Those in places with mountains are more able to survive. We've also heard of deaths around the Natiliq area and near Prince Charles Island/Rowley Island near Igloolik which are flat areas.
- 7) I go to Coral Harbour almost each spring by boat. There they say that Coral Harbor people see Baffin caribou – they seem lazy, like Northern Quebec caribou which are much larger.
- 8) It's said that many caribou are crossing over near Igloolik.
- 9) We've heard for a long time that caribou wait for their food to regrow. There are ancient trails that turned out to be old caribou trails. Caribou will return.
- 10) That's what all wildlife do. They die. The environment, disease for wildlife. You don't want it to happen, but it happens. It can't be helped.
- 11) We want them to be our food and continue to be our food but it's unknowable. There's that mining going on up there. I'm not trying to fear monger. If they want to return, if they need to return, they shall return (CD H, Qik H).
- 12) Too many wolves? Is that the case around your community (CD H)?
 - a. Yes, even coming to communities and even wolverines. Wolverines make them run away.
- 13) Have you heard about the islands that are close to us? Tudjaat, Akullii, and Tudjaaraarjui. Thinking about the future, we had asked that those islands be populated with caribou during a meeting. Did

you hear about that? Thinking of the future, we'd try to not overpopulate it, but have some present. I go there looking for some and there are only antlers – there are no longer tracks (CD H).

a. I have heard about that but I had not heard if the plan was being prepared.

b. Does it have only polar bears or do they have wolves as well?

i. Looking in places where tracks could be seen, such as sand, tracks are not seen of wolves or caribou.

14) I use to participate with polar bear researchers near Kimmirut and Cape Dorset. We went to those islands and saw antlers but never saw caribou or wolf signs. Polar bears would be camouflaged there (CD H).

15) I know what the past caribou researcher said. After eight years the caribou food grows back (CD H).

16) If we're going to have a stop hunting our food, will there be money or food made available for us? It's been a long time that we haven't had caribou close to us. We order caribou, as the HTO or the hamlet. Can we be helped financially when we order from places with caribou? Shipping is expensive and places with caribou only become accessible through money. If we're going to put restrictions on harvesters, on the public, it seems like there should be assistance (Qik H).

a. That was spoken about at the workshop as well. A person from Coral Harbour came to speak. They have been dealing with caribou extensively and Government has tried to decrease their harvest. A major cause was the sale of caribou meat to other communities. So their facing difficulty during this scarce period and their looking for solutions. You have selling rights through the land claims agreement but while there are few caribou we have to examine things and I don't know if selling will be allowed or if communities will be provided with caribou. But there's no doubt that while there's few caribou, selling will be closely scrutinized. (Qik H)

b. I haven't heard what Government plans are regarding that – whether it will be part of a management plan or not, if they're setting aside funds to assist or not, but if we HTOs enquire, I think we can find out if that exists. The QWB executive recently had a meeting as well and discussed that it might be possible to use community funds for ordering. (Qik H).

c. Inuit have to be participants as well, and what we're thinking about has to be better used. So we're visiting now, to improve the research. Only after research can the Government start to create regulations and only through the NWMB. The NWMB as well would have to have a hearing for Baffin communities. There, if the government proposes a quota, you will have an opportunity at the NWMB hearing to indicate what you want to see. That you'd like to see compensation for example. We have not heard that Government will provide financial assistance but you will have an opportunity at a public hearing (Qik H).

d. I would like to emphasize that this is the first meeting with your community but it will not be the last. An aerial survey will be done and as soon as the results of that and we've been able to summarize these consultations into a report, our plan is to share that information with you and to discuss further what could go into a management plan for your community and ultimately for all of Baffin caribou communities. You'll see us again and hear from us in correspondence and perhaps on the radio. We want to share the knowledge that we gain with you and get your reaction to what we've learned along the way (Qik H).

17) In the past, our elders said that there was not much noise in the environment. There are antlers back then, when the DEW lines were about to settle here, I was around when there were caribou here but they've been displaced since aircraft started to go here. Our elders spoke truly: no one wants to be

disturbed. Wildlife does not want to be disturbed. They spoke true saying not to disturb or pointlessly kill. We hear of pointless killing – we’re behaving poorly if we do that to anything, not just caribou. That’s how it is; they don’t want to be disturbed. We don’t know their thoughts but caribou are said to return – that always happens and so caribou will return at some point.

18) The current elders are able to show ways for stronger relationships and avoiding conflict.

- a. In our Iqaluit meeting, while trying to come up with solutions, we heard: during this time of caribou scarcity, yes have restrictions, but have an end date. During a NWMB hearing, you will have an opportunity to show in writing what you guys think in terms of an end date. (Qik H).

4.3 Caribou Population Cycle

- Caribou populations fluctuate high and low over a 50-75 year period. (HTO – AB,KI; public – CR; both - IQ,CD,PG,PI)
- Currently Baffin caribou have declined and are at a low point in the cycle. (HTO – KI,AB; public - CR,PI,IG; both – IQ,PG)
- The caribou decline was not caused by Inuit, but by other factors that affect caribou populations. (HTO – AB; public – IG; both – QK)
- Participants wanted more information about what caused the initial declines, what the environmental conditions were like at that time, and why caribou are at such low numbers now. (Public – CR; both – IQ, QK)
- Some participants are not concerned about the low numbers of caribou. Caribou will eventually return in greater numbers. (HTO – KI; public – IQ, CR, AB; both – QK)
- Even when the numbers are low, there are still some areas where caribou can be found on Baffin Island; small pockets of caribou. (HTO – AB; public – IQ)

The Steering Committee (SC) recognizes that caribou populations undergo natural fluctuations that are driven by ecological factors. In the past, the caribou population on Baffin Island experienced a low in this cycle (1950-60s), but the population rebounded over the following three decades and peaked in the late 1980s and early 1990s. Many participants were not concerned about the current low numbers of caribou on Baffin Island, believing that caribou would eventually return as they did in the past. But the SC and many of the consultation participants noted that caribou may be facing additional pressures to those in the past. Harvesting, and harvesting efficiency, by an increasing population of Nunavummiut, exploration and development across their range, changing climate and environmental conditions, are all factors that may have changed significantly in recent years. (Also see 4.2 ‘Factors the effect the caribou population’ and 4.15 ‘Technological Advances in Harvesting’).

The SC recognizes that we don’t have control over many of the natural processes that can impact a caribou population. However, we can manage certain factors that we do have control over in an attempt to minimize their impact on the population (eg. harvest, development), and promote their recovery when the population is low and especially vulnerable to further decline.

4.4 Factors that Affect the Caribou Population

- Predators (wolves) (HTO – KI; both – IQ, CD, PG)
- Weather (icing-events) (public – HB; both – IQ, CD, QK)
- Disease (HTO – KI; public – PI, both – IQ)
- Mining/Development (HTO – AB; both – IQ,CD,PG)
- Vegetation (public – PI,HB; both – IQ,CD,IG)
- Harvesting (both - QK)

There are many factors that can affect a caribou population, and the initial decline of Baffin caribou in the 1990s was likely a combination of two or more of these factors. Unfortunately there was limited scientific or standardized information collected during that time to explain the direct causes of the decline across the island, but we can look to local knowledge and observations for insight. Density-dependent

factors (or factors that have a greater influence when population numbers are high) such as disease and forage depletion (over-grazing) were commonly observed across the island during late 1990s and early 2000s.

4.5 Migration/Vegetation

- Caribou migrate following the availability of vegetation (public – PI, both – IQ,QK)
- Caribou will return when the vegetation grows bac. (public – PI; both – CD,QK)
- Caribou change their movement and migratory patterns when they are in decline and/or behave differently than when they are abundant. (HTO – AB; public – PI; both – PG).

Caribou numbers on Baffin Island may be regulated by the availability of adequate forage or the depletion of forage when numbers are high. They may also shift their seasonal ranges when preferred vegetation in one location is depleted. This has also been documented in IQ and scientific studies in South Baffin Island (Ferguson et al. 2001).

4.6 Animal Wastage/Harassment

- There is concern that some harvesters leave parts of the caribou out on the land that would otherwise be consumed (public – CR, AB, IG; both – IQ).

Meat wasting was a common comment heard throughout the consultation tour. It was acknowledged that some people were never taught how to hunt properly or to be environmental stewards in their community. One of the more common themes during the July 2013 Caribou Workshop was the need for more education related to traditional harvesting and conservation practices. Suggestions included more educational programs that bring together Elders and Youth to facilitate the sharing of traditional knowledge with the younger generations. The SC agreed that educational programs, and funding for such programs, focusing on traditional wildlife practices requires more attention and development. Also see 4.9 IQ.

4.7 Mining Activity

- Activities associated with mining scare/harass animals (public – CR; both – IQ,PG)
- Need to address the impacts that mining has on caribou (HTO – IQ, AB; public – CR; both CD).

Many of the consultation participants felt that mining activities have had negative effects on caribou. Among other avenues of legislation and the environmental assessment processes in Nunavut, there is an opportunity to address the issue of exploration and development impacts on caribou and other wildlife in a Baffin Island Caribou Management Plan. For example, co-managers and community members may want to consider protecting important caribou areas from future development or limiting the types of activities that may occur there. Identified calving grounds are areas that should be considered for protection against development.

4.8 Helicopters

- Aircraft (particularly helicopters) scare/disrupt caribou (public – CR,AB; both – PG,QK)
- Inuit are taught not to harass wildlife. (public – CR; both – QK)

This concern was highlighted with a particular emphasis on exploration and development activities and the proposed GN-DOE aerial caribou survey. Many participants did not want to see helicopters used to survey caribou because they may scare caribou away and cause the animals stress. The GN-DOE shared these concerns and outlined the measures it would take to reduce disturbances to caribou to the fullest extent possible. They stressed that when caribou are spotted during the aerial survey they will not be chased or harassed, and the duration of the exposure will be very short; caribou will be counted and classed as the aircraft passes by. Furthermore, the GN-DOE has opted to use fixed-wing aircraft to cover most of the survey. The fixed-wing aircraft are much quieter and tend to be less disturbing to caribou than helicopters. A helicopter will only be used to complete mountain transects where it would be unsafe to fly a fixed-wing aircraft at low altitudes.

4.9 Wolves

- Predation by wolves on caribou negatively affects the caribou population (HTO – KI; both – IQ,CD,PG)
- A bounty on wolves, or a cull, should be introduced to reduce their numbers (both - IQ,CD,PG).

Although there is little data about wolf numbers and trends on Baffin Island, biologists described the opportunistic observations of wolves and wolf sign made during the 2012 South Baffin Aerial Caribou Survey. Observations of wolves were very few given the large area covered, and this likely reflects the low availability of caribou as prey source on the island to support a larger number of wolves that may have been present in the past. At this time, biologists do not consider wolves to be a primary concern for the caribou population on Baffin Island. However, the SC is keeping all management options open for further discussion and consideration.

4.10 Die-offs

- Noted observations of caribou die-offs in the past (particularly the late 1990s and early 2000s when caribou were more abundant and starting to decline. (HTO – AB; public – CR; both - IQ,QK)
- For any species, including caribou, when the population grows too high, there will be die-offs. (HTO – KI; public – CR)

When abundance is high, caribou are more susceptible to density-dependent factors such as disease and depleting vegetation. As a result, it is not uncommon to observe die-offs under certain circumstances. This is consistent with the information that the SC received throughout the consultation tour about observations of disease and vegetation. Furthermore, certain climatic conditions may also lead to die-offs. During some years, rainfall or varying freezing and thawing in the late fall and winter can create a layer of ice on the ground that is difficult for caribou to penetrate and access forage. These conditions are referred to as ‘icing’ or ‘weather’ events and can lead caribou to starve if they cannot access adequate amounts of vegetation.

4.11 IQ

- More work needs to be done to incorporate IQ into research (public - CR, PI, HB)
- Information about caribou should be collected from the Elders (public - IQ, AB)
- There should be more training for young hunters. Elders may not be providing guidance and passing down their knowledge to young hunters as much as they once did (public - IQ, AB).

4.12 Aerial Survey 2014

- Inuit need to have more input and involvement in research and surveys, and should participate in the upcoming 2014 survey (HTO – PI,AB; both – QK)
- Results from the survey should be reported back to the communities (HTO – AB; public – PI; both – QK)
- **Unanimous support from all Baffin HTOs was given for the 2014 island-wide Baffin Island Caribou Survey.**

Inuit involvement in the 2014 Aerial Caribou Survey is essential for the project to be successful. The GN-DOE requires the assistance and advice of local experts in the design and implementation of the survey and as observers in each aircraft (up to four local people per aircraft (4)). In addition to the aerial survey, three HTOs will be conducting ground surveys by snowmobile. This information will be used to supplement the information gained from the aerial survey.

The GN-DOE is committed to timely and transparent reporting of the results of the 2014 Aerial Caribou Survey to the HTOs and public. The SC understands that this information is needed to properly assist the HTOs and public to determine what types of management actions they need to consider implementing in their communities. A workshop is being planned for the Fall of 2014, where the HTO and other co-management partners can discuss the survey results and continue to develop management initiatives.

4.13 HTO Ground Surveys

- More funding should be made available for the communities to conduct their own ground surveys (HTO - CR, KI, PI; both – PG)
- Government should consider using more ground-based instead of/ or to complement aerial methods to survey caribou. There should be greater involvement of HTOs in ground-based surveys (HTO – KI,CR; public – PI; both – QK).

Three HTOs applied for funding for their ground-based caribou survey through the NWMBs ‘Nunavut Wildlife Studies Fund’ (NWSF). The NWSF funds community-based management and research projects in Nunavut, particularly projects led by the HTOs. There is annual allocation of funds available that Inuit and community-based organizations can apply for by submitting proposals for their projects. This is just one avenue for funding HTO research projects such as caribou ground surveys.

Ground-based surveys are a very useful addition to aerial surveys and provide a good means of incorporating local expertise. However they do have their limitations, particularly when trying to generate a population estimate over a very large area. Baffin Island is over 500,000 square km. It would

be impossible to conduct a systematic survey over the whole island, within an acceptable timeframe, using only snowmobiles. Also, there are many areas that snowmobiles cannot reach where the topography can be quite extreme (eg. it is difficult to manoeuvre a snowmobile and sled through steep mountains and rocky terrain). For a full island population census, aerial surveys are the preferred and proven method by biologists, though the ground surveys certainly complement the effort.

4.14 Food Security

- Government should introduce provisions to support inter-community trade of caribou meat and/or provide compensation to the communities if harvesting is restricted (both - QK).

The issue of food security was also raised during the July 2013 Caribou Workshop. Caribou represent a cultural and economically valuable food source that is both nutritious and affordable. The low availability of caribou on Baffin Island raises concerns over food security for Inuit in the Baffin communities. There are provisions in the NLCA for the trade/sale of meat, however, people need to be aware that this can also create added pressures on herds that may not be able to sustainably support the added consumption from Baffin Island communities. One consideration could be to limit the commercial sale of meat to restaurants and businesses. Another consideration is to look to other country food sources to satisfy these requirements in times of caribou scarcity (e.g. muskox in the Kitikmeot or High Arctic, Ross' goose, whales, seals, fish).

4.15 Sharing Locations of Caribou

- Some hunters are reluctant to share information about where caribou are located (public – CR,KI; both – CD,QK)
- When people find out where caribou are, more hunters go out to harvest in those areas (HTO – IQ; public – CR; both – CD.)

The SC recognized that some hunters were reluctant to share information about caribou locations out of concern that the information might be used to impose harvest restrictions in the areas identified, or lead to an increase in harvest if the information was made publicly available. The SC appreciated and shared many of the same concerns. The SC assured the participants that the information shared by local experts during the mapping exercise would only be used to help design the aerial survey and would not be used to impose harvest restrictions or be made publicly available. (Separate maps were used during the HTO and public meetings).

4.16 Re-locating/Transplanting Caribou or reindeer

- Government should consider relocating or transplanting more caribou or reindeer to Baffin Island (HTO – KI; public – AB; both – IQ,CD,PG).

An example that was consistently used in support of this statement was the successful relocation of caribou to Southampton Island after caribou there were extirpated in the 1950s. About fifty caribou were relocated from Coates Island to Southampton in the late 60s and that number eventually grew to a high of

about 30,000 animals over three decades. But there are a number of considerations that go into the success of a relocation project, such as finding caribou that will be well suited and able to adapt to the conditions of their new environment, funding, and implementing a management plan that will allow the population to grow large enough to sustain a harvest.

It is always preferable to encourage the recovery of a local caribou population before considering a relocation project. On Southampton Island this was not possible as caribou there were extirpated. At this time, the SC felt that it is premature to consider relocating more caribou to Baffin Island. Baffin Island still has caribou, and if managed appropriately, they can recover to higher numbers. It's the Government's preference that we manage the caribou we have, before considering relocating additional caribou from another region to Baffin Island.

4.15 Technological Advances in Harvesting

- Harvesters are more efficient hunters than in the past. Today, hunters are using high powered equipment (snowmobiles, high powered rifles, scopes, GPS, etc.) whereas in the past they were using dog teams or walking (public - HB, KI)
- In the past when caribou numbers were low, some people in that area didn't have caribou in their diet. Today we have air transport and social media to assist in the trade of caribou meat (public - IQ).

This topic was also raised by Elders during the Elders Advisory Committee Meeting (EAC Minutes May 28, 2013) and the July 2013 Caribou Workshop. Technological advances have resulted in greater harvesting efficiency and greater access to areas that may have formerly been areas of refuge for Baffin caribou. In addition, harvesters are challenged with providing country food for an increasing population of Nunavummiut, placing a higher demand on wildlife populations. The increased efficiency of harvesting and new avenues for selling and trading meat to a growing population (eg. social media) are placing greater pressures on the caribou populations than in the past. These are issues that will need to be considered when developing a management plan.

4.17 Local Management

- It may be difficult for the HTOs to enforce any bylaws/rules they create concerning caribou management (HTO - IQ)
- Public support for bylaws is essential if they are to be successful. The public will need to be adequately informed (HTO – AB; both – IQ)
- There needs to be consensus on management between communities, especially those that share harvesting grounds (HTO – KI; both - PG, QK)
- The success of management initiatives will require cooperation and communication between communities/HTOs/Government. All will need to work together (public – CR; both - PG)
- Local management should look to Elder guidelines and traditional practices when developing rules/bylaws (both - PG)
- Additional funding for HTOs may be needed to develop and enforce new bylaws (HTO – PI; both - PG).

- Inuit need to be involved in the management processes concerning caribou (public – CR,PI; both - QK)
- Inuit want the opportunity to manage caribou themselves before the government does (public – CR)
- Any management actions or directions that are put in place need to be flexible and modified according to the changing population (both - QK)
- The caribou population can recover if they are managed properly. (public – CR)
- Government needs to be transparent and share information with the communities (re: research results and management plans. (HTO – AB; public - IG)
- **All HTOs have deferred local management action until the results of the 2014 Baffin Island Caribou Survey have been released.**

The direction set out during the July 2013 Caribou Workshop was that Inuit self-management was the preferred system for caribou management on Baffin Island. This system would involve the HTOs developing a community-based management approach by asserting their co-management authority to create bylaws and rules within their communities. A number of challenges with this approach were identified during the consultation tour, particularly communication and enforcement. Communication and collaboration amongst all communities and co-management partners is absolutely essential in building a successful conservation and management strategy for Baffin Caribou. Many of the HTOs recognize the importance of working together and have met amongst their organizations to discuss how best to address management and restrictions on shared or adjacent harvesting grounds. One concern that was commonly voiced was that harvesters will likely be unwilling to adhere to another community's bylaws or follow restrictions in their community if adjacent communities do not adopt the same restrictions. Another concern dealt with the issue of enforcement. Many participants foresee challenges in the HTOs' ability to enforce their bylaws and suggested the assistance of the Government of Nunavut Conservation Officers.

The SC recognizes that these are all issues that will need to be discussed amongst HTOs and co-management partners. A workshop is being planned for the Fall of 2014. The format will be similar to the July 2013 Caribou Workshop in that representatives from across Baffin will be brought together to further discuss and develop management actions for their caribou. The results of the 2014 Baffin Island Aerial and Ground Caribou Surveys will be shared and options for conservation measures discussed.

5.0 Summary of Suggested Management Actions

A number of management actions were suggested by HTO board members and the general public during the consultation tour. Some of the potential actions that were mentioned during the consultations included:

- Limit or eliminate the commercial harvest
- Restrict the harvest of: females during calving and post calving; pregnant females; females accompanying calves; and calves
- Impose seasonal harvest restrictions

- Establish limits on the number of caribou harvested per household
- Introduce a bounty for harvesting wolves
- Implement Harvest Reporting – Utilize Conservation Officers to provide information on harvesting activities in each community, or the use of hunter booklets to record harvest and observations of disease.
- Implement a tag System (TAH). Tags issued by HTOs.
- Impose hunting restrictions in specially important areas for caribou.
- Greater HTO involvement in ground surveys.
- Introduction of reindeer and/or muskoxen, or relocating additional caribou to Baffin Island.

The following outlines all of the potential management actions for Baffin caribou that were suggested by HTO board members and the general public during the consultation tour:

- Limit/regulate the sale of caribou meat (HTO - QK; both – IQ,CD,CR)
- Restrict harvest of females during calving and post-calving, pregnant females, females accompanying calves, and calves (public - AB, HB, KI; both – IQ)
- Establish limits on the number of caribou harvested per household (public – IG,HB; both - IQ)
- Introduce a bounty for harvesting wolves (both – IQ; CD; PG)
- Eliminate the commercial harvest (both - IQ, CR)
- Establish a moratorium until caribou numbers recover (both - IQ, CD, CR)
- Harvest reporting/monitoring(HTO – AB; both - IQ, PG)
- Quota or Tag System (TAH) and work with GN to enforce. (HTO – AB; both - IQ, CD, CR)
- Protection of identified calving grounds from development (both - CD).

6.0 Summary of Community Comments and Outcomes

6.1 Iqaluit HTO and Public Consultation Summary

HTO and Public Comments and Concerns for Caribou

- **Wastage** – Some harvesters leave parts of the caribou out on the land that could otherwise be consumed. Non-Inuit hunters that have an Elder or experienced hunter with them could be shown which parts of the caribou can be consumed.
- **Wolves** – Concern was expressed over the predation of caribou by wolves and how this may be negatively impacting caribou numbers.
- **Tags** – It was suggested that all tags for commercial and non-Inuit harvest need to be consolidated with one organization to administer (preferably the HTO).
- **Mining Activity** - Activity associated with mining and exploration may scare animals at first, but they may learn to live with distractions they are not used to. However, it is important that these activities do minimal damage to the environment.
- **Die-offs** - Populations of any species that grow to high numbers too fast will experience die-offs.
 - Die-offs seen in the plateau areas.
 - Die-offs may also have been due to disease and/or other health issues.
 - Climate change/ warming events - Icing events leading to die-offs.

- **Population Fluctuations** - Caribou populations tend to cycle high and low over a 50 – 75 year period; currently felt to be at the low, low of a low cycle.
- **Migrations** - Caribou migrate following the availability of vegetation.
- **Re-Location/Transplanting Caribou** – Government should consider re-locating or transplanting caribou from another region of Nunavut to Baffin Island.
- **Local Management** – HTOs will require the guidance and support of their membership to enforce bylaws under their authority.
 - Iqaluit is unique in that it has a largely transient population and more non-Inuit hunters than any other community.

Conservation Actions

Potential ‘Conservation Actions’ that could be implemented through HTO bylaws and/or with Government assistance that were suggested include:

- Limit/regulate the sale of caribou meat
- Restrict harvest of females during calving and post-calving, pregnant females, females accompanying calves, and calves
- Establish limits on the number of caribou harvested per household
- Introduce a bounty for harvesting wolves
- Eliminate the commercial harvest
- Moratorium until caribou numbers recover (mentioned by HTO as a possible management action that could be taken at the HTO meeting; at the community meeting it was mentioned with concern that it might be imposed on the community without community support)
- Harvest Reporting – Utilize Conservation Officers to provide information on harvesting activities in their community
- Tag System (TAH) and work with GN to enforce.

The Iqaluit HTO suggested that introducing conservation measures at the local level could be effective, but stressed the importance of co-management partner cooperation and public understanding in the management process in order to receive support for their initiatives. There was an identified need for long-term management plans as well as short term plans.

Moving Forward

The Iqaluit HTO has committed to responding to the GN outlining the conservation initiatives they propose for the community of Iqaluit. This correspondence will be provided in a letter from the Iqaluit HTO to the Government of Nunavut.

6.2 Cape Dorset HTO and Public Consultation Summary HTO and Public Comments and Concerns for Caribou

- ***Caribou Cycle*** - Caribou numbers fluctuate in a 50-70 year cycle. Caribou will start to return in greater numbers when the vegetation grows back. There are numerous factors affecting caribou, including disease.
- ***Mining Activity*** – Need to address environmental and caribou impact related issues from mining corporations.
- ***Predators*** – Wolves and wolverines predate on caribou. Hunters are observing wolf track close to the community. Suggested researchers cull wolves seen during survey work.
- ***Re-locations/Transplants*** – Suggested re-populating the islands south of Cape Dorset (Mill, Salisbury, and Nottingham Islands). Transplants to other locations on Baffin Island were also suggested, but consideration should be given to the amount of vegetation currently available to sustain them. Antlers have been found on the islands but no caribou in recent years.
- ***Sharing Information about Caribou Locations*** – Some hunters may be reluctant to share information about where caribou may be located. If caribou information is shared publically, more hunters may harvest in those areas.
- ***Food Security*** – Residents would like to continue having caribou as part of their diet.
- ***Factors Affecting Caribou Numbers*** – Icing events and wolves were identified as being important factors affecting caribou numbers.

Conservation Actions

The conservation actions mentioned by the Iqaluit HTO were also highlighted during both HTO and Public meetings in Cape Dorset. All actions were considered by the Cape Dorset HTO with additional mention of the following actions:

- Protection of identified calving grounds from development
- Quota (TAH) / Moratorium – Identified as an option following the announcement of the results of the 2014 survey to determine what numbers would be appropriate under such action
- Mentioned imposing a maximum harvest level per household per year until numbers increase.

The HTO members stated their ability to provide direction to its hunters when the caribou population is low, and the public supported the community-based approach to developing solutions and cooperation.

Moving Forward

The HTO is committed to implementing conservation actions through HTO bylaws following the results of the upcoming Baffin-wide aerial survey in February/March 2014. The HTO will consult further with the public about which actions to consider.

6.3 Pangnirtung HTO and Public Consultation Summary

HTO and Public Comments and Concerns for Caribou

- ***Caribou Numbers Cycle*** – Years ago, residents experienced a similar low in the population cycle. During that time there were maximum household harvest levels (5 per household per year) and

other restrictions such as not harvesting calves. These restrictions were in place until the caribou numbers returned to greater numbers. Even during the population low, there were areas where caribou could still be found.

- Everyone is in agreement that caribou are in decline.
- **Wolves** – Suggested increasing harvest of wolves due to their risk to declining caribou populations.
- **Mining** – Mining operations may scare caribou away. Helicopters are scaring the caribou away
- **Re-locating/Transplanting Caribou** – Inquiries were made into the feasibility of conducting similar re-locations of caribou on Baffin Island as were previously carried out on Southampton Island and Sanikiluaq.
- Caribou may change their behaviour when they are in decline e.g. altering migration patterns.
- **Surveys** – Researchers need to spend more time surveying in areas where there is lots of caribou sign.
- **What is a Low Number of Caribou?** – During the public meeting a question was raised over what the Government of Nunavut considers a ‘Low’ number of caribou, and what number they would be comfortable with or would like to work towards increasing the population to. The Steering Committee indicated this would be discussed further at the Fall 2014 Caribou Workshop.
- **Ground Surveys** – Some participants would like to see funding made available for Pangnirtung hunters to conduct ground surveys similar to those being planned in Qikiqtarjuaq, Clyde River, and Arctic Bay.
- **Cooperation amongst Communities** – It was identified that all communities will need to work together in the interest of caribou. Communities and HTOs will need to communicate with each other on a regular basis and cooperate to set their own regulations based on common understanding. Additional HTO funding will need to be made available for this cooperation to be successful.
- **Elder Guidelines** – Community members are committed to taking the lead in caribou management and highlighted the importance of involving Elder guidelines in community-based management plans. In the past you only hunted what you needed – there were rules. When numbers were low previously there was a 5 year restriction on harvesting females with unborn calves. The HTO needs to take the lead in developing and putting in place rules and conditions for harvesting.

Conservation Actions

The conservation actions mentioned by the Iqaluit HTO were highlighted during both HTO and Public meetings in Pangnirtung. All actions were considered by the public participants in Pangnirtung with mention to the following additional actions:

- Harvest Recording – suggested use of hunter booklets to record harvest and observations of disease to determine the annual harvest rates in each community (similar booklets were used in the past in the 1970s).
- Communities need to cooperate – don’t want the government to limit.

Moving Forward

Although the HTO and community members of Pangnirtung are committed to taking management action in the interest of protecting caribou for future generations, it was suggested that the community wait for the release of the 2014 survey results before implementing conservation initiatives.

6.4 Qikiqtarjuaq HTO and Public Consultation Summary

HTO and Public Comments and Concerns for Caribou

- **Compensation and Inter-community trade of meat** – During the HTO meeting, board members asked if the government would introduce provisions for inter-community trade of meat due to the low caribou numbers and reduced availability of caribou as a meat source on Baffin Island. If they had to stop hunting, would there be money or caribou meat provided as compensation? Inter-community trade would be important for Qikiqtarjuaq, especially if limits are set, because it is more difficult for them to access caribou compared to other communities. Because caribou have not been close to the community for a while the HTO or the Hamlet has to order meat. The HTO asked if it would be possible to get financial help, stating that if the government put restrictions on harvesting they should also implement something to help Inuit.
- **Setting harvest limits** – The HTO was concerned about the low numbers of caribou and acknowledged the need to set limits. They know there are few caribou on Baffin Island and will be thinking about solutions or how they can help.
- **Overlapping Harvesting Grounds** – Many communities have overlapping hunting grounds (Kimmirut and Iqaluit included). If harvest restrictions are set, how will the boundaries be determined? Can't restrict one community and not the others.
- **Past caribou distribution** – There used to be caribou on the islands near Qikiqtarjuaq, and on the mountaintops where you can find old antlers, but they are not found there now. Biologists should not expect to find many, if any, caribou near the community. Many people asked why there are no caribou close to the community. Many of the places that had caribou in the past don't have caribou now. It is thought that caribou will eventually return.
- **Caribou Movement** - It is thought that caribou moved from the south to the north. Caribou are walkers and can't be in one location. This makes it difficult to say where they are.
- **Aircraft disturbance** - Noise pollution from helicopters and aircraft impacts caribou. It's often thought that Inuit are diminishing the caribou population, but machines, helicopters, and planes contribute as well. According to Inuit Qaujimagatuqangit (IQ), Inuit didn't play with wildlife. People should not disrupt or kill wildlife for fun. Wildlife should be respected and not disrupted. Researchers should consider using ground-based surveys and instead of aircraft.
- **Vegetation** – Caribou will return when the vegetation grows back. Some community members asked that the caribou habitat/environmental conditions be assessed as well. Caribou follow their food, and if caribou can't eat they will go someplace else. Community members asked that the caribou habitat/environmental conditions be assessed as well.
- **Research** – Public are pushing for more research around the community.
- **Aerial Survey Input, Support and Reporting**– The HTO was in favour of doing consultations prior to survey work so that they could provide their input, and the public stressed that Inuit

needed to be involved in the aerial survey when it was being conducted. During the HTO and public meetings, participants asked that the communities be revisited to report back the survey results. Some community members suggested that it would be best to include the caribou locations when reporting the survey results because hunters may not know where the caribou are and they are often coming back from hunting trips with nothing. The HTO also said that if they are going to create a quota for our hunters they need to know how many and where they are, but the previous report (2012 South Baffin Survey) did not show that.

- **Caribou Management and Restrictions** - In the past, Inuit were able to harvest anywhere without quotas or geographical restrictions. In the past, Inuit harvesters were challenged by having to walk. Today, harvesters are challenged by quotas. Harvesters are being restricted worldwide. Something has to be done and Inuit need to be involved, but some HTO members did not want to create fixed [non-flexible] restrictions for their hunters. There was concern from some HTO members that if they pointed out areas where they know caribou can be found on the map, those areas will be targeted for restrictions.
- **Management Plan** - In the past the government set regulations for beneficiaries without any Inuit involvement in the processes. During the public meeting, community members voiced that they wanted Inuit to be included in the development of a management plan before it is finalized. They were also concerned that if a management plan and a quota were put in place, they would not be able to make changes once it was finalized (ie. they would not be able to make changes or increase the quota if and when they wanted).
- **Environmental Conditions** - There are situations that impact caribou that are not controlled by humans. These factors need to be incorporated into the research. You have to understand all of the factors involved that could impact the population, not just harvest. *Eg.* If there was an icing event, that could drive caribou out further from the community.
- **Caribou Declines** – It's been known for some time that caribou are decreasing, and it was acknowledged that caribou are becoming depleted. HTO members did not see the caribou decline on Baffin Island as having been caused by Inuit. Caribou move to find food. Some observed die-offs a few years ago. The public would like to see more research in their community.

Conservation Actions

The HTO preferred to set direction for management actions at the HTO level after the population assessment was complete. They stressed that it would be difficult to know what management actions to take if they did not know how many caribou there were. They would not be prepared to implement management actions without this information.

Moving Forward

The HTO will wait for the results of the aerial survey to be reported before taking any management actions at the community level. They are prepared to continue making progress on this initiative.

6.5 Clyde River HTO and Public Consultation Summary HTO Comments and Concerns for Caribou

- ***Funding for Community Research Initiatives*** – Aerial surveys are disruptive and we won't learn anything about managing wildlife or be part of the management process, if Inuit are not involved. The government should spend less money on aircraft for aerial surveys, and make more money available to the HTOs to do community research to learn more about the caribou population. It's more accurate to send locals to do the surveys.

Public Comments and Concerns for Caribou on Baffin Island

- ***Caribou Decline*** - In the 1990s there were a lot of caribou that died-off and community members wanted to know if there was any research that was done that would explain why they had died, and what was going on in the area (environmental conditions, exploration and development, etc.) that might have contributed to the decline. What are the factors that are currently contributing to the low numbers of caribou? Similarly, they asked what the conditions were like when caribou started to increase in the 1960s after experiencing a low in their population cycle in the 1940s/50s/60s. In the 1940-50-60s there were very few caribou.
- ***IQ and Inuit Culture*** – More work needs to be done to incorporate the IQ components to have a better understanding of caribou on Baffin. IQ is complicated and researchers have only scratched the surface of it. People will not be able to protect Inuit interests if they do not understand the culture or the language. IQ should be used to manage the caribou. The Inuit culture needs to be replenished and strengthened.
- ***Wastage*** - In the late 1990s and early 2000s, when caribou were more abundant, there was a lot of wastage. Meat was often thrown out or fed to dogs. Many public members noted concerns about meat wastage, stressing that it is important that no caribou parts are left behind or meat wasted. Wound and loss was also mentioned; it's important for hunters to take time to make sure the animals is killed and not wounded and lost.
- ***Caribou Abundance and Distribution*** – There have always been caribou on the western part of the island, even when the numbers have declined. Many people feel that caribou will come back eventually; the population fluctuates. Currently, caribou are scarce and are not migrating anymore. There is an increase in mining activity, and caribou are being harassed and run away; not too many caribou herds sighted. In the past [1990s] when caribou were abundant, they could be found right in town.
- ***Aerial Survey and Reporting*** – It was suggested that community members should hear about the results of research conducted or other information about their caribou before it goes to the newspapers. Some public members did not want to see the aerial survey go ahead because they felt it would disturb and harm the caribou. Others wanted to see the survey go ahead so that could be updated on the status of caribou on Baffin Island. Still others felt that a survey would be more appropriate when caribou are more abundant and survey activities may have less of an impact. The surveys should include the hunters' knowledge.
- ***Disturbance*** – Inuit take care of their animals, and are taught to respect them, to not harass them, and to only take what they need. Some of the public felt that surveys scare the animals and cause them stress. Some suggested that previous surveys negatively impacted caribou. Caribou avoid or move away from man-made noises or tracks. However, when the population is high they may be more tolerant to loud sounds. For these reasons some of the public felt it would be preferable if

the surveys were not done. Others wanted to see the survey completed even though they felt that helicopters would scare caribou.

- **Harvest Restrictions** – Some of the public felt that, in general, rules are being imposed on them without their input. They felt that the people that live in the communities should be the ones setting directions for harvesting and not have rules introduced to them without their involvement and agreement. It was mentioned that it would be very difficult to go back to the way things were before. In the past, Inuit were challenged living on the land and harvesting from the animals without equipment [snowmobiles, GPS, etc.]. The population can come back and they can be managed if time and care is put into it. It was heard that when caribou are close to the community, people immediately go out and harvest them. Sometimes you don't hear that people that have gone out to harvest caribou unless they try to sell the meat. Some did not want to see harvesting for commercial purposes, and suggested that people should refrain from harvesting in some years to allow the population to grow back. If the community does not want to see outsiders set restrictions then they need to do it themselves. One person suggested trying a moratorium, and if it didn't work out, to try something else. Inuit need to take the lead role and set limitations to harvesting when the population is down if they want caribou in the future.
- **Communication** - Greater efforts need to be made to communicate with each other (between community members as well as with the government) and work together. It was suggested that hunters meet more regularly to share information. Time must be taken to start sharing and documenting knowledge of caribou.

Conservation Actions

The HTOs in Clyde River, Pond Inlet, Qikiqtarjuaq, and Igloolik previously met to discuss creating caribou harvest regulations for their communities. These HTOs met because they share harvesting grounds and recognize the importance that cooperation amongst communities will have in the success of their management initiatives. They are in the beginning stages of discussions and have not yet brought it to the broader community where they would like to get feedback from the Elders and hunters. Some of the suggestions they have prepared include:

- Stop harvesting caribou (if that is what their hunters want)
- Limit the number of caribou that can be harvested (Quota)
- Stop selling/buying caribou meat - Some people sell their caribou to the HTO. The HTO could stop buying Baffin caribou meat.

After the initial meetings, it was concluded that each HTO should set their own direction and bylaws.

Moving Forward

The HTO will continue management discussions with adjacent HTOs and communicate with community Elders and hunters to gather their input. The Clyde River HTO has prepared a draft with their recommendations, but the other HTOs that were included in these discussions would like to wait until the aerial survey results are released before implementing any management actions.

6.6 Pond Inlet HTO and Public Consultation Summary

HTO Comments and Concerns for Caribou

- **Aerial Survey** – The HTO expressed interest in having community representatives from Pond Inlet participate in the aerial survey, as well as conducting their own surveys and consultations. They commented that it will be difficult to observe caribou in the mountains and they might be missed during the survey. They also suggested that because caribou numbers fluctuate, it would be good to do additional surveys [every few years].
- **Environmental Factors** – In the past when there was heavy rainfall, people wondered if caribou would die off if the rain created an ice layer on the land. Some Elders in the past suggested that rain is beneficial in the mountains because the sloping lands funnel more nutrients in the lower areas.
- **Caribou Cycle** – Caribou populations fluctuate (Elders say intervals of about 50 years or more before caribou come back).

Public Comments and Concerns for Caribou

- **Harvest Limitations** – In the past, Inuit could hunt without restrictions. They would only hunt when required, and when they had enough, their fathers would prevent them from hunting further. Some public members are anticipating harvest restrictions being implemented and want to be involved in the processes.
- **Caribou Distribution and Abundance** – All species fluctuate in numbers. Caribou will return in greater numbers and then they will disappear again. Animals are migrating back and forth all the time. About a decade ago there used to be so many caribou that they had to clear them off the runway before the planes landed.
- **Vegetation** – Caribou declined because the vegetation was depleted. There was no longer enough vegetation to sustain the caribou so they moved on. A similar situation occurred 60 years ago when caribou numbers were low. Caribou will travel to other parts of the island until the vegetation around the communities grows back. They migrate following their food, even to the mainland.
- **Ground Surveys** – It can be difficult to spot caribou from the air, especially in rough terrain and if the transect intervals are too far apart. A ground survey by skidoo would be a good means of supplementing the aerial survey.
- **Caribou Health** – When caribou numbers were high, the larger ones were eating a lot. Then they noticed die-offs and it was obvious that they had health issues. In the fall they lose a lot of weight and it is easier to evaluate if they have health issues. If harvesters were involved in the survey they would be able to help evaluate the health of the caribou. Hunters want to be careful of what they eat, and they are encouraging people to take out the sampling kits for the Caribou Health Monitoring Program.
- **Communication and Reporting** - It was asked if there would be additional consultations following the aerial survey to develop community management actions, to which the SC responded that they intended to organize either a workshop or community consultations following the release of the aerial survey results. Some also commented that it is difficult to translate scientific terms into Inuktitut and sometimes unilingual people have a hard time understanding

the information that is presented. They want to see IQ incorporated into reports as well as the scientific information. It was suggested that the Mary River mine [Baffinland] also share the information from their caribou studies and other observations from around the mine site.

Conservation Actions

The HTO had held preliminary discussions on the types of management actions that could be implemented at the community level, and were included in similar discussions with adjacent HTOs [Clyde River]. The HTO was waiting for HTO-public discussions in Clyde River to be completed before they consult the public in Pond Inlet. The HTO will assess the information and decide what is best for the community before they impose any restrictions and they will try to keep the public as informed as possible. The board members did not comment on the types of management actions that they might consider.

Moving Forward

The HTO will continue to hold management discussions with the board and general public prior to the aerial survey in anticipation of the results being released. The HTO would like to conduct their own survey and consultations with the public.

6.7 Arctic Bay HTO and Public Consultation Summary

HTO Comments and Concerns for Caribou

- ***Aerial Surveys*** – A more up-to-date survey should be conducted because the populations can fluctuate year to year. It can be down one year and then up the next. The community should have the most recent results before they make management decisions. The HTO was supportive of the aerial survey being conducted, but wanted to make sure that experienced spotters from the community participate in it. They also stressed that the government needs to be transparent and share all of the information (both survey results and plans for management).
- ***Communication*** – The HTO held a radio show before the consultations to receive feedback from the community members about the aerial survey as well as harvest restrictions. Although they were heated discussions, the community was in favor of conducting the aerial survey.
- ***Mining Activity*** – Mining activities associated with the Mary River mine have negatively impacted caribou. Caribou are not in as good a condition since the mine opened. In the past, people used to travel there by dog team and come back with lots of caribou. We need to pay more attention to the impacts that mining activity have on caribou. If there are less negative impacts then maybe caribou will return sooner.
- ***Caribou Cycle*** – It was said that when caribou are abundant, they will eventually decline. They were not sure how long it took caribou to come back in the past.
- ***Die-offs*** – When caribou were abundant there were observations of die-offs.

- ***Caribou Abundance and Distribution*** – Caribou behave differently when they are abundant. They started migrating inland and didn't come back. Now the numbers are very low, and even though there are still some pockets of caribou, many harvesters are not successful in finding caribou. Tracks have been seen north of Arctic Bay and in certain areas south.
- ***Migration*** – Researchers should look into where the caribou are migrating. When they left Arctic Bay, it wasn't because they were decreasing, it was because they migrated somewhere else. But now it seems they have decreased in the areas that they migrated to as well. The pattern of caribou migrations is not the same anymore.

Public Comments and Concerns for Caribou

- ***Harvest Restrictions and Conservation Measures*** – When caribou numbers are low, there should be limited or no harvesting of females with calves or pregnant females.
- ***Wildlife Management*** – One public member stated that arctic wildlife species were meant to roam free and too many restrictions are being imposed on them. It's better not to manage the animals and let them be. Inuit survived on them and take care to ensure that they are sustained.
- ***Wastage*** – Hunters in other communities are leaving out parts of caribou. This is not helping to sustain the caribou population.
- ***Disturbance*** – Caribou should not be harassed. Some were concerned that helicopters disturb caribou and can cause them to move. For this reason, some public members were not supportive of using helicopters for the survey work.
- ***IQ*** – Information about caribou should be collected from Elders. Elders are not providing guidance to young hunters as they once did.
- ***Caribou Abundance and Distribution*** – Many public members lived through a time in the past when there were very few caribou on Baffin Island, but caribou eventually became abundant again. Caribou will eventually come back as they did in the past.
- ***Relocating/Transplanting Caribou*** – It was asked if caribou from another area could be relocated closer to Arctic Bay for the community to either harvest or conserve.

Conservation Actions

It was acknowledged that if the caribou numbers continue to stay low then the HTO will have to set directions for harvesting. They will need to monitor the harvest levels to ensure that caribou return to larger numbers. The HTO discussed their willingness to introduce harvest limitations on a temporary basis, and unless caribou return in greater numbers, a TAH may need to be introduced.

Moving Forward

The HTO stressed that management decisions need to be based on up-to-date information. Therefore the HTO will wait for the results of the aerial survey before implementing management actions at the community level.

6.8 Igloolik HTO and Public Consultation Summary

Public Comments and Concerns for Caribou

- ***Caribou Abundance and Distribution*** – The caribou population on Baffin Island has declined since the 1980s/90s.
- ***Caribou Cycle*** – The caribou population fluctuates due to the availability of adequate vegetation for forage and not from harvesting by Inuit hunters. The caribou population fluctuates and caribou move to different areas depending on the season (rut, calving, etc.); this information should be considered when conducting the aerial survey. This kind of information is captured in traditional knowledge.
- ***Caribou Movement and Migration*** – Previous caribou surveys on Baffin Island did not cover caribou on the Melville Peninsula near Igloolik. Some caribou from Baffin Island may migrate to the Melville Peninsula, although this does not commonly occur. Researchers also need to investigate the movements of caribou from season to season; difficult to determine with an aerial survey.
- ***Communication*** – Community members need to be aware of the information so that caribou will not be extirpated.
- ***Wastage*** – Today, people are not going to starve if the caribou decrease or move away like they would have in the past. In the past, people were informed to conserve every part of the caribou and not waste anything. Caribou need to be eaten respectfully and if hunters can't take all of the meat, it should be cached. Nearly all parts of the caribou can be eaten. The public and elders are concerned about some of the wasteful practices occurring.

6.9 Hall Beach HTO and Public Consultation Summary

HTO Comments and Concerns for Caribou

- ***Caribou Abundance and Distribution*** – Mainland caribou move north in the spring and south for the winter. When they were abundant, you could find caribou on the ice.
- ***IQ*** – IQ was absent in [Social Science Research] interviews. Very few Elders were interviewed. Need to combine IQ and scientific results.
- ***Harvesting*** – Hall Beach does not harvest caribou on Baffin Island very often anymore.
- ***Caribou Decline*** – It was questioned if wolves and receding glaciers have contributed to the caribou decline. Are there observations of die-offs in the mud or softer ground around the perimeters of melting ice caps?
- ***Environmental Factors*** – In the fall, if an icing-event occurs, some caribou will move to higher grounds to get better access to vegetation.
- ***Mainland vs. Island Caribou*** – Caribou on Baffin Island are smaller compared to mainland caribou. The HTO was interested in having the Melville Peninsula included in the aerial survey, particularly the northern tip. The Fury and Hecla Strait seems like a very likely spot for caribou to cross from Baffin to the Mainland (and vice versa). It was also heard that some caribou may have died while trying to cross the strait (caught in bad ice, or swept away).

Public Comments and Concerns for Caribou on Baffin Island

- **Technological Advances** – Hunters are using high powered equipment, whereas in the past they were using dog teams (eg. snowmobiles vs. dog teams).
- **Caribou Decline** – In the 1990s caribou were abundant. It was asked where they went; if they died-off, or moved to another area. One commented that it seemed like caribou were moving north at that time. Some also questioned why populations of caribou seem to be declining in every community at the same time.
- **Supplementing Caribou Diet** – People have heard that caribou are running out of food and are starving (likely cause of decline); icing-events have also contributed to the unavailability of forage at times. It was asked if hay or grass could be dropped for caribou to supplement their diet when forage may be inadequate. Could the government introduce a feeding program for caribou?
- **Baffin – Melville Caribou Movement** – It is said that caribou cross from Melville to Baffin (and vice versa). Community members wanted to see the areas around Igloolik and Hall Beach included in the aerial survey.
- **Harvest Restrictions** - In the past, when caribou declined on North Baffin, self-regulations were followed so that caribou numbers would increase again (eg. no harvesting of females).

6.10 Kimmirut HTO and Public Consultation Summary

HTO Comments and Concerns for Caribou

- **Caribou Abundance and Distribution** – Elders used to say caribou numbers were low in the 1950s/60s and people would have to travel a long way to find caribou. People are saying that caribou will eventually come back.
- **Previous Survey Concerns** – The report for the 2012 South Baffin Caribou Survey indicated that there were few caribou during the time of the survey, but there were challenges and a lot of people have not agreed on the method/formula used; sometimes it's just a guess. Many hunters were not completely satisfied with the transect grid that was used. Many caribou were probably missed.
- **Transplants/Re-locations** – In the 1960s when caribou numbers were low, reindeer were transplanted on South Baffin. Can reindeer or caribou be transplanted to the area again?
- **Sport Hunt** – Sport hunters have also taken a lot of caribou, particularly bulls, from the population.
- **Overlapping Harvesting Grounds** – Many communities have overlapping hunting grounds (Kimmirut and Iqaluit included). How will conservation measures be implemented at the community level if multiple communities harvest in the same area? Restrictions cannot be set for one community and not the other. There may need to be agreements between the communities.
- **Wolves** - Need to also consider the effect that wolves have on the caribou population.
- **Die-offs** – There were die-offs of caribou in previous years. At certain (higher) population numbers they tend to get sick and die-off. This holds true for other species as well, not just caribou.

- ***HTO Ground Surveys*** – The HTO expressed interest in conducting HTO-led ground surveys and discussed options for how it could be funded.
- ***Disturbance*** – People have more noisy equipment today (eg. snowmobiles) – the sounds from the motor and the ground vibrations have an impact on caribou as well.
- ***Sex Preference*** – Many harvesters may prefer to harvest female caribou, particularly those that have not had calves, because they are usually in better shape in the winter. In the summer, harvesters may select more bulls.

Public Comments and Concerns for Caribou on Baffin Island

- ***Previous Survey Concerns*** – It is hard for people to believe that there were very little/no caribou seen during the 2012 South Baffin Caribou Survey, because harvesters are going out and still finding caribou.
- ***Aerial Surveys*** – Some commented that it will be difficult to observe caribou from the air, and suggested surveying in the fall when caribou stand out against the tundra more. Snow conditions so far this year are not ideal for spotting.
- ***Past Harvest*** – In the past people went out by dog team and it would take a whole month to get caribou. Now we just fuel up; didn't kill as many caribou back then as today.
- ***Harvest restrictions*** – People were encouraged not to harvest females with fetus's. But harvesters will continue to do that if they are not made aware.
- ***Caribou Locations*** – It would be better for researchers to keep the caribou locations to themselves. It was heard that people are harvesting caribou for money and it could divide hunters. Iqaluit hunters are harvesting on Kimmirut hunting grounds.

Moving Forward

After the survey the HTO hopes to make improvements and decisions related to management actions that can be taken at the community level.