August 1, 2019

Hon. Robert C. McLeod, Minister
Environment and Natural Resources
Government of the Northwest Territories
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Via Email
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Grand Chief George Mackenzie
Tłı̨chǫ Government
Box 412, Behchokǫ̀, NT X1A 1Y0
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Re: WRRB Reasons for Decision Final Report – Sahtì Ekwǫ̀ Bluenose-East Caribou Herd

Dear Minister McLeod & Grand Chief Mackenzie:

The Wek'èezhìı Renewable Resources Board is providing notification of an oversight that the Board recently discovered pertaining to the *"Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board 9-11 April 2019 Behchokǫ̀, NT & Reasons for Decisions Related to a Joint Proposal for the Management of the Sahtì Ekwǫ̀ (Bluenose-East Caribou) Herd"*, submitted on June 16, 2019. The document has an incorrect version of the Appendix I. As such, please find attached the Reasons for Decision final report with the correct version of Appendix I, which will be posted to the public registry.

Our apologies for any inconveniences this error may have caused. If you have any questions, please contact our office at (867) 873-5740 or jpellissey@wrrb.ca.

Sincerely,

Joseph Judas
Chair

Cc Dr. Joe Dragon, Deputy Minister, ENR-GNWT
Rita Mueller, Assistant Deputy Minister, Operations, ENR-GNWT
Bruno Croft, Superintendent, North Slave Region, ENR-GNWT
Laura Duncan, Tłı̨chǫ Executive Officer, TG
Tammy Steinwand-Deschambeault, Director, Culture and Lands Protection, TG
Michael Birlea, Manager, Culture and Lands Protection, TG

Report on a Public Hearing
Held by the
Wek'èezhìı Renewable Resources Board
9-11 April 2019
Behchokǫ̀, NT

&

Reasons for Decisions Related to a Joint Proposal for the Management of the Sahtì Ekwǫ̀ (Bluenose-East Caribou) Herd

Wek'èezhìı
Renewable Resources Board

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LIST OF ACRONYMS

ACCWM	Advisory Committee for Cooperation on Wildlife Management
BGCTWG	Barren-ground Caribou Technical Working Group
CARC	Canadian Arctic Resources Committee
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
DGG	Délı̨nę Got'ı̨nę Government
ENR	Environment & Natural Resources
GNWT	Government of the Northwest Territories
INAC	Indigenous and Northern Affairs Canada
IR	Information Request
NSMA	North Slave Métis Alliance
NT	Northwest Territories
SRRB	Ɂehdzo Got'ı̨nę Gots'ę́ Nákedı/Sahtú Renewable Resources Board
TAH	Total Allowable Harvest
TG	Tłı̨chǫ Government
TK	Tłı̨chǫ Knowledge; traditional knowledge
WRRB	Wek'èezhìı Renewable Resources Board
YKDFN	Yellowknives Dene First Nation

LIST OF TŁĮCHǪ TERMS

dè	includes everything with whom Tłįchǫ have a relationship and that is responsive to their attention, action, and behaviour as everything has spirit. It is often translated as 'land', but it means much more than the English word land can convey. For Tłįchǫ elders, becoming knowledgeable and understanding the dè are about reaching outward while learning more, not about limiting thinking and understanding to a bounded area. Dè is about interconnectedness.
Dene béré	alternative harvest; hunting and gathering all kinds of different Dene foods
det'ǫcho	golden eagle
dìga	wolf
Ɂek'wahtįdǝ́	highest honest leader (Délįnę Got'įnę dialect)
ɂekwǫ̀	barren-ground caribou
Kǫk'èetì	Contwoyto Lake
Kǫk'èetì Ekwǫ̀	Bathurst caribou
Mǫwhì Gogha Dè Nįįtłèè	traditional area of the Tłįchǫ, described by Chief Monfwi during the signing of Treaty 11 in 1921
nǫ̀gha	wolverine
nǫɂokè	water crossings
sahcho	grizzly bear
Sahtì Ekwǫ̀	Bluenose-East caribou
tataa	corridors between bodies of water; land bridges
wedzıh	biggest male ɂekwǫ̀
Wek'èezhìı	management area; within the boundaries of
yaagoa	younger bull; third year male ɂekwǫ̀

1.0. Executive Summary

The Wek'èezhìı Renewable Resources Board (WRRB) is responsible for wildlife management in Wek'èezhìı and shares responsibility for managing and monitoring the *Sahtì Ekwǫ̀* (Bluenose-East Caribou) herd. In November 2018, the Department of Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT) reported that, in their view, the Sahtì ekwǫ̀ herd had continued to decline significantly and that further management actions were required.

In January 2019, the Tłı̨chǫ Government (TG) and GNWT submitted the *Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd 2019-2021* to the Board, outlining proposed management actions for the Sahtì ekwǫ̀ herd in Wek'èezhìı. The management actions proposed by TG and GNWT in the Joint Proposal were grouped under the five categories: harvest, predators, habitat and land use, and education as well as research and monitoring. More specifically, TG and ENR proposed implementing a herd-wide total allowable harvest of 300 bulls only for the Sahtì ekwǫ̀ herd. The WRRB has determined that any specific numerical restriction of a harvest or a component of harvest constitutes a total allowable harvest (TAH). A proposal for a TAH requires a public hearing under Section 12.3.10 of the Tłı̨chǫ Agreement. The WRRB held a public hearing in Behchokǫ̀, NT on April 9-11, 2019.

The WRRB concluded, based on all available Indigenous and scientific evidence, that a serious conservation concern exists for the Sahtì ekwǫ̀ herd and that additional management actions are vital for herd recovery. In making its decision about harvest limitations, the WRRB considered the risks to the herd from a recent high rate of decline, uncertainties about the underlying mechanisms for the decline and the importance of *ʔekwǫ̀* (barren-ground caribou) for Tłı̨chǫ citizens to thrive – physically, spiritually, and culturally.

The WRRB determined that a TAH of 193 bulls only shall be implemented for all users of the Sahtì ekwǫ̀ herd within Wek'èezhìı for the 2019/20 and 2020/21 harvest seasons. Further, the Board determined that that the proportional allocation of the TAH of the Sahtì ekwǫ̀ herd for the 2019/20 and 20/2021 harvest seasons shall be as follows: Tłı̨chǫ Citizens – 39.29%, and Members of an Indigenous people who traditionally harvest Sahtì ekwǫ̀ (including Nunavut) – 60.71%.

As monitoring of the Sahtì ekwǫ̀ harvest is crucial for management decisions, the Board recommended that TG and ENR revise their approach to harvest monitoring for the 2019/20 and 2020/21 harvest seasons, including collecting demographic and health information and hiring additional community monitors.

The WRRB recommended 0that GNWT provide harvest information from its Enhanced North Slave *Dìga* (wolf) Harvest Incentive Program to allow the Board to determine the success of the program. Further, the Board recommended that GNWT and TG develop a framework to evaluate the effectiveness of the Enhanced North Slave Dìga Harvest Incentive Program in achieving ʔekwǫ̀ conservation goals. The WRRB also recommended that GNWT and TG monitor *Nǫ̀gha* (wolverine) populations in Wek'èezhìı and work cooperatively with the Government of Nunavut to protect the calving grounds of the Sahtì ekwǫ̀ from predators.

The WRRB recommended that high priority habitat for protection of the Sahtì ekwǫ̀ herd should be identified and legal protection measures should be implemented. In the interim, Mobile Caribou Conservation Measures should be implemented. Additionally, the Board recommended that TG and GNWT encourage Tłı̨chǫ citizens to harvest alternative country foods.

The Board recommended that TG and GNWT collaborate with the WRRB to develop a herd-specific adaptive management framework with thresholds linked to specific management actions. The WRRB also recommended the following monitoring actions for the Sahtì ekwǫ̀ herd: conduct population surveys every two years; implement pregnancy monitoring through fecal pellet collection in the winter months; cease annual reconnaissance surveys; and increase the number of collars from 50 to 70. Furthermore, the Board recommended that a detail rationale for the collar increase be provided.

The WRRB recommended that TG's Ekwǫ̀ Nàxoède K'è program should be expanded to the post-calving and summer ranges of Sahtì ekwǫ̀ to collect on-the-ground climate change observations. Finally, the Board recommended the Tłı̨chǫ Research and Monitoring Program should be implemented to ensure that both ʔekwǫ̀ and ʔekwǫ̀ habitat monitoring and realistic harvesting numbers are recorded in a culturally appropriate manner.

2.0. Introduction

The Sahtì ekwǫ̀ herd has declined at approximately 21% per year since 2010. This means the herd is shrinking by about 50% every 3 years and has declined from 103,000 in 2010 to about 19,300 in June 2018. In the WRRB's public hearing in Behchokǫ̀ on April 9-11, 2019, Chief Daniels called this a *"serious situation"* and a *"critical issue"*.[1] During the closing session, Grand Chief Mackenzie called the situation a *"crisis"*.[2]

[1] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p 8.
[2] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. p. 136.

Superintendent Bruno Croft noted that *"the Bluenose-East herd is in a serious predicament"* and *"continues to decline at alarming rates"*.[3]
The extent of the decline, as of June 2018, is reported in the 2019 Joint Proposal, entitled *"Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd 2019-2021"* (the "Joint Proposal") (Appendix A). TG and GNWT submitted the Joint Proposal on January 14, 2019 and the WRRB implemented its review procedures, which lead to a public hearing in early April 2019.

The short-term goal of the Joint Proposal's proposed management actions is to slow the herd's decline and promote recovery over the period of 2019 to 2021. The recovery of the herd to a level where sustainable harvesting is once again possible within Mǫwhì Gogha Dè Nı̨ı̨tłèè and meets community needs is the long-term goal of the Joint Proposal.

In Board proceedings during 2010 and 2016, the WRRB made decisions about harvest and, then, subsequently a TAH, as well as recommendations to urge government actions to halt the Sahtì ekwǫ̀ herd's decline.[4] The 2010 and 2016 determinations and recommendations that were implemented were focused on harvest reductions to increase survival of adult ʔekwǫ̀ as well as predator and habitat management. Unfortunately, the herd's decline has continued. Restrictions on harvest have not been enough despite the hardships borne by harvesters. The WRRB is both conscious of and troubled by the rate of the herd's decline and finds that there is a clear need for an urgent response to this decline. Each year's delay in effective management action is predicted to result in a further 20% decline.

This report describes the WRRB's assessment of the evidence on the record. This assessment is the basis for the Board's determinations and recommendations. The specific management actions proposed by the TG and GNWT will, by the words in the Joint Proposal itself, not halt the decline.[5] This puts the herd in a perilous position. The WRRB notes that the governments acceptance and implementation of previous Board recommendations has been limited. Additionally, the WRRB is troubled by the time it has taken governments to implement approved Board recommendations given that the Sahtì ekwǫ̀ herd has been declining by half every 3 years since 2010.

[3] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. p. 176.
[4] PR (BNE 2019): 073 – Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board, 22-26 March & 5-6 August 2010, Behchoko, NT; and PR (BNE 2019): 149 - 2016 Reasons for Decision Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ̀ (Barren-ground Caribou) Herd - Part A.
[5] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.

Based on a review of past proceedings by the Board, 60 recommendations were submitted in 2010 to TG and GNWT.[6] In 2016, the WRRB submitted 24 recommendations and two determinations to the two governments.[7] It appears to the Board that to date only the determinations and 20 of the recommendations have been fully implemented. Consequently, the WRRB is of the view that an adaptive management framework is required to fully capitalize on the collective efforts of the Board and governments. Adaptive approaches are common in other resource management settings, such as in land and water management. Given the urgency of decisive management action for the Sahtì ekwǫ herd, it is the Board's opinion that adaptive management would lead to more timely and effective management actions, which will be essential to address the herd's decline.

3.0. The Board and Its Authorities

The WRRB is responsible for the wildlife management functions set out in the Tłı̨chǫ Agreement in Wek'èezhìı [8] and shares responsibility for the management and monitoring of the Sahtì ekwǫ herd. The WRRB is a co-management tribunal established by the Tłı̨chǫ Agreement to exercise advisory and decision-making responsibilities related to wildlife, forest, plant and protected areas management in Wek'èezhìı (Figure 1). The Board's legal authorities came into effect at the time the Tłı̨chǫ Agreement was ratified by Parliament.[9] The WRRB's major authorities and responsibilities in relation to wildlife are set out in Chapter 12 of the Tłı̨chǫ Agreement.

[6] PR (BNE 2019): 073 – Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board, 22-26 March & 5-6 August 2010, Behchoko, NT.
[7] PR (BNE 2019): 149 - 2016 Reasons for Decision Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ̀ (Barren-ground Caribou) Herd - Part A.
[8] Section 12.1.2 of the Land Claims and Self-Government Agreement Among the Tłı̨chǫ and the Government of the Northwest Territories and the Government of Canada, Indian Affairs and Northern Development, Ottawa, 2003 (hereinafter the "Tłı̨chǫ Agreement").
[9] Tłı̨chǫ *Land Claims and Self-Government Act*, S.C. 2005, c.1. Royal assent February 15, 2005. See s.12.1.2 of the Tłı̨chǫ Agreement.

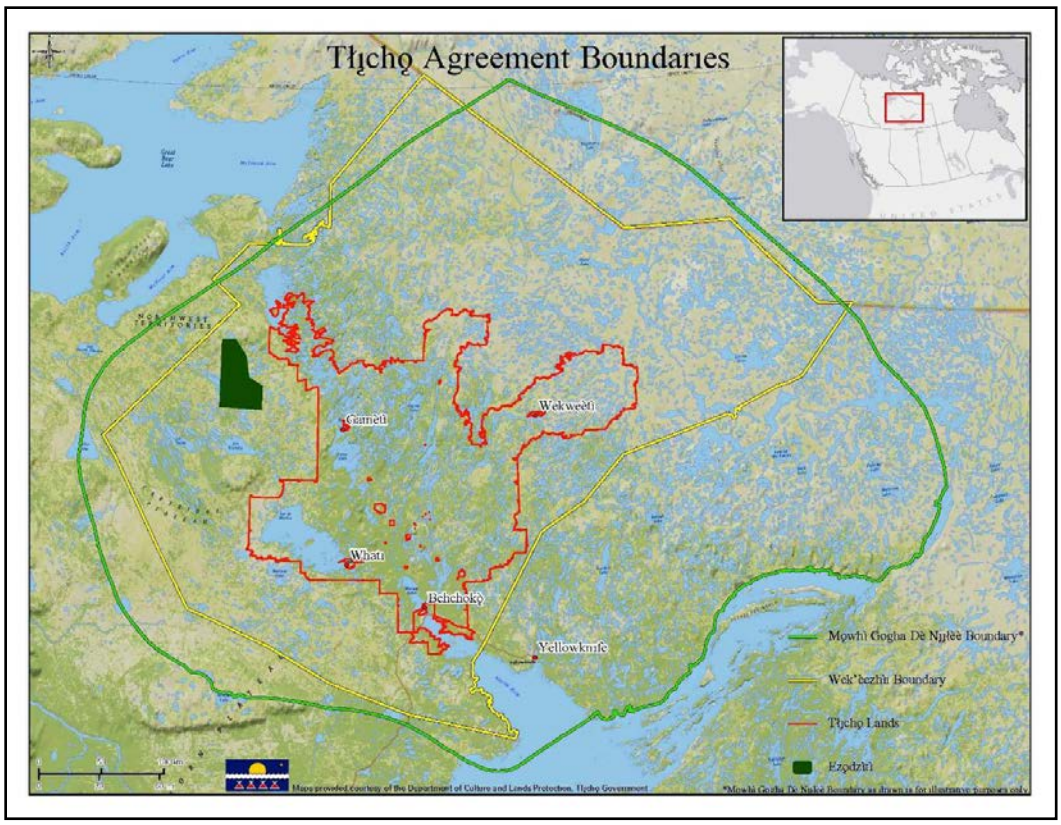


Figure 1. Wek'èezhìı Management Area.[10]

As required by Sections 12.5.1 and 12.5.4 of the Tłı̨chǫ Agreement, any Party[11] proposing a wildlife management action in Wek'èezhìı must submit a management proposal to the WRRB for review. This includes the establishment or adjustment of a total allowable harvest (TAH). Prior to making a determination or recommendation, the WRRB must consult with any body that has authority over that wildlife species both inside and outside of Wek'èezhìı. Under Section 12.5.5 of the Agreement, the WRRB has sole responsibility for making a final determination with respect to a total allowable harvest for Wek'èezhìı.

> ***12.5.5*** *The Wek'èezhìı Renewable Resources Board shall*
>
> *(a) make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal*
>
> *(i) regarding a total allowable harvest level for Wek'èezhìı, except for fish,*

[10] Department of Culture & Lands Protection, Tłı̨chǫ Government. 2014.
[11] As defined in the Tłı̨chǫ Agreement, "Parties" mean the Parties to the Agreement, namely the Tłı̨chǫ, as represented by the Tłı̨chǫ Government, the Government of the Northwest Territories and the Government of Canada.

(ii) regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìı to groups of persons or for specified purposes, or

(iii) submitted under 12.11.2 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìı; and

(b) in relation to any other proposal, including a proposal for a total allowable harvest level for a population or stock of fish, with respect to its application in Wek'èezhìı recommend implementation of the proposal as submitted or recommend revisions to it, or recommend it not be implemented.

The WRRB acts in the public interest. It is an institution of public government, which makes its decisions on the basis of consensus. The WRRB works closely with Tłı̨chǫ communities, TG, and GNWT. The Board also collaborates with other territorial government departments, such as Lands and Industry, Tourism and Investment, and federal government departments, such as Environment and Climate Change Canada, Fisheries and Oceans Canada, and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). In addition, the WRRB works with other wildlife management authorities, Indigenous organizations and stakeholders.

Wildlife management is a central and vital component of the Tłı̨chǫ Agreement.[12] The rights of Tłı̨chǫ citizens to use wildlife for sustenance, cultural, and spiritual purposes are protected by the Tłı̨chǫ Agreement and the Constitution[13], subject to the management framework set out in Chapter 12. The most important provisions in relation to the WRRB's role in the limitation of Tłı̨chǫ citizens harvesting are set out in the Tłı̨chǫ Agreement as follows:

12.6.1 *Subject to chapters 15 and 16, a total allowable harvest level for Wek'èezhìı or Mǫwhì Gogha Dè Nı̨ıtłèè (NWT) shall be determined for conservation purposes only and only to the extent required for such purposes.*

12.6.2 *Subject to 12.6.1 and chapters 15 and 16, limits may not be prescribed under legislation*

(a) on the exercise of rights under 10.1.1 or 10.2.1 except for the purposes of conservation, public health or public safety; or
(b) on the right of access under 10.5.1 except for the purposes of safety.

12.6.3 *Any limits referred to in 12.6.2 shall be no greater than necessary to achieve the objective for which they are prescribed, and may not be prescribed*

[12] See Section.12.1.1 of the Tłı̨chǫ Agreement.
[13] *Constitution Act.* 1982. Section 35.

where there is any other measure by which that objective could reasonably be achieved if that other measure would involve a lesser limitation on the exercise of the rights.

12.6.5 *In exercising its powers in relation to limits on harvesting, the Wek'èezhìı Renewable Resources Board shall give priority to*

(a) non-commercial harvesting over commercial harvesting; and
(b) with respect to non-commercial harvesting,
(i) Tłı̨chǫ Citizens and members of an Aboriginal people, with rights to harvest wildlife in Wek'èezhìı, over other persons, and
(ii) residents of the Northwest Territories over non-residents of the Northwest Territories other than persons described in (i).

The WRRB is bound by the Tłı̨chǫ Agreement if it is contemplating any limitation to Tłı̨chǫ citizens' harvesting, including any limitation to the harvesting of Sahtì ekwǫ̀. More specifically, Section 12.6.1 (see above) specifies that a total allowable harvest level shall be determined for conservation purposes only and only to the extent required for such purposes. The Tłı̨chǫ Agreement defines conservation as follows:

"conservation" means
(a) the maintenance of the integrity of ecosystems by measures such as the protection and reclamation of wildlife habitat and, where necessary, restoration of wildlife habitat; and
(b) the maintenance of vital, healthy wildlife populations capable of sustaining harvesting under the Agreement.

In addition to the substantive legal protection for Tłı̨chǫ citizens' harvesting rights set out in the Tłı̨chǫ Agreement, the WRRB is also bound by the requirements of fairness. Section 12.3.10 gives the Board the authority to order a hearing on a wildlife management proposal and makes it mandatory for the WRRB to hold a public hearing when it intends to consider establishing a TAH in respect of a species or a population such as the Sahtì ekwǫ̀ herd.

3.1. Advisory Committee for Cooperation on Wildlife Management

ʔekwǫ̀, including the Sahtì ekwǫ̀ herd, cross jurisdictional boundaries during their seasonal migrations. This inter-jurisdictional distribution is well-recognized and the Advisory Committee for Cooperation on Wildlife Management (ACCWM) was established in 2008 to exchange information, help develop cooperation and consensus, and make recommendations regarding wildlife and wildlife habitat issues that cross land claim and treaty boundaries. The committee is made up of the Chairpersons of the

Wildlife Management Advisory Council (NWT), Gwich'in Renewable Resources Board, ʔehdzo Got'ıné Gots'é Nákedı/Sahtú Renewable Resources Board, WRRB, Kitikmeot Regional Wildlife Board, and Tuktut Nogait National Park Management Board.

These wildlife management boards have authority through their land claims or legislation to make recommendations and decisions on wildlife management issues. The ACCWM can make consensus-based recommendations to governments, land use regulators, and respective Boards on wildlife management actions. ACCWM recommendations are not binding on individual boards and do not prevent them from providing additional recommendations to governments.

The ACCWM developed a management plan for the Cape Bathurst, Bluenose-West, and Sahtì ekwǫ herds, entitled *"Taking Care of Caribou – The Cape Bathurst, Bluenose-West, and Bluenose-East Barren Ground Caribou Herds Management Plan"*.[14] While the immediate need for the management plan was in response to reported declines in the herds, the intent is to address ʔekwǫ management and stewardship over the long term. The management goals are to maintain herds within the known natural range of variation, conserve and manage ʔekwǫ habitat, and ensure that harvesting is respectful and sustainable. The plan provides a framework for monitoring the herds, making decisions, and taking action. Five different categories of management actions are outlined in the plan, including Education, Habitat, Land Use Activities, Predators, and Harvest Management. The WRRB determinations and recommendations in this report are consistent with the ACCWM plan and follows the same categories of management actions.

4.0. Previous WRRB ʔekwǫ Determinations & Recommendations

Part 12.1 of the Tłı̨chǫ Agreement requires the coordination of the functions of governments (authorities whose responsibilities include wildlife management among other functions).[15] Section 12.1.5 of the Agreement also requires the Parties[16] to manage wildlife based on the principles of conservation, on an ecosystemic basis and in an adaptive fashion.[17] Chapter 12 of the Agreement sets out a comprehensive framework for wildlife management. WRRB determinations are final but recommendations made by the Board may be accepted, rejected or varied by the Party with the jurisdiction affected by the recommendation. However, once a recommendation is accepted, that Party doing so must implement it *"to the extent of its power under*

[14] PR (BNE 2019): 069 - Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East Barren-Ground Caribou Herds Management Plan. ACCWM. 2014.
[15] See Section.12.1.4 of the Tłı̨chǫ Agreement.
[16] This includes the Tłı̨chǫ Government, the Government of the Northwest Territories and the Government of Canada.
[17] See Section 12.1.5 paragraphs (a) and (d) of the Tłı̨chǫ Agreement.

legislation".[18] This framework and these relationships are central to effective wildlife management in Wek'èezhìı.

4.1. 2010 Proceeding

In June 2009, GNWT conducted a calving ground photographic survey and estimated the Sahtì ekwǫ̀ herd size was about 103,000 ʔekwǫ̀. On November 5, 2009, TG and GNWT submitted a *Joint Proposal on Caribou Management Actions in Wek'èezhìı*, which proposed nine management actions and eleven monitoring actions, including harvest limitations, for the Kǫ̀k'èetì, Sahtì and Beverly/Ahiak ʔekwǫ̀ herds. While TG and GNWT agreed on the majority of actions set out in the proposal, there was no agreement reached on the proposed levels of Indigenous harvesting.

Upon review of the proposal, the WRRB held that any restriction of harvest or component of harvest to a specific number of animals would constitute a TAH. Thus, the Board ruled that it was required to hold a public hearing. Registered Parties were notified on November 30, 2009 of the Board's decision to limit the scope of the public hearing to Actions 1 through 5 of the Joint Proposal, which prescribed limitations on harvest. All other proposed actions were addressed through written submissions to the Board. Originally scheduled for January 11-13, 2010, the public hearing took place March 22-26, 2010 in Behchokǫ̀, NT. Once the evidentiary phase of the proceeding was completed, TG requested the WRRB adjourn the hearing in order to give TG and GNWT time to work collaboratively to complete the joint management proposal.

On May 31, 2010, TG and GNWT submitted the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhìı*. This revised proposal changed the original management and monitoring actions and incorporated an adaptive co-management framework and rules-based approach to harvesting. TG and GNWT were able to reach an agreement on Indigenous harvesting. Therefore, the WRRB reconvened its public hearing on August 5-6, 2010 in Behchokǫ̀, NT, where final presentations, questions and closing arguments were made.

On October 8, 2010, the WRRB submitted its final recommendations and reasons for decision report to TG and GNWT.[19] Many of the recommendations were related to the Kǫ̀k'èetì ekwǫ̀ herd and relevant management actions vital for herd recovery, including harvest restrictions. The Board also made harvest recommendations for the Beverly/Ahiak ʔekwǫ̀ herd.

[18] See Sections 12.5.11 and 12.5.12 of the Tłı̨chǫ Agreement.
[19] PR (BNE 2019): 073 - Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board 22-26 March 2010 & 5-6 August 2010 Behchokǫ̀, NT.

The Board recommended a harvest target of 2800 (± 10%) Sahtì ekwǫ̀ per year for harvest seasons 2010/11, 2011/12, and 2012/13 in Wek'èezhìı. Further, the Board recommended that the ratio of bulls harvested to cows should be 85:15. Although the evidence suggested that the Sahtì ekwǫ̀ herd had not continued to decline, the Board concluded that a limited harvest of 2520-3080 Sahtì ekwǫ̀ with 420 or fewer cows was a cautious management approach based on the herd size and trend at the time. Additionally, the WRRB recommended that all commercial, outfitted and resident harvesting of the Sahtì ekwǫ̀ herd in Wek'èezhìı be set to zero.

The WRRB made additional ʔekwǫ̀ management and monitoring recommendations to TG and GNWT, specifically implementation of detailed scientific and Tłı̨chǫ̀ knowledge monitoring actions and implementation of an adaptive co-management framework.

The WRRB also recommended to the Minister of CIRNAC (formerly Indian and Northern Affairs Canada) and GNWT to collaboratively develop best practices for mitigating effects on ʔekwǫ̀ during calving and post-calving, including the consideration of implementing mobile ʔekwǫ̀ protection measures, and for monitoring landscape changes, including fires, industrial exploration, and development, to assess potential impacts to ʔekwǫ̀ habitat.

The Board recommended that the harvest of dìga should be increased through incentives but that focused dìga control not be implemented. The Board understood if TG and GNWT were to plan for focused dìga control in the future, a management proposal would be required for WRRB consideration.

Of the 57 recommendations made in 2010 and accepted or varied by TG and GNWT, the Board has evidence that only 18 have been fully implemented. Specifically, the closure of commercial, outfitted and resident harvesting for the Kǫ̀k'èetì, Sahtì and Beverly/Ahiak ʔekwǫ̀ herds; the establishment and allocation of a harvest target for the Kǫ̀k'èetì ekwǫ̀ herd; the implementation of monitoring the density of cows on the calving grounds; the development and implementation of a scientific conservation education program; the establishment of the Barren-ground Caribou Technical Working Group; the ongoing discussions with the Government of Nunavut to identify opportunities for calving ground protection; the collaborative work to meet the obligations of Section 12.11 of the Tłı̨chǫ̀ Agreement; the hiring of a TG Wildlife Coordinator to increase capacity to ensure full participation in monitoring and management of caribou; the removal of GNWT's Emergency Interim Measures following the implementation of recommendations by January 1, 2011; the consultation with Tlicho communities about Board recommendations prior to January 1, 2011; the development of a detailed implementation and consultation plan; and the development and implementation of an effective enforcement and compliance program.

Implementation of the remaining accepted recommendations appears to the WRRB to be incomplete, including the development of a government position regarding reinstatement of outfitting and resident harvesting in Wek'èezhìı; the negotiation of harvesting overlap agreements with the Sahtú and Nunavut; the implementation of the *Special Project, Using Tłı̨chǫ Knowledge to Monitor Barren Ground Caribou* of the overall Tłı̨chǫ Research and Monitoring Program; the implementation of TK and scientific caribou monitoring actions; the development of criteria to evaluate when management actions are to be revised; and the development of a land use plan for Wek'èezhìı.

Additional details of the 2010 proceeding can be found in Appendix B and a review of the 2010 WRRB Recommendations is found in Appendix C.

4.2. 2016 Proceeding

In June 2015, GNWT conducted a calving ground photographic survey and estimated the Sahtì ekwǫ herd had declined to 38,600 ʔekwǫ. On December 15, 2015, TG and GNWT submitted the "*Joint Proposal on Management Actions for Bluenose-East Caribou 2016-2019"* to the Board outlining proposed management actions for the Sahtì ekwǫ herd in Wek'èezhìı, including new restrictions on hunter harvest, predator management, and ongoing monitoring. More specifically, TG and GNWT proposed implementing a herd-wide total allowable harvest of 950 bulls only, allocation for the Sahtì ekwǫ herd, and conducting a feasibility assessment of a full range of dìga management actions. The WRRB considered the proposed restriction of harvest as the establishment of a TAH and, therefore, was required to hold a public hearing. The public hearing took place April 6-8, 2016 in Behchokǫ̀, NT.

In anticipation of the proposal, the ʔehdzo Got'ı̨nę Gots'ę́ Nákedı/Sahtú Renewable Resources Board (SRRB) and the WRRB signed a *"Memorandum of Understanding Regarding Collaborative Efforts for the Management of the Bluenose-East Caribou Herd"* in October 2015 to ensure management of proceedings related to the Sahtì ekwǫ herd would be as effective as possible. Each Board conducted its own proceeding, including public hearings in both the Sahtú and Wek'èezhìı areas. Each Board submitted its own Reasons for Decision report.

In order to allow careful consideration of all the evidence on the record and to meet legislated timelines, the WRRB decided to prepare two separate reports to respond to the proposed management actions in the joint management proposal. The first report, Part A, dealt with the proposed harvest management actions that required regulation changes in order for new regulations to be in place for the start of the 2016/17 harvest season, as well as the proposed dìga feasibility assessment. The second report, Part B,

dealt with additional predator management actions, biological and environmental monitoring, and cumulative effects.

On June 10, 2016, the WRRB submitted its final determinations and recommendations and Part A Reasons for Decision Report to TG and GNWT.[20] The WRRB determined that a TAH of 750 bulls only should be implemented for all users of the Bluenose-East ʔekwǫ̀ herd within Wek'èezhìı for the 2016/17, 2017/18, 2018/19 harvest seasons. Further, the Board determined that the proportional allocation of the TAH of the Sahtì ekwǫ̀ herd for the 2016/17, 2017/18, 2018/19 harvest seasons should be as follows: Tłı̨chǫ Citizens – 39.29%, and Members of an Indigenous people who traditionally harvest Sahtì ekwǫ̀ (including Nunavut) – 60.71%.

The Board recommended that TG and GNWT agree on an approach for designating zones for aerial and ground-based surveillance throughout the fall and winter harvest seasons from 2016 to 2019. Additionally, the WRRB recommended weekly communication updates, timely implementation of hunter education programs for all harvesters of the Sahtì ekwǫ̀ herd, and development of harvesting overlap agreements with the Sahtú and Nunavut.

The WRRB recommended that the dìga feasibility assessment set out in the proposal be led by the Board with input and support from TG and ENR. As well, if deemed successful, the Community-based Dìga Harvesting Project would be extended in 2016-2017 to the Sahtì ekwǫ̀ herd and incorporated into an adaptive wolf management approach.

On October 3, 2016, the WRRB submitted its final recommendations and Part B Reasons for Decision Report to TG and GNWT.[21] The WRRB recommended consultations with Tłı̨chǫ communities to determine a path forward for implementation of Tłı̨chǫ laws to continue the Tłı̨chǫ way of life and maintain their cultural and spiritual connection with ʔekwǫ̀.

In addition, the WRRB recommended several Tłı̨chǫ Knowledge (TK) research and monitoring programs focusing on dìga, *Sahcho* (grizzly bear), stress and other impacts on ʔekwǫ̀ from collars and aircraft over-flights, and an assessment of quality and quantity of both summer and winter forage.

The Board recommended a biological assessment of sahcho as well as requesting that the Barren-ground Caribou Technical Working Group (BGCTWG) prioritize biological monitoring indicators and develop thresholds under which management actions can be

[20] PR (BNE 2019): 149 - 2016 Reasons for Decision Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ̀ (Barren-ground Caribou) Herd - Part A.
[21] PR (BNE 2019): 075 - Reasons for Decisions Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd - Part B. 2016.

taken and evaluated. All scientific and TK monitoring data will be provided to BGCTWG annually to ensure ongoing adaptive management.

The WRRB recommended the implementation of Tłı̨chǫ Land Use Plan Directives as well as completing a Land Use Plan for the remainder of Wek'èezhìı. The Board also recommended the development of criteria to protect key ʔekwǫ̀ habitat, including *Nǫʔokè* (water crossings) and *Tataa* (corridors between bodies of water), using the Conservation Area approach in the NWT's *Wildlife Act*, offsets and value-at risks in a fire management plan. Additionally, the WRRB recommended the development of monitoring thresholds for climate indicators.

Of the two determinations made by the Board and 24 recommendations accepted or varied by TG and GNWT, only the determinations and five recommendations have been fully implemented. Specifically, the establishment and allocation of a harvest target for the Sahtì ekwǫ̀ herd; the establishment and implementation of the Mobile Core Bathurst Caribou Conservation Area; the regular provision of updates on aerial and ground-based compliance surveillance of the Sahtì ekwǫ̀ herd; the implementation of the GNWT's Hunter Education Program; and the completion of a collaborative feasibility assessment of options for dìga management.

The remaining accepted recommendations appear to the Board to be incomplete, including providing regular harvest updates; negotiating harvesting overlap agreements with the Sahtú and Nunavut; conducting TK research on sahcho predation on ʔekwǫ̀, and their relationship with ʔekwǫ̀, other wildlife and people; conducting a collaborative sahcho biological assessment; conducting TK research about stress and impacts on ʔekwǫ̀ and people related to collars and aircraft over-flights; prioritizing biological monitoring indicators in order of need for effective management and developing thresholds under which management actions can be taken and evaluated; developing a land use plan for Wek'èezhìı; investigating the potential use of offsets for ʔekwǫ̀ recovery; conducting a TK monitoring project with elders to document how climate conditions have affected preferred summer forage and impacted ʔekwǫ́ fitness; and developing monitoring thresholds for climate indicators.

Additional details of the 2016 proceeding can be found in Appendix D and a review of the 2010 WRRB Recommendations are in Appendix E.

5.0. Summary of 2019 Wildlife Management Proposal and Board Process

5.1. Receipt of 2019 Joint Proposal

On January 14, 2019, the TG and GNWT submitted the *"Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd 2019-2021"* to the

Board outlining proposed management actions for the Sahtì ekwǫ herd in Wek'èezhìı. The management actions proposed by TG and GNWT in the Joint Proposal were grouped under the five categories defined in the ACCWM's *Taking Care of Caribou Management Plan*: harvest, predators, habitat and land use, and education as well as research and monitoring.[22]

More specifically, TG and GNWT proposed the following:

- Harvest: implementing a reduced herd-wide total allowable harvest of 300 bulls only and allocation for the Sahtì ekwǫ herd; exploring ways of supporting harvesting of other wildlife; increasing on-the-land activities and cultural practices;
- Predators: increasing incentives for dìga harvesters in an area centered on the collar locations of wintering Sahtì ekwǫ; continuing to develop a program to train dìga harvesters using culturally acceptable methods on the winter range; submitting a separate TG-GNWT joint management proposal on reduction of *dìga* numbers on the Sahtì and Kǫk'èetì ekwǫ herd ranges;
- Habitat & Land Use: promoting the protection of the Sahtì ekwǫ herd's calving grounds in Nunavut; participating in any environmental assessment and land use planning in the NWT and Nunavut; supporting ongoing TK and scientific research focused on identifying key ʔekwǫ habitats, minimizing disturbance to key ʔekwǫ habitats, and ensuring conservation of these habitats; supporting research on climate factors that may affect herd trend and studies of how a changing climate may be affecting vegetation and foraging conditions for ʔekwǫ;
- Education: continuing education initiatives such as sight-in-your-rifle, minimizing waste, and respecting traditional ways of harvesting; continuing annual visits to the four Tłı̨chǫ communities; and,
- Research & Monitoring: increasing biological monitoring of the Sahtì ekwǫ herd, including conducting population surveys carried out at two-year intervals, increasing radio collars to 70, suspending June calving reconnaissance surveys in years between photo survey years, conducting annual composition surveys in June, October and March/April to assess productivity and mortality rates; continuing accurate harvest reporting and improving body condition assessment of harvested ʔekwǫ; supporting the expansion of the Tłı̨chǫ Ekwǫ Nàxoède K'è (formerly the Boots on the Ground) program onto the Sahtì ekwǫ range; supporting continued research into factors contributing to ʔekwǫ declines.

The WRRB considered the proposed restriction of harvest as a proposal for the establishment of a TAH and, therefore, was required to hold a public hearing.

[22] PR (BNE 2019): 069 - Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East Barren-Ground Caribou Herds Management Plan. ACCWM. 2014.

The Board initiated its 2019 Bluenose-East Caribou Herd Proceeding on January 30, 2019 and established an online public registry: http://www.wrrb.ca/public-information/public-registry. On February 4, 2019, public notice of the WRRB decision to open a proceeding and conduct a public hearing concerning the possible setting of a reduced TAH for the Sahtì ekwǫ herd was provided to potentially interested organizations in and out of Wek'èezhìı via email, WRRB website, social media and radio. Notifications of the revised proceeding schedules were posted publicly on February 12, March 4, 11 and 19, 2019.

The proceeding and hearing were conducted in accordance with the WRRB's *Rules of Procedures, June 14, 2017*.[23]

5.2. Registered Intervenors

Interested organizations or individuals were required to register as intervenors via the Board's website or to notify the WRRB in writing via email by February 15, 2019. Four organizations registered by the deadline date: the Canadian Arctic Resources Committee (CARC), the Délı̨nę Got'ı̨nę Government (DGG), the North Slave Métis Alliance (NSMA) and the Yellowknives Dene First Nation (YKDFN). Full intervenor status was granted to CARC, DGG, NSMA and YKDFN on February 15, 2019.

5.3. Information Requests

In order to obtain the information necessary for the WRRB to consider as part of the record of this proceeding, a series of Information Requests (IRs) were issued to the registered Parties. The IRs and responses are all available on the online public registry.

The first round of IRs was issued February 8, 2019, requesting that TG and GNWT provide additional Tłı̨chǫ knowledge and scientific information and rationale on the proposed management and monitoring actions. GNWT and TG provided their responses on February 18, 2019. On March 6, 2019, the Board requested consent from all Parties to post supporting documentation referenced by TG and GNWT in their management proposal and IR No.1 responses to the public registry. No concerns were raised, and documents were posted on March 12, 2019.

The second round of IRs was issued February 25, 2019, requesting all Registered Parties provide additional information related to range planning and bull harvest. Additionally, NSMA submitted five IRs for response by GNWT related to harvest, predator management, and habitat and land use. All Parties provided their responses on March 6, 2019.

[23] https://wrrb.ca/sites/default/files/WRRB%20Rules%20of%20Procedure%2014jun2017_1.pdf

5.4. WRRB Public Hearing, April 9-11, 2019

To ensure that procedural, legal and administrative items were addressed prior to the public hearing, the Board held a pre-hearing conference on March 18, 2019 in Yellowknife, NT. The WRRB issued public hearing instructions to the registered Parties as required and, further to recommendations made by Parties during the pre-hearing conference, a revised set of instructions was issued on March 19, 2019. The instructions also included the requirements for Party closing statements and final written arguments.

Hearing presentations from intervenors were requested for March 29, 2019; presentations from TG and GNWT were requested for April 1, 2019. All written submissions, hearing presentations and speaking notes were posted to the public registry.

During the April 9-11, 2019 hearing in Behchokǫ̀, NT, the registered Parties gave oral presentations and asked questions of the other Parties. The registered general public were also given a daily opportunity to address the WRRB in the hearing. A list of registered Parties and general public is in Appendix F. A full written transcript of each day's session was produced and is available on the public registry.[24] Recommendations provided by the Intervenors were summarized by Board staff (Appendix G).

The WRRB adjourned the hearing on April 11, 2019. Final written arguments were submitted by registered intervenors on April 24, 2019, and by TG and GNWT on April 26, 2019. It should be noted that CARC did not provide any written submissions or presentations nor did they attend the public hearing.

The public record was closed on April 26, 2019 and the WRRB's deliberations followed.

6.0. Is there a Conservation Concern for the Sahtì Ekwǫ̀ Herd?

Based on the WRRB's review of Sections 12.6.1 and 12.6.2 of the Tłı̨chǫ Agreement, the first question which must be answered is whether there is a conservation concern with respect to the Sahtì ekwǫ̀ herd. If the WRRB is not convinced that there is a Sahtì ekwǫ̀ management problem, it does not have the authority to recommend harvest limitations on Tłı̨chǫ citizens.

[24] http://wrrb.ca/public-information/public-registry

6.1. Evidence Presented

6.1.1. Evidence from Indigenous Parties

In his opening remarks, Chief Clifford Daniels highlighted the severity of the decline of the Sahtì ekwǫ herd:

"*The decline of the herd is a serious situation. You will hear about the impacts of the herd on our well-being, our way of life, and land-based economy"* and *"This decline has separated us from the caribou. We want to be part of the caribou again"*.[25]

In their closing remarks, NSMA stated that they *"remain deeply concerned that the rate of decline of the BNE herd has not slowed down since the implementation of the last management proposal (2016-2018)"*.[26] YKDFN acknowledged the *"dire reality of the caribou decline"*.[27]

A main message from harvesters and elders was the need to sustain – care for and protect – ʔekwǫ, and to be careful how much you talk about them, especially in a negative way, which is disrespectful. Elder Alfred Taniton emphasized this:

> "*And so, when we speak of it [ʔeksǫ], we -- and the Elders used to say, And all the animals on this land is to be used by the people. It is not to be talked about. …Treat it well. Do not talk about it*".[28]

Elder Taniton went on to say the situation may worsen unless better solutions are found,

> *"And so, to this day -- to this day, the caribou still do exactly what it [story] says. It goes in its migration -- migratory route to the calving grounds, and this is the importance of what we are talking about today. He [prophet] said that when it disappear, it's going to be very -- very difficult for all of us. That may be true, but as an Elder from Délı̨nę, from a prophet Ayha who spoke -- and who spoke about the future, and he spoke about what was going to take place in the future. So, there's some people in here that probably know about the -- the words of our -- our prophet Ayha. And in the future, this is what is going to take place, he said. There is going to become a time when famine is going to be on this land. And what we are walking towards is really, really drastic -- will be very, very drastic. And -- and grandpa, this is how he showed the importance of what he was*

[25] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p 8.
[26] PR (BNE 2019): 186 - North Slave Métis Alliance Final Written Argument.
[27] PR (BNE 2019): 189 - Yellowknives Dene First Nation Final Written Argument.
[28] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.144.

saying. And he said that when -- no food -- there is going to be no food on our land. It's going to become really, really drastic. The water will also disappear. … I wanted to -- I wanted to tell you about my comments about what I thought about the comment -- the presentations this morning. And our Elders killed as many caribou as they needed to survive. And -- and since -- and so we are the ones that are -- live on the -- on the people that live in the cold land, that decision should be up to us".[29]

Elders and harvesters know the rules associated with caring for the ʔekwǫ̀ and maintaining their relatedness with the animals. As is the Dene way, the most knowledgeable are listened to as well as listen to others. The most knowledgeable find solutions when ʔekwǫ̀ become scarce.[30] Elder Phillip Dryneck exemplifies this in his statement:

"*That's the reason why we, as Elders, always make a strong statement regarding the -- how we should protect our animals at the -- but as an Elder, I feel that maybe we are the ones that we should be the -- the people that most -- people -- main spokesperson for regarding those wildlife such as caribou but nonetheless to date I guess we pretty well have to depend only on our leaders* [who have chosen to limit our harvest]".[31]

6.1.2. Scientific Evidence

Herd Estimates and Vital Rates

A June 2018 calving ground photographic survey of the Sahtì ekwǫ̀ herd, conducted by the GNWT, resulted in a total estimate of 11,675 breeding cows (95% CI = 9971 – 13,670), which indicated that abundance of breeding females had decreased by about 32.9 % since the June 2015 estimate of 17,396 (95% CI = 12,780-22,012) (Figure 2).[32] The estimate of adult females in the survey area was 13,988 (95% CI=12,042-16,249). The proportion of adult females classified as breeding was higher in 2018 (83%) than in 2015 (63%).[33] The overall decline between 2015 and 2018 is 50% based on the total population estimate, which fell from 38,592 (95% CI = 33,859-43,325) in 2015 to 19,294 (95% CI = 16,527- 22,524) in 2018 (Figure 3).[34]

[29] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.147-148.
[30] PR (BNE 2019): 061 - Caribou migration and the state of their habitat. Legat et al. 2001.
[31] PR (BNE 2019): 174 - Transcript, April 10, 2019 (DAY 2) - 2019 Bluenose-East Caribou Herd Public Hearing. p.180.
[32] PR (BNE 2019): 201 – Undertaking #1, Part B, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing
[33] Ibid.
[34] Ibid.

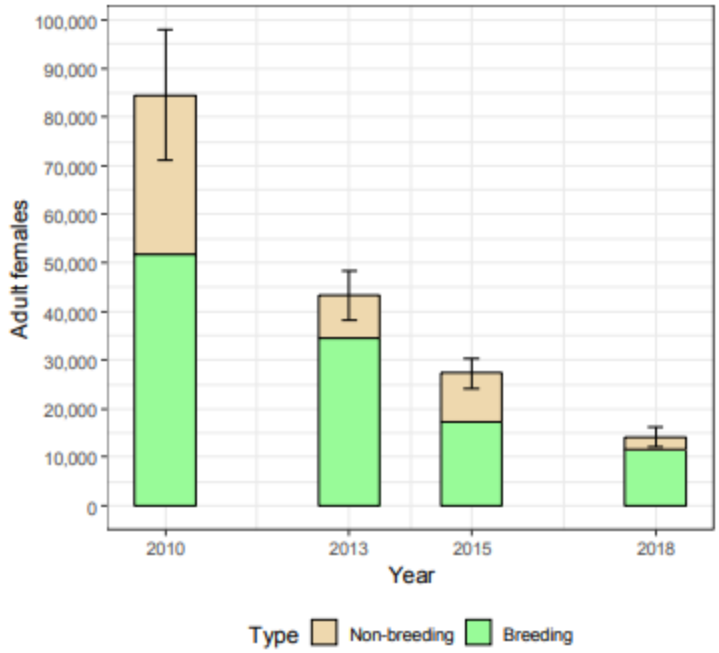


Figure 2. Sahtì ekwǫ herd breeding cow estimates (± 95% CI), 2010-2018.[35]

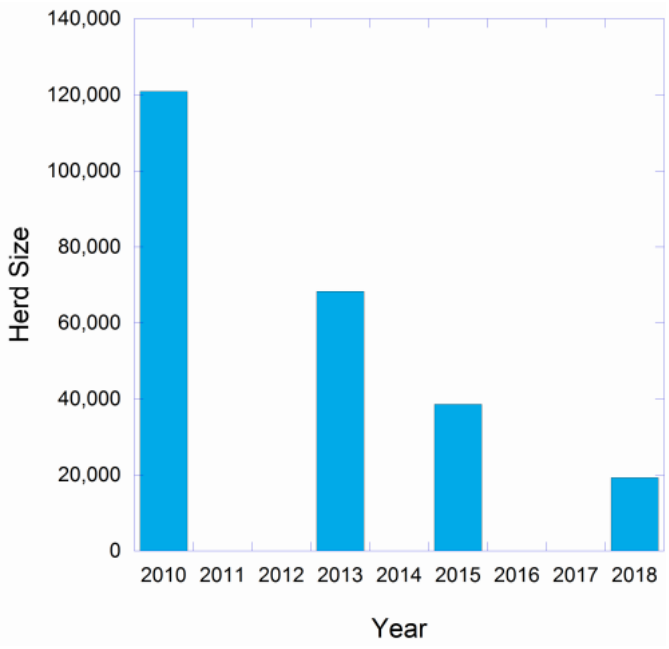


Figure 3. Sahtì ekwǫ herd population estimates, (± 95% CI) (2010-2015).[36]

[35] PR (BNE 2019): 001 – Joint Management Proposal on Management Actions for the Bluenose-East Ekwǫ (Barren-ground caribou) Herd: 2019-2021.
[36] PR (BNE 2019): 164 - ENR Public Hearing Presentation.

"A rapid and continuing decline"[37] is how TG and GNWT characterized the 2019 Sahtì ekwǫ herd's status. Based on the survey results, the herd has declined annually by about 20% from about 103,000 in 2010 to 19,300 in 2018. This equates to a total decline of 81%.[38]

The herd may be declining due to the low annual survival of cows (averaging 79%, 2010-2018, based on Table 1) and calves (averaging 36%, 2010-2018, based on Table 2).[39]The survival rate for adult cows needs to be at least 84-92% for a stable herd.[40] Calf survival rates, the ratio of calves to 100 cows, should be about 35-45 calves: 100 cows in a stable herd in October. In October 2018, the Sahtì ekwǫ herd had a ratio of 25 calves: 100 cows.[41]

Table 1. Collar-based annual survival estimates of Sahtì ekwǫ̀ cows from 2010-2011 to 2017-2018. A caribou year begins in June and ends at the end of May.[42]

Caribou year	Survival	SE	95% Confidence Interval	
2010	0.67	0.16	0.33	0.89
2011	0.97	0.03	0.84	1.00
2012	0.60	0.08	0.45	0.74
2013	0.74	0.09	0.54	0.88
2014	0.79	0.08	0.60	0.90
2015	0.93	0.04	0.77	0.98
2016	0.84	0.07	0.67	0.93
2017	0.75	0.08	0.55	0.88

[37] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ (Barren-ground caribou) Herd: 2019 – 2021.
[38] PR (BNE 2019): 201 – Undertaking #1, Part B, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.
[39] Ibid.
[40] Ibid.
[41] PR (BNE 2019): 165 - ENR Public Hearing Presentation Speaking Notes.
[42] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

Table 2. Annual Survival Estimates of Sahtì ekwǫ̀ calves from 2009-2018.[43]

Caribou Year	Survival	Standard Error	Lower 95% Confidence Interval	Upper 95% Confidence Interval
2009	0.46	0.017	0.427	0.495
2010				
2011				
2012				
2013	0.36	0.014	0.334	0.388
2014				
2015	0.347	0.015	0.318	0.376
2016	0.434	0.024	0.389	0.481
2017	0.435	0.019	0.401	0.475
2018	0.257	0.257	0.016	0.291

Pregnancy rates, based on testing the cows during collaring, are high. In healthy herds, the breeding-age cows usually have a pregnancy rate of 80% or more.[44] In June 2018, the proportion of breeding females in the BNE herd was 83%, which suggests a healthy pregnancy rate.[45]

Harvest was estimated to be about 1260 ʔekwǫ̀ per year between 1998 and 2005. Harvest rates increased between 2009/10 and 2013/14 (2009/10 – 3,466, 2010/11 – 2,918, 2011/12 – 1,766, 2012/13 – 2,562 and 2013/14 – 3,016). Harvest data from 2014/15 and 2015/16 are not published.[46] Harvest levels decreased dramatically in 2016/17 and 2017/18 to 373 and 323 ʔekwǫ̀, respectively, after a TAH of 750 bulls was implemented in 2016.[47]

In 2016, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed ʔekwǫ̀ in the NWT and Nunavut as Threatened. The status of ʔekwǫ̀ under federal Species at Risk legislation is currently under review. Within the NWT, ʔekwǫ̀ were assessed by the Species at Risk Committee as Threatened in 2017 and were later listed as Threatened under the NWT *Species at Risk Act* in 2018.

Guidance for the management and monitoring of the Sahtì ekwǫ̀ herd in the NWT is primarily found within the ACCWM's *Taking Care of Caribou Management Plan*. In

[43] PR (BNE 2019): 009 – TG and ENR Responses to Information Requests Round No. 1.
[44] PR (BNE 2019): 164 - ENR Public Hearing Presentation.
[45] Ibid.
[46] Ibid.
[47] Ibid.

2018, the Sahtì ekwǫ herd was assessed by the ACCWM as being in the red zone.[48] A red status is assigned when the population level is low.[49] For the Sahtì ekwǫ herd, a low population is under 20,000 animals.[50]

Movement of Collared ʔekwǫ among Herds

GNWT assessed the movement of collared females between the Sahtì ekwǫ and neighbouring Bluenose-West and Kǫk'èetì ekwǫ calving grounds from 2010-2018 and determined there was minimal movement of cows to or from neighbouring herds.[51] Figure 4 depicts the number of collared animals that have immigrated and emigrated from the Sahtì ekwǫ herd from 2010-2014 and 2016-2018.

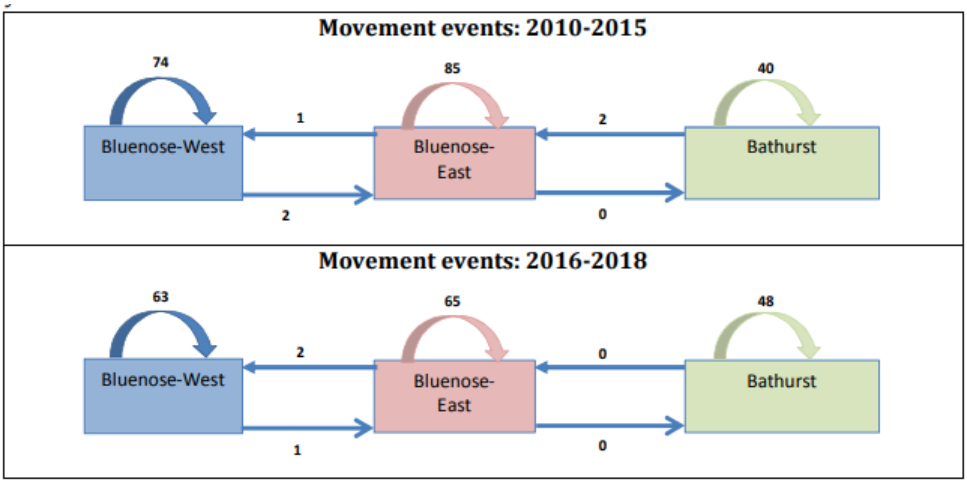


Figure 4. Movement of collared animals in and out of the Sahtì ekwo herd 2010-2015 and 2016-2018.[52]

State of the Habitat

The Joint Proposal stated that while harvest levels likely contributed to the herd's decline between 2010 and 2015, harvest was relatively low between 2015 and 2018 and thus other factors must be at play.[53] The proposal goes on to list predation, disturbance from industry, and adverse environmental conditions as being key to the Sahtì ekwǫ herd's decline.[54]

[48] PR (BNE 2019): 080 - Advisory Committee for Cooperation on Wildlife Management. 2019. Action Plan for the Bluenose East Caribou Herd 2019-2020 – Red Status. Yellowknife, NT.
[49] PR (BNE 2019): 069- Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East Barren-Ground Caribou Herds Management Plan. ACCWM. 2014.
[50] Ibid.
[51] PR (BNE 2019): 201 – Undertaking #1, Part B, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.
[52] Ibid.
[53] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ (Barren-ground caribou) Herd: 2019 – 2021.
[54] Ibid.

Boulanger and Adamczewski found that climate variables including summer warble fly index, summer drought index, and winter climate factors, including snow depth, can help statistically explain cow and calf survival, and pregnancy rates.[55] For example, a drought year in 2014 likely led to poor feeding conditions, poor cow condition and low pregnancy rate in 2014-2015.[56]

The Joint Proposal identified that predation may be a key limiting factor as harvest rates are low.[57] However, without survey information on predators, the effects of predation cannot be evaluated. The WRRB submitted recommendations for predator management to TG and GNWT on February 6, 2019. These recommendations included surveys of predators on the Sahtì ekwǫ̀ range including dìga, sahcho, and *Det'ǫcho* (eagle). The Governments accepted theses recommendations with some variations. This correspondence is in Appendix H.

6.2. Conclusion

The WRRB agrees with TG and GNWT's characterization of the herd's continuing and severe decline based on the aerial photographic calving ground surveys (2010-2018). It remains unclear what the causes of the decline may be. The WRRB notes that with the updated information on adult survival,[58] the average is 79% (2010-2018) and, while this varies annually, it is not as low as the 71% adult survival rate reported by the Joint Proposal.[59] The WRRB is also concerned by the low calf survival, which, while varying between years, is trending down and is lower during the summer than the winter (for the 4 years when it was measured both in the fall and the following late winter).[60] It is uncertain whether the average rate of adult cow and calf survival is sufficient to explain the rate of decline, as measured by the trend from the calving ground survey.

The completeness and reliability of the evidence available to the Board is variable. The calving ground survey, based on the Board's review of the resulting report,[61] was conducted to a high technical standard. The sex and age composition surveys are not reported in detail, but what detail there is, appears reliable. The WRRB does not agree that pregnancy rates are high since the follow-up evidence indicated that rates vary annually.[62] Relying on testing of the collared cows to measure pregnancy adds

[55] PR (BNE 2019): 041 - Analysis of environmental, temporal, and spatial factors affecting demography of the Bathurst and Bluenose-East caribou herds DRAFT June. Boulanger & Adamczewski. 2017.
[56] Ibid.
[57] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[58] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.
[59] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[60] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.
[61] PR (BNE 2019): 201 - Undertaking #1, Part B, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.
[62] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

uncertainty as it overestimates rates compared to fecal sampling or the percentage of breeding cows on the calving ground. The WRRB notes that in 2010 and 2015, the percentage of pregnant breeding cows was 61-63% compared to 80-83% in 2013 and 2018.[63]

The WRRB heard the GNWT express confidence in the reported harvest levels[64] and the department state that reduced harvest levels were a result of changes in winter distribution relative to the communities. There is a gap in the harvest information provided in the Joint Proposal, which only summarizes rates up to 2012/13 (average 2700-4000/year) and then for 2016-2018 (323-373 bulls).[65] The recent numbers constitute an abrupt 10-fold decrease in harvesting, well below the 2016 TAH level. However, GNWT and TG neither analysed winter distribution relative to neighboring herds nor included harvesters' information on location of harvest. This leaves the WRRB uncertain about the reliability of the harvest information.

The WRRB is concerned that TG and GNWT's Joint Proposal has not provided all the available information on predation. For example, the rate of predator sightings during aerial or ground-based surveys is not included. Although the WRRB issued an Information Request for the annual and seasonal rate of collar loss as an indicator of survival, only the annual rate of collar loss was provided.[66] It would have been helpful for the WRRB to know in which season and where the cows were dying to help determine if mortalities were due to predation.

The Joint Proposal did not offer any evidence to help the WRRB understand how the uncertainty and complexity of the effects of climate change can be addressed in halting the decline of the herd.

However, Petter Jacobson, TK Researcher for TG, did state

> *"The first thing we -- was -- that was easily noticeable by the Elders was the impact of climate change on caribou and its habitats. And because of the increasing temperatures and the melting summer snow, caribou are now engaging in new behaviours, like we see them standing in water for long time periods. And the photo on the bottom shows a herd we saw just standing a long time in the water to try to cool down. And last summer we saw for the first time herds running in circles. And the -- they're doing this to try to avoid heat and harassment by insects and they're trying to create wind. And this was the first*

[63] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.
[64] PR (BNE 2019): 174 - Transcript, April 10, 2019 (DAY 2) - 2019 Bluenose-East Caribou Herd Public Hearing. pp. 34-36.
[65] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[66] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

time that the Tłı̨chǫ monitors observed this behaviour and also it's the first time that their Inuit partners who we worked with observed this type of behaviour. … In relation to climate change, industrial development as well as harvesting restriction, the Tłı̨chǫ will often say, And sitting on the land with Elders and harvesters I often hear statements such as, caribou are not here because people are not here. And these type of statements demonstrate our program recommendations to support Indigenous people on the land activities to restore balances in 9 the ecosystem. Okay, so I'm going to move on from our results to some of our plans that we outlined in the management proposal. One (1) purpose of traditional knowledge research is to gather and use the Elders' knowledge, but also create space for that knowledge in decision-making and management". [67]

Nevertheless, the overall evidence available to the Board including that from Indigenous elders, and the trend in ʔekwǫ̀ numbers are clear and compelling. As such, the WRRB concluded that the preponderance of the Indigenous and scientific evidence submitted suggests that there is a serious conservation concern and increased monitoring actions are both warranted and urgently required. In addition to a limited bulls only harvest, additional management and monitoring actions that focus on reducing predation and disturbance to Sahtì ekwǫ̀ and their habitat are required.

7.0. WRRB's Determinations and Recommendations

7.1. Introduction

In developing determinations and recommendations to halt the decline of the Sahtì ekwǫ̀ herd, the WRRB was highly concerned about the need for effective and timely actions. This is in agreement with Dr. John B. Zoe, TG, who stated that:

"So, all I'm saying is that we need to help our Joint Management Proposal more than we have in the past with the Bathurst Joint Management Proposal. We've got to do something different…". [68]

and, the GNWT who stated that:

"Timely conservation-based management actions are needed to help the BNE herd recover so that it can once again provide sustainable harvests that meet the needs of traditional users and communities". [69]

[67] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p 82.
[68] Ibid. p 119.
[69] PR (BNE 2019): 196 - ENR Final Written Argument.

Consistent with the requirements of the Tłı̨chǫ Agreement, the WRRB is taking a precautionary approach[70] as well as learning from the experience of the 2016 TAH, which did not on its own achieve the objective of halting the decline. Reducing harvest and predation are the two management actions that most directly and immediately affect ʔekwǫ̀ survival rates.

While the WRRB is most concerned about harvest and predation, the Board also recognizes the importance of a healthy habitat, efficient and effective monitoring that is able to rapidly inform management decisions (adaptive management), and the support and understanding of an informed public. Therefore, in addition to the urgency of actions to halt the decline, the WRRB has recommendations on habitat, adaptive management, and education.

7.2. Total Allowable Harvest

7.2.1. Introduction

In the Tłı̨chǫ Agreement, a TAH level is defined as *"in relation to a population or stock of wildlife, the total amount of that population or stock that may be harvested annually"* (i.e. a TAH is a specific number of ʔekwǫ̀ that can be harvested from a particular herd). As set out in Section 12.5.5(a)(i) of the Tłı̨chǫ Agreement, the WRRB has sole responsibility for making a final determination with respect to a TAH for Wek'èezhìı.

In 2016 the WRRB made a determination to implement a TAH of 750, bulls only for Sahtì ekwǫ̀. This was the first TAH for Sahtì ekwǫ̀ in Wek'èezhìı.

Increasing adult survival by reducing harvest rates is a first and, often, the only direct management action. The effectiveness of harvest reduction as a stand-alone action is dependent on the factors which are driving the decline and whether they have changed during the decline.

7.2.2. Proponent's Evidence

The Joint Proposal indicates that, even with a reduced harvest of 373 Sahtì ekwǫ̀ in 2016/17 and 323 Sahtì ekwǫ̀ in 2017/18, the herd still declined about 20% for each of those two years. GNWT has undertaken computer modeling to project the effectiveness of reducing harvests under different levels of calf and adult survival. GNWT concluded that if adult and calf survival increased to at least >85% and >40%, respectively, a harvest of 300 bulls would not hinder recovery.[71] GNWT's rationale for decreasing the

[70] Section 12.1.5(c) of the Tłı̨chǫ Agreement.
[71] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

harvest from 1.9% (TAH 750 bulls in 2016) to 1.6% (TAH 300 bulls in 2019) is to have minimal effect on the rate of decline while providing for cultural continuity.[72]

7.2.3. Other Parties' Evidence

NSMA supported the proposed action to lower harvest limits and recommended a variable TAH of up to 300 bulls only Sahtì ekwǫ̀ per season.[73] NSMA further recommended an annual review of the TAH based on cow and calf survival rates, using an adaptive management framework and response plan.[74] YKDFN did not support either the TAH of 300 bulls only Sahtì ekwǫ̀ or the six Sahtì ekwǫ̀ allocated for YKDFN, and they did not propose alternative numbers.[75]

DGG highlighted the continued implementation of their conservation plan *Belare wíle Gots'ę́ ʔekwę́ – Caribou for All Time*, in particular, the policy to increase *Dene Béré* (alternative harvest) traditions, harvesting what the land does provide in abundance. Elder Walter Bezha said

> *"But Délı̨nę is leading the plan. We're implementing, we're harvesting, we have -- we -- we're harvesting more fish, and more moose, and more woodland caribou than we ever have in the last ten (10) years. And we're not going to be harvesting something that's not [there] -- you've seen the -- the information from ENR yesterday about where the caribou have been the last year, the migration pattern"*.[76]

7.2.4. Analysis and Determination

In the preceding Section 6, the WRRB questioned whether monitoring of harvest levels is providing accurate information. The Joint Proposal provides no evidence to determine the effectiveness of the authorization cards compared to, for example, information collected at check stations or through officer patrols. Such a comparison could have supported the TG and GNWT assumption that the harvest levels are accurately measured.

The GNWT reported that recovery would not be hindered by a harvest of 300, if adult and calf survival increased to at least >85% and >40%, respectively.[77] This then, is a

[72] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[73] PR (BNE 2019): 186 - North Slave Métis Alliance Final Written Argument.
[74] Ibid.
[75] PR (BNE 2019): 189 - Yellowknives Dene First Nation Final Written Argument.
[76] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. pp. 53-54.
[77] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

question of how to increase survival. The WRRB notes that GNWT has not used its population model to explore how the 2016-2018 harvest levels influenced the current annual rate of decline under the measured rates of adult and calf survival.

Additionally, the proposal does not provide evidence to explain how reducing the bull harvest will increase the survival of cows. Increasing the survival rate of cows to between 86 and 90% is considered necessary for herd recovery. In other words, there is little or no evidence to suggest that the reduced harvest of 300 bulls will ensure that the Sahtì ekwǫ herd will stabilize or recover. However, further harvest limitations could reduce any direct and/or indirect sources of mortality to Sahtì ekwǫ cows caused by harvesters.[78]

Emphasis on bull harvest over cow harvest should be greatest in declining herds and/or herds at low numbers.[79] However, as noted by the Tłı̨chǫ elders, it is also important to protect the bulls in order for them to continue guarding the cows from dìga and providing strong genetic material for the future herd.[80] A limited harvest of *yaagoa* (younger bull; third year male ʔekwǫ) in the early spring, and *wedzıh* (biggest male ʔekwǫ) in the late spring and fall[81] will permit Tłı̨chǫ citizens to continue their relationship with the ʔekwǫ, slow the rate of herd decline, and ensure that cows can still be protected by the wedzıh. As Tammy Steinwand-Deschambeault explained:

> *"Our perspective is that with a focus on younger bulls, this total allowable harvest represents a low additive risk for the herd, which has been outlined in GNWT's presentation and modeling work"*.[82]

Harvesting ʔekwǫ is about more than just food security[83] for the Tłı̨chǫ, it is about Tłı̨chǫ harvesters' connections within their culture, language and way of life. Tammy Steinwand-Deschambeault explained *"[*On the table in front of me, there are*] special artifacts carrying the spirit of the caribou. They will help us tell our story"*.[84]

Dr. John B. Zoe sums up the importance of Tłı̨chǫ thriving, when he said harvesting is

> *"… a way of life, in relation to the caribou is described in the Tłı̨chǫ Agreement, which is 12.1.1, which encompasses our livelihood and we try to capture that in our agreement to ensure that we always have a connection to the caribou, the*

[78] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.
[79] Ibid.
[80] PR (BNE 2019): 061 - Caribou migration and the state of their habitat. Legat et al. 2001.
[81] Ibid.
[82] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.74.
[83] Food security is defined as "the state of having reliable access to a sufficient quantity of affordable, nutritious food". https://www.lexico.com/en/definition/food_security.
[84] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.68.

activity around the caribou and the ceremonial games that happen around the -- the caribou and the travel. Everything that we -- that we had was in relation to the caribou".[85]

And near the end of his presentation for TG, Dr. Zoe reiterated the importance of the Tłı̨chǫ way of life:

"And so the picture I'm trying to paint today is that going as far back as a hundred and fifty (150) years ago, we've been fighting against the current, fighting against a change, and that change is disenfranchising our ability to carry on our way of life, our knowledge that comes with that life, our kinship, our relation to the animals and the fish in the water and to the trees that provide the birch bark to go -- to go to where we're going. All these things that are there that people continue their way of life and kept the information alive until today; we still have it".[86]

Figure 5 shows an approach to how the harvest rate and sex ratio of harvest could be adjusted to the herd's risk status.[87] Indicators of a herd at high risk include low calf recruitment, low cow survival, poor condition as assessed by harvesters, and high dìga numbers. Harvest in high-risk herds is tolerable at 1% or less of the herd and may increase to 2, 3 and 4% of the herd in lower-risk herds. Emphasis on harvest of bulls only or a high percentage of bulls in the harvest would be greatest in high-risk herds. This approach is contingent upon ongoing reliable reporting of harvest by all harvesters, despite the herd's size or trend.

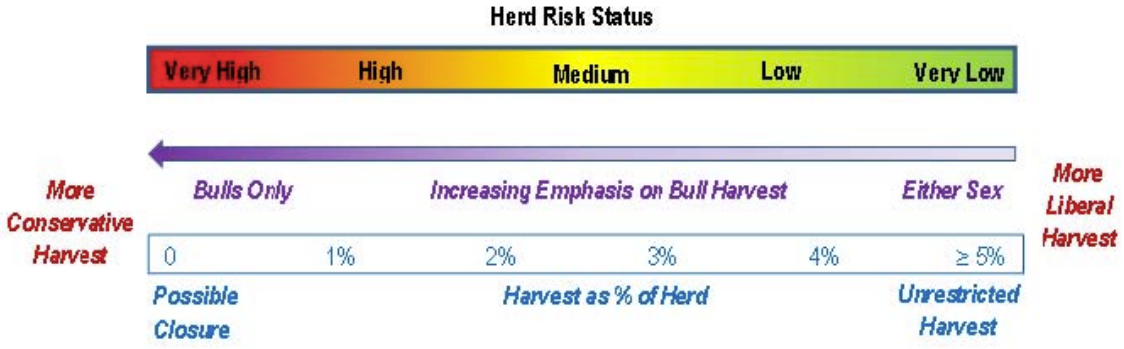


Figure 5. Suggested approach to recommending rate (% of herd) and sex ratio of harvest depending on a herd's risk status.[88]

GNWT and TG reported that in 2016/17 and 2017/18, 373 and 323 Sahtì ekwǫ̀ were harvested, respectively. This equates to a harvest rate of approximately 0.91% per year

[85] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.87.
[86] Ibid. p.109.
[87] PR (BNE 2019): 095 - Harvest recommendations for barren-ground caribou based on herd risk status: A rule of thumb approach. ENR. 2013.
[88] Ibid.

based on the 2015 population estimate of 38,000. However, the Sahtì ekwǫ herd continued to decline by 20% between 2016-2018. The proposed TAH of 300 bulls only Sahtì ekwǫ equates to an annual harvest rate of approximately 1.6% of the 2018 population estimate. Therefore, a TAH of 300 in 2019 results in more harvest pressure on the herd than during 2016-2018. The Board believes that an acceptable harvest would be 1%, i.e.193 Sahtì ekwǫ, bulls only.

Furthermore, the 20% rate of decline of Sahtì ekwǫ is similar to rate of decline for the Kǫk'èetì ekwǫ. Figure 6 compares the population estimates of the two herds through time.

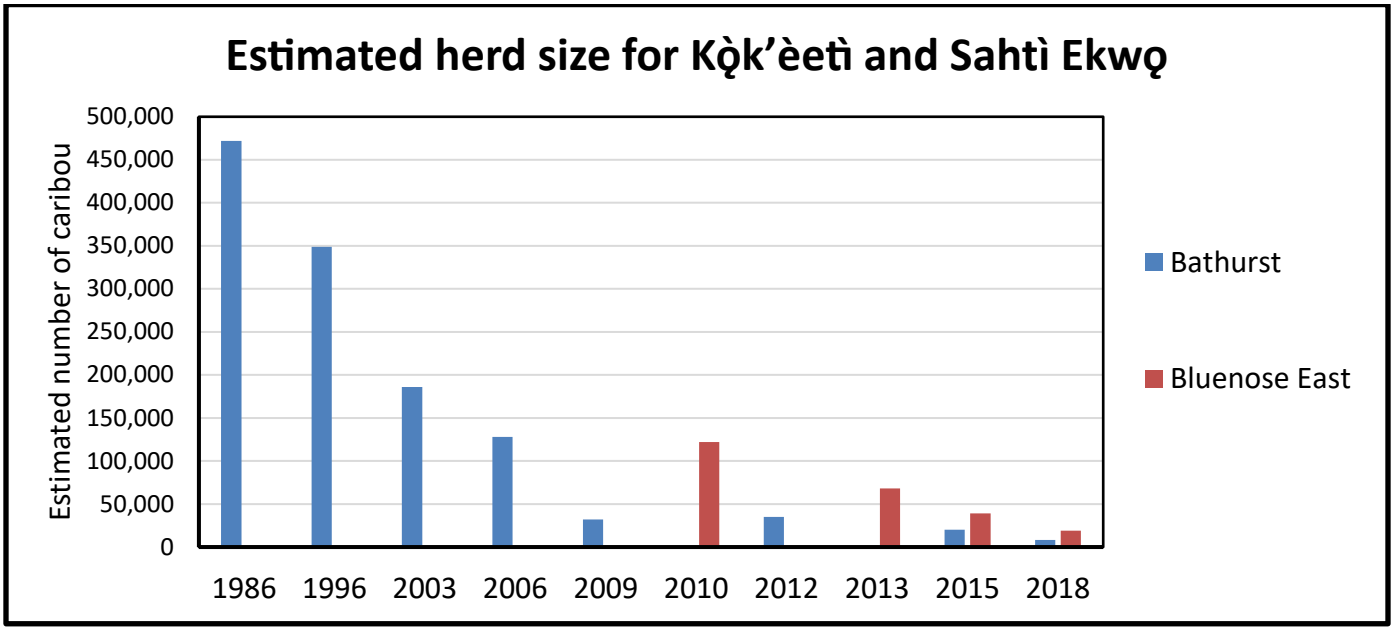


Figure 6. Comparison of Kǫk'èetì ekwǫ and Sahtì ekwǫ estimates.[89]

Table 3 compares the population estimate of Kǫk'èetì ekwǫ and Sahtì ekwǫ, and the TAH which was determined at the time. The Board acknowledged the similar rate of decline between the herds in its decision making.

[89] https://www.enr.gov.nt.ca/en/services/barren-ground-caribou.

Table 3. Comparison of Kǫ̀k'èetì ekwǫ̀ and Sahtì ekwǫ̀ population estimates and TAH.[90]

Kǫ̀k'èetì Ekwǫ̀			Sahtì Ekwǫ̀		
Survey Year	Population	TAH (% of population)	Survey Year	Population	TAH (% of population)
2013	35,000	300 (0.86%)	2016	39,000	750 (1.9%)
2016	20,000	0	2018	19,300	193 (1%)
2018	8,200	0*			

* Proposed

As per Section 12.6.3 of the Tłı̨chǫ Agreement, any harvest limit *"shall be no greater than necessary to achieve the objective for which they are prescribed, and may not be prescribed where there is any other measure by which that objective could reasonably be achieved if that other measure would involve a lesser limitation on the exercise of the rights"*.

In making its determination about harvest limitations, the WRRB considered the risks to the herd given the recent high rate of decline, uncertainties about the underlying mechanisms for the decline, the importance of ekwǫ̀ for food security and cultural strength, and the comparison to the rate of decline of Kǫ̀k'èetì ekwǫ̀.

Evidence from the public during the proceeding, as well as from Tłı̨chǫ elders during the 2007 TG workshop, suggest a willingness to restrict harvest, and leave the ʔekwǫ̀ alone.[91] Leaving ʔekwǫ̀ alone, to the elders, includes all activities that stress or bother those remaining. As Elder Leon Modeste summarizes:

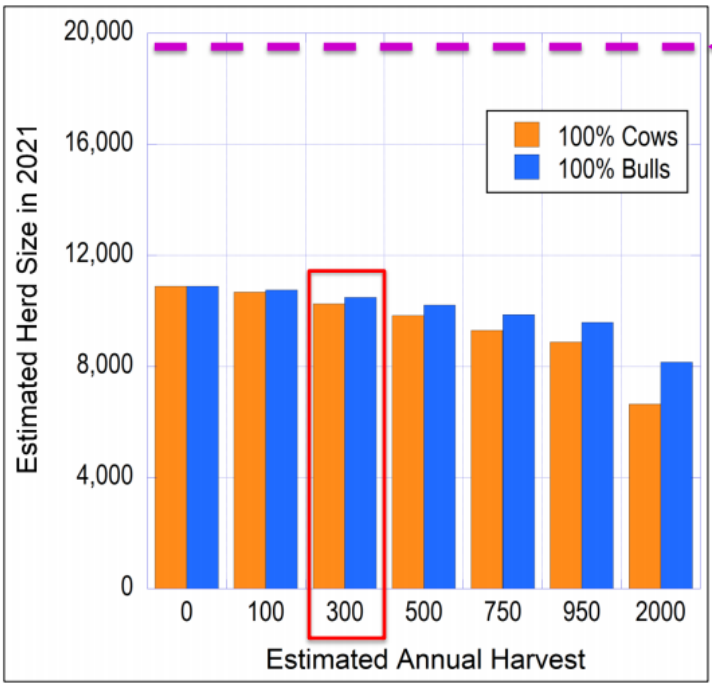
> *"We can -- it's really, really important not to talk about it for a little while and let's not talk about it, let's not follow them on planes, let's not hunt them, let's just leave them alone. I'm telling you what I'm thinking and because it's really, really important and -- and this is what the Walter said earlier, he says that I wonder -- I think my time is up but I'd like to say, like, whether you are non Aboriginal, Aboriginal people, it's really, really important to stand together on this and to have this approach together".*[92]

[90] https://www.enr.gov.nt.ca/en/services/barren-ground-caribou.
[91] PR (BNE 2019): 145 - Transcript, Tłı̨chǫ Government Caribou Workshop, Whatì, NT – Day 2. 2007.
[92] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. p.31.

To slow the rate of decline, offset the effects of unreported harvest, and reduce the bulls only harvest to ensure the cows are protected, the Board believes a more conservative TAH is required. Therefore, a TAH of 193 Sahtì ekwǫ̀, bulls only, must be implemented without delay.

In making its decision, the WRRB considered Figure 7 provided by GNWT,[93] which models 2021 population estimates for Sahtì ekwǫ̀ with different harvest rates. This figure suggests that even a total harvest of zero would not halt the decline; however, lower harvest rates could *slow* the rate of decline.

Although the Board determined that a TAH of zero was appropriate when Kǫ̀k'èetì ekwǫ̀ was at a similar population level, there were other ʔekwǫ̀ herds, with no harvest restrictions, that could be utilized. The WRRB wishes to balance protection of the herd to encourage recovery with the nutritional and cultural needs of the Tłı̨chǫ, and other Indigenous people who rely on Sahtì ekwǫ̀. Figure 7 and the Joint Proposal suggest that harvest levels of 100-300 per year will likely result in minimal additional declines.[94]



Harvest	All Cows	All Bulls
0	10,898	10,898
100	10,685	10,760
300	10,260	10,486
500	9,834	10,212
750	9,303	9,869
950	8,878	9,595
2000	6,645	8,155

Figure 7. Impacts of harvest on the Sahtì ekwǫ̀ herd in 2021(adult cow survival 71% and average calf survival). The dashed line is the herd size in 2018; 19,300. The bars represent the numbers on the right.[95]

[93] PR (BNE 2019): 176 - Undertaking #2, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.
[94] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[95] PR (BNE 2019): 176 - Undertaking #2, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.

Determination #1-2019 (Sahtì ekwǫ̀): Harvest of Sahtì ekwǫ̀
A total allowable harvest of 193, bulls only, for all users of the Sahtì ekwǫ̀ herd within Wek'èezhìı is to be implemented by the TG and GNWT for the 2019/20 and 2020/21 harvest seasons.

7.3. Harvest Allocation

7.3.1. Introduction

Section 12.5.5(a)(ii) of the Tłı̨chǫ Agreement states that *"the WRRB shall make a final determination about the allocation of portions of any TAH for Wek'èezhìı to groups of persons or for specified purposes"*.

7.3.2. Proponent's Evidence

Based on the 2018 population estimate and GNWT's recommended allocation from the 2014/15 harvest season, TG and GNWT proposed a herd-wide allocation for the Sahtì ekwǫ̀ herd as 300 ʔekwǫ̀, i.e. Tłı̨chǫ 118 (39.29%), Sahtú 52 (17.14%), Dehcho 5 (1.61%), Inuvialuit 2 (0.89%), Northwest Territories Métis Nation 5 (1.43%), Akaitcho 6 (2.14%), North Slave Métis Alliance 5 (1.79%), and Nunavut 107 (35.71%).[96] Although TG and GNWT have no authority over wildlife management in Nunavut, a consistent overall approach for Indigenous harvest of this migratory species is desired.[97]

The proposed allocation was based on the following:

- The results of the 2015 and 2018 calving ground surveys and the reported rate of decline of 20-21%;
- The *Taking Care of Caribou* management plan which places the Sahtì ekwǫ̀ herd in the red low population zone, where a TAH acceptable to ACCWM can be established;
- GNWT's harvest rule-of-thumb and associated modeling of harvest and ʔekwǫ̀ populations;
- The need to consider the Nunavut harvest;
- The WRRB recommendations of 2010 and 2016 for this herd, along with the herd's considerably reduced numbers, and its downward acceleration similar to the Kǫ̀k'èetì ekwǫ̀ herd's most rapid decline between 2006 and 2018.[98]

[96] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[97] Ibid.
[98] PR (BNE 2019): 149 - 2016 Reasons for Decision Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ̀ (Barren-ground Caribou) Herd - Part A.

7.3.3. Other Parties' Evidence

DGG and NSMA did not raise concerns about the ACCWM approach to allocation and that it has been used before by the Board also with no objections.

While YKDFN did acknowledge the *"dire reality of caribou decline and that certain concessions are required"*, they stated they did not accept the allocation due to *"the belief that indigenous rights to harvest, cannot and should not be placed in such absolute terms"*.[99] Further, YKDFN noted concerns about how overlaps in calving areas and ranges between the Sahtì ekwǫ̀ and Kǫ̀k'èetì ekwǫ̀ herds will be addressed. They point out that there could be *"potential conflicts"* between traditional harvesters of the two herds; therefore, the Chiefs of YKDFN do not agree with the six bull per year quota.[100]

7.3.4. Analysis and Determination

As the Board does not have the evidence necessary to make specific allocations in Wek'èezhìı, the WRRB concluded that they would express the allocation proportionately, basing their determination on TG and GNWT's considerations above and its authority within Wek'èezhìı only. Considering the determination for a total allowable harvest of 193, the harvest allocation would thus be: Tłı̨chǫ 76 (39.29%), Sahtú 33 (17.14%), Dehcho 3 (1.61%), Inuvialuit 2 (0.89%), Northwest Territories Métis Nation 3 (1.43%), Akaitcho 4 (2.14%), North Slave Métis Alliance 3 (1.79%) and Nunavut 69 (35.71%).

Determination #2-2019 (Sahtì ekwǫ̀): Sahtì Ekwǫ̀ Harvest Allocation
The proportional allocation of the total allowable harvest of the Sahtì ekwǫ̀ herd for the 2019/20 and 2020/21 harvest seasons shall be as follows: Tłı̨chǫ Citizens: 39.29% (76 animals) Members of an Indigenous people who traditionally harvest Sahtì ekwǫ̀ (includes Nunavut): 60.71% (117 animals) TG should determine distribution of the allocation with Tłı̨chǫ communities, and GNWT should determine distribution of the allocation to members of an Indigenous people who traditionally harvest Sahtì ekwǫ̀ in consultation with those groups.

[99] PR (BNE 2019): 189 – Yellowknives Dene First Nation Final Written Argument.
[100] PR (BNE 2019): 172 - Yellowknives Dene First Nation Public Hearing Presentation.

7.4. Harvest Monitoring

7.4.1. Introduction

Harvest monitoring is critical for ensuring TAH compliance, documenting wounding and wastage, and herd health monitoring. Community monitors, GNWT Renewable Resource Officers, and aerial and ground-based surveys are utilized for harvest monitoring purposes.

7.4.2. Proponent's Evidence

TG and GNWT's Joint Proposal described the monitoring methods for harvest and annual harvest levels.[101] GNWT monitors harvesting activity in Wek'èezhìı through a check station at Gordon Lake and McKay Lake and by Tłı̨chǫ community monitors, hired by TG. The community monitors keep TG and GNWT updated on activities on the land and report any infractions.[102] In addition, aerial reconnaissance flights throughout the fall and winter harvest seasons are conducted to check for any harvesting activity within wildlife management zones and along winter roads.

Previously, in 2015, GNWT and TG stated that officer presence would be increased in the communities if hunting pressure increased, but the primary approach is to work with community harvesters to educate them about the management and conservation measures in place. Education and prevention are the primary tools used in achieving harvest compliance; prosecution will always be a tool of last resort.[103]

7.4.3. Other Parties' Evidence

NSMA was concerned about how *"the proposed 300 bull-only (or 118 for Tłı̨chǫ and 5 for NSMA) harvest opportunity may be for the continuation of traditional practices, as compared to the risk of driving the BNE herd population further downward"* [104] and requested harvest levels for the previous 3 years for neighboring herds. GNWT responded that the Beverly/Ahiak herd's winter distribution influenced its harvests, which were in the North Slave region, 0 (2015-16); 3000 (2016-17); and 500 (2017-18).[105]

[101] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[102] Ibid.
[103] PR (BNE 2019): 149 - 2016 Reasons for Decision Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ̀ (Barren-ground Caribou) Herd - Part A.
[104] PR (BNE 2019): 018 - TG and ENR Responses to Information Request No. 2.
[105] Ibid.

NSMA was also concerned about how the relative proportion of harvested younger and older bulls could affect the remaining population.[106] While GNWT provided additional information on the possible effects of harvest on the adult sex ratio, they did not have specific information on whether the age structure of the harvested bulls would affect the herd.[107]

YKDFN noted an overlap of Kǫ̀k'èetì and Sahtì ekwǫ̀ ranges and that it is unclear in the Joint Management proposal how the overlap will be treated (i.e. what will the impact of the overlap be on harvesting as generally harvesters do not make herd distinctions?).[108]

DGG noted that their community plan "*Belare wíle Gots'ę ʔekwę́ – Caribou for All Time"* sets out how the community will monitor harvest. Mr. Leonard Kenny, Deputy *ʔek'wahtı̨dǝ́* (highest honest leader) said

> *"And so the way we keep track of our own harvesting -- harvesters is that it was, you know, when you actually tried something for the first time, it was kind of difficult, but at the time, the leadership was involved with it. We made sure that RRC -- people that went hunting had to report to RRC, or any of the hunters that are out there. You know, they have to be honest, just like what the proposal said. But at the end of the day, after the hunters went back, the -- the numbers that came -- came in were -- were pretty accurate"*.[109]

Mr. Kenny stated further

> *"And it's -- it's done by -- not by ENR themself. If they did it themself, people won't -- won't participate in their -- trying to give them the -- the numbers. It has to come from the – people like … -- from the RRC, and the leadership have to be involved"*.[110]

7.4.4. Analysis and Recommendations

TG and GNWT provided annual harvest levels but did not summarize or analyze monitoring effort (number of days at the check station, number of ground and aerial patrols). GNWT relies on the locations of the satellite-collared ʔekwǫ̀ as the basis for assigning harvest to the different herds; however, there has been no analysis completed about how harvest is assigned to which herd. There was no analysis relating harvest

[106] PR (BNE 2019): 018 - TG and ENR Responses to Information Request No. 2.
[107] Ibid.
[108] PR (BNE 2019): 189 – Yellowknives Dene First Nation Final Written Argument.
[109] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. p.59.
[110] Ibid. pp.60-61.

effort (distances travelled, for example) to winter distribution of Sahtì ekwǫ̀ and its neighboring herds.

The WRRB is concerned about how the communities cope when ʔekwǫ̀ harvests appear to be so annually variable (Figure 8). In the last five years, Sahtì ekwǫ̀ harvests have varied from approximately 323 to 4000 when the winter distribution of the Sahtì ekwǫ̀, Kǫ̀k'èetì ekwǫ̀, and Beverly/Ahiak ʔekwǫ̀ herds are within the NWT.

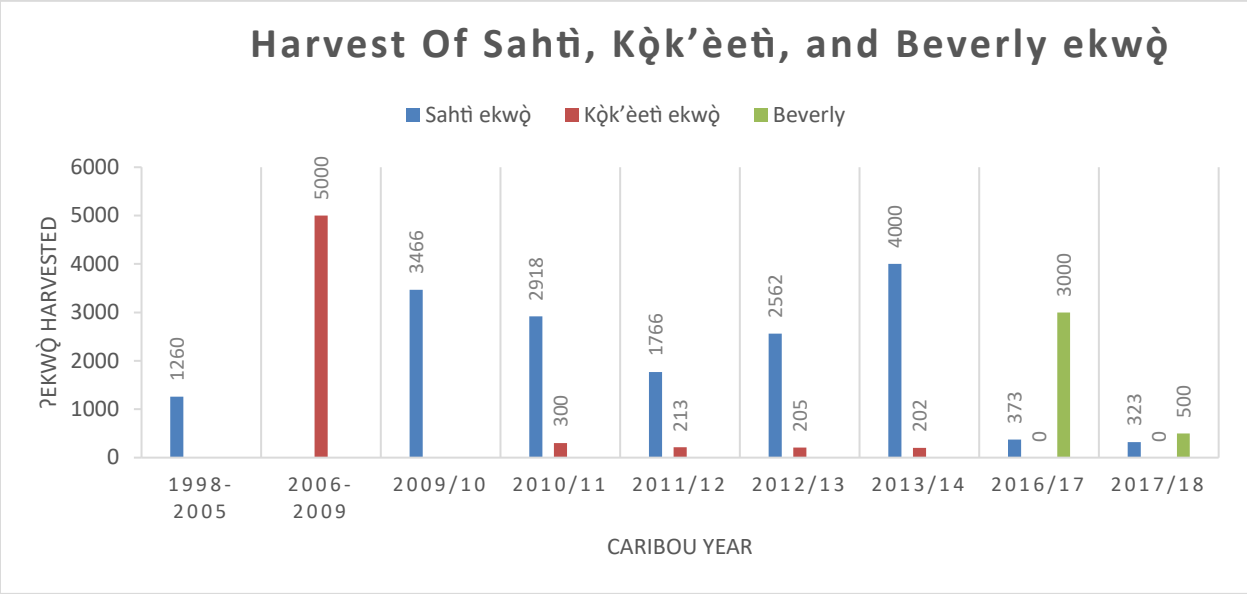


Figure 8. ʔekwǫ̀ harvested from the Sahtì ekwǫ̀, Kǫ̀k'èetì ekwǫ̀ and Beverly/Ahiak ekwǫ̀ herds from 1998 to 2018.[111]

The uncertainty about the harvest levels and why they vary so much annually will not be solved simply by improved reporting and analyses. The reported variability also suggests that a better understanding of harvesting from the community perspective is essential. This can be achieved by an increase in community monitoring and more detailed reporting.

Harvest monitors not only provide critical information on harvest, but they are also a link between communities and responsible governments. Harvest monitors are on the front lines and can collect real-time information from harvesters on the health of the animals, and the herd. However, if ʔekwǫ̀ are abundant around the community, harvest monitors can be overworked, which can be a safety concern.

[111] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021; and PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

Recommendation #1-2019 (Sahtì Ekwǫ̀): Sahtì Ekwǫ̀ Harvest Monitoring
To ensure that the total allowable harvest is being adhered to, and to utilize the expertise of harvesters, TG is to revise their approach to Sahtì ekwǫ̀ harvest monitoring for the 2019/20, and 2020/21 harvest seasons to include: • Data collected from harvesters which, at minimum, should include the number and location of ʔekwǫ̀ harvested, sex, health, and body condition of the animals, and distance travelled by the harvesters; • Harvest data should be provided weekly by TG to the WRRB, and the annual harvest and monitoring summary reports prepared by GNWT and TG should be made public by June 30 of each year; and • Where necessary because of concentrations of ʔekwǫ̀ near a community, up to four community monitors should be hired to be able to collect, and report on harvest data weekly.

7.5. Predators

7.5.1. Introduction

As previously described, the Sahtì ekwǫ̀ herd decline is a serious conservation concern. Harvest restrictions alone have proven to be ineffective in halting this decline, and the evidence presented suggests that this will continue to be the case. As predators continue to put pressure on the Sahtì ekwǫ̀, predator management could aid in the short-term stabilization and recovery of the herd.

7.5.2. Proponent's Evidence

TG and GNWT's Joint Proposal identified that the Sahtì ekwǫ̀ herd decline continued despite the harvest reduction in 2016, and that low adult cow and calf survival rates suggest that predation may be a *"key limiting factor"*.[112] The Joint Proposal identified that the *Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd* could be applicable to dìga reduction options for the Sahtì ekwǫ̀ range.[113] These possible dìga reduction options will be submitted to the WRRB in a separate proposal. This proposal will recommend ways to ensure that dìga harvest is increased to a level where ʔekwǫ̀ survival rates will be measurably increased. During the public hearing, Dr. Jan Adamczewski suggested that a predator management proposal may be submitted in *"early May [2019]"*.[114] As of

[112] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[113] Ibid; and PR (BNE 2019): 078 - Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd. 2017.
[114] PR (BNE 2019): 174 – Transcript, April 10, 2019 (DAY 2) – 2019 Bluenose-East caribou Herd Public Hearing. pp.52-53.

the date of publishing this report, the Board has not yet received a predator management proposal.

The Joint Proposal also outlined an Enhanced North Slave Dìga Harvest Incentive Program, which was implemented in the 2018/19 harvest season to reduce predation and promote caribou recovery.[115] This Program increased the incentive of dìga harvested within a specified zone to up to $1650.[116]

7.5.3. Other Parties' Evidence

Elder Alfred Taniton stated

> *"There is a lot of animals that go through the wolf. We can't blame ourselves. We survive by killing by going by harvesting animals. That is how we go by things. And we have to decide on what we're going to do with the wolf. And that's another item that we need to talk about. We know we want to help the caribou. Maybe in a few years if there's a lot more caribou and then we want -- before that, we want to talk about the wolf. We have to really think about it"*.[117]

YKDFN noted that *"we fail to believe that predation is the main contributing factor, there are other factors at play which quite frankly we are yet to understand"*.[118] NSMA was concerned about a focus on predator management and stated that *"Currently, there are more discussions and commitments about predator removals than attempt to understand the predator ecology"*.[119]

NSMA argued that more thorough survey and assessment should precede any aggressive dìga/predator removal measures.[120] They reasoned that understanding the ecology of ʔekwǫ̀'s predators is essential in reinforcing the Sahtì ekwǫ̀ management plan and preventing unforeseen consequences to other ecologically important species.

NSMA also expressed concern that an increase in dìga harvesting could disturb ʔekwǫ̀ if the harvesting was from snow machines. Snow machines can create hard-packed trails that in turn would increase predation rates if dìga prefer the trails.[121]

[115] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[116] Ibid.
[117] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. p.184.
[118] PR (BNE 2019): 172 - Yellowknives Dene First Nation Public Hearing Presentation.
[119] PR (BNE 2019): 163 - North Slave Métis Alliance Public Hearing Presentation.
[120] PR (BNE 2019): 186 - North Slave Métis Alliance Final Written Argument.
[121] PR (BNE 2019): 018 - TG and ENR Responses to Information Request No. 2.

YKDFN noted in their closing remarks that dìga should be collared to provide data complimentary to caribou collar data, and traditional knowledge.[122]

7.5.4. Analysis and Recommendations

The Joint Proposal is short on evidence related to predation (e.g. it does not include trends in sighting rates of dìga and sahcho during aerial and ground surveys). This information would be useful in determining whether or not predator sightings are changing. An earlier analysis, which mapped seasonal ʔekwǫ̀ mortality (2010-2016), revealed that most collared ʔekwǫ̀ deaths are on summer and fall ranges and are least on calving ranges. The WRRB is perplexed that GNWT did not include evidence and the analyses that it has previously completed on dìga. The Joint Proposal notes that the Kǫ̀k'èetì Wolf Management Feasibility Assessment 2017 can be applied to Sahtì ekwǫ̀ herd. There is no further indication of how and when such an action might be implemented.

Given that the Joint Proposal states that the limited harvest of bulls is not sufficient to halt the decline and given the low survival of the cows, the WRRB agrees that action is needed to improve cow survival.[123] While the WRRB understands the concerns expressed by NSMA and YKDFN, analysis of the Joint Proposal by the Board, and review of evidence about community concerns, reflects an immediate need for action to reduce predation on the herd. During the 2016 public hearing, the TG-GNWT ʔekwǫ̀ consultations tours conducted January 21-23, 2019, and the 2019 public hearing, the WRRB has heard from Tłı̨chǫ community members that dìga are continuing to put pressure on ʔekwǫ̀ populations.

Mr. Jimmy Kodzin discussed the number of wolves he's seen on the tundra:

> *"When I think about the wolves, the predator such as the wolfs, we know that for the fact there are a lot of wolves out there. They usually go where the caribou are, and I did something that I have observed, something that I have seen. And one (1) time when I was out in the tundra, out in the -- and also I have seen a lot of wolf. It seems like nobody could be approach those predators such as the wolves. And also, this Elder that was with me, I told him what do we -- I never seen this amount of caribou, one lake I've been -- I have seen over five hundred (500) caribou -- five hundred 500 wolfs, sorry, five hundred (500). I told him -- he asked me what did I do? I didn't do -- and that Elder said, What did you do? I said nothing. Well it's a good thing, that Elder told me that wolf that you think -- you think you're on a snowmobile where there's lots, so it's a good thing you didn't do anything. They could attack you. If you at least killed one, you would have*

[122] PR (BNE 2019): 189 - Yellowknives Dene First Nation Final Written Argument.
[123] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.

not been here today, because they help each other to attack. But still -- but then I want something to be done. And also, I'm pretty sure there are some people that can -- we know for the fact that -- that the predator such as the wolves are killing off a lot of caribou, but we do not think alike. … And also, it's not a small animal, it's not a small – not a small animal".[124]

The WRRB submitted recommendations for predator management to TG and GNWT on February 6, 2019. The Governments accepted theses recommendations with some variations. This correspondence is in Appendix H. The Board strongly suggests that implementation of predator management actions should be a priority for both governments. Delayed action at this stage would not be in the public interest and would represent a failure in responsible management.

Although a priority for the TG, Tammy Steinwand-Deschambeault explained at the Hearing

"It [dìga culling] *has been focused on Tłı̨chǫ knowledge and based on recommendations from the Elders, and a key aspect of the project is to utilize and follow traditional dìga harvesting laws and to enhance monitoring in partnership with GNWT. This work is ongoing and, as we knew from the outset, it would not be easy".*[125]

In 2018, the GNWT implemented the Enhanced North Slave Dìga Harvest Incentive Program as a pilot program. This program increased the incentive to up to $1650 for a dìga harvested in an area of the North Slave region centered on the collar locations of wintering ʔekwǫ̀. Dìga harvesters were required to check into and out of the dìga harvesting zone at winter road access point. The purpose of the program was to both increase interest in the TG dìga harvester training program and to reduce the number of predators on the ʔekwǫ̀ ranges.

The WRRB is aware that incentive programs can attract criticisms and may not be effective in reducing predation rates.[126] The WRRB wants to be able to see a linkage between the Enhanced North Slave Dìga Harvest Incentive Program and ʔekwǫ̀ conservation efforts.

[124] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. pp.117-118.
[125] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.76.
[126] PR (BNE 2019): 190 - Predator Bounties in Western Canada Cause Animal Suffering and Compromise Wildlife Conservation Efforts. Proulx and Rodtka. 2015.

The WRRB supports the accelerated implementation of TG's Dìga Harvester Training Program as described in the Joint Management Proposal as an education tool but the WRRB needs reporting about how many wolves are harvested and where.

Recommendation #2-2019 (Sahtì Ekwǫ̀): Enhanced North Slave Dìga Harvest Incentive Program
To understand the success of the pilot year of the Enhanced North Slave Dìga Harvest Incentive Program, GNWT is to provide the location and number of dìga harvested, as part of the Program, to the WRRB by July 26, 2019.

Recommendation #3-2019 (Sahtì Ekwǫ̀): Enhanced North Slave Dìga Harvest Incentive Program
To determine the future use of the Enhanced North Slave Dìga Harvest Incentive Program in managing Sahtì ekwǫ̀ and other ʔekwǫ̀ herds, GNWT and TG are to develop a framework to evaluate the effectiveness of this Program in achieving ʔekwǫ̀ conservation goals, for review and approval by the WRRB, by September 30, 2019.

Mr. Henry Gon emphasized the impact that predators including dìga, nǫ̀gha, and sahcho can have on ʔekwǫ̀.

> *"…at the same time too, I guess, we have to look at the predators that has a major role in the impact of the caribou decline. It could be the grizzly bear and sometimes they say bald eagle, and then there are some crazy wolves and wolverine. So -- and then the -- this has some problem with the total of the caribou decline and then maybe there are some other things that we shouldn't do that we're doing that cause the caribou decline. That we, as hunters, we as the hunters, we do hunt the caribou a lot for many years and we see the -- a lot of -- lot of wolves travelling around, they take a lot of caribou. One time I came across the caribou migrating across Hottah Lake and then there were a lot of -- a the big pack of wolf were following the caribou. So, the -- so very little has been said about the -- the pack of caribou, that amount of land that they don't take the -- how many -- how many caribou they would take. So if you justify that with the human hunter or hunters that are out on the land with the -- with allocations of the numbers that are allocated for the harvesting, you know, within the area compared to the amount that -- that to wolf in the hundreds and the -- how many caribou they take per day."*[127]

The Joint Proposal did not identify nǫ̀gha as a major ʔekwǫ̀ predator. Although they can take a ʔekwǫ̀, they are mostly known as scavengers. As such, declines in ʔekwǫ̀

[127] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. pp.107-108.

populations and implementing dìga control may have ecological implications for scavengers such as nǫ̀gha.

Recommendation #4-2019 (Sahtì Ekwǫ̀): Nǫ̀gha (wolverines)
To determine the current population trends and distribution of the Sahtì ekwǫ̀ predator, GNWT and TG are to monitor nǫ̀gha populations in Wek'èezhìı, beginning April 1, 2020. Monitoring information should be shared with the WRRB as available.

TG and GNWT's Joint Proposal included no evidence on predator sighting rates on the calving grounds nor did the 2018 calving ground survey report. But the report did recommend increased support for predator monitoring as well as for on-the-land traditional monitoring programs like the Tłı̨chǫ Ekwǫ̀ Nàxoède K'è (formerly the Boots on the Ground) program. GNWT's recommendation leads the WRRB to recommend monitoring predators on the calving grounds in collaboration with the Government of Nunavut. In an effort to reduce disturbance to ʔekwǫ̀, this work should be done on the ground, and not via aircraft.

Recommendation #5-2019 (Sahtì Ekwǫ̀): Predators on the Calving Grounds
To increase the birth rate of Sahtì ekwǫ̀, GNWT and TG are to work cooperatively with the Department of Environment, Government of Nunavut to protect the calving grounds of Sahtì ekwǫ̀ from dìga, sahcho, det'ǫcho, and nǫ̀gha. Starting in 2020, calving ground protection could take the form of monitors on the perimeter and should begin one week prior to calving.

7.6. Habitat and Land Use

7.6.1. Introduction

The range of Sahtì ekwǫ̀ encompasses land in the NT and Nunavut, which makes management more difficult; however, the herd will require intact habitat for recovery and sustained use.

7.6.2. Proponent's Evidence

TG and GNWT's Joint Proposal offered no evidence about the state of the Sahtì ekwǫ̀ habitat such as the cumulative winter range modified by fire or the total linear length of roads. The Joint Proposal does not describe seasonal distribution or indicate whether it is changing as the herd declines.

During TG's presentation, Tammy Steinwand-Deschambeault stated:

> *“Basically, the rationale for minimizing human cause disturbance to* ekwǫ̀*, caribou, and caribou habitat or dè is to provide the best conditions for caribou so that they may reach their reproductive potential, which is supported by environmental conditions and health of the land…. So, with respect to land use, the key steps in implementing, monitoring and management actions are to understand, identify and conserve important habitats and sensitive areas for* ekwǫ̀*”.*[128]

Ms. Steinwand-Deschambeault then explained the importance of considering the relatedness of all that interconnects with ʔekwǫ̀ habitat:

> *" Dè has a broader meaning than land because it refers to a whole ecosystem or environment. However, where the word "ecosystem" is based on the idea that living things exist in association with non-living elements the Dogrib term "dè", it spans the meaning of association to encompass the knowledge that everything in the environment has life and spirit"*.[129]

Ms. Steinwand-Deschambeault further clarified

> *"that dè is not an independent object that's out there existing separate from culture and our daily lives, but rather is an all-encompassing holistic system of which Indigenous cultures is an integral part"*.[130]

One must look at the ecosystem in its entirety – physical, spiritual, cultural – to understand the impacts to ʔekwǫ̀ and its habitat.

In the 1990s, the Tłı̨chǫ elders initiated the research project, *Caribou Migration and the State of their Habitat*.[131] These elders wanted Tłı̨chǫ, in the future, to recognize the importance of understanding ʔekwǫ̀ habitat seasonally, annually and over time. This entailed becoming knowledgeable about various vegetation communities/ habitat-types necessary for ʔekwǫ̀ to remain healthy throughout their range. Between 1999 and 2007, these same elders worked with the research team to design a monitoring program that included not only ʔekwǫ̀ habitat but the dè. The monitoring is to be done by harvesters as they watch and use all that is within the dè. They are then to report this to Tłı̨chǫ researchers who keep track of the state of dè. Dr. John B. Zoe’s presentation reflected

[128] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.77.
[129] Ibid. p.78.
[130] Ibid. p.79.
[131] PR (BNE 2019): 061 - Caribou migration and the state of their habitat. Legat et al. 2001.

the importance of being on the land, watching while using other species, and to demonstrate to ʔekwǫ̀ they are needed for more than just food security.[132]

All Dene who spoke at the public hearing stressed the importance of ʔekwǫ̀ for all aspects of their lives. Tammy Steinwand-Deschambeault said:

> *"I'd like [to] add a couple of things. Masi, for your question, Allice. I believe the short answer is yes. As Tłı̨chǫ people, we believe that we have a big part to play in the -- the whole ecosystem of -- of the North. And part of that in -- in terms of looking at the -- the caribou and, as you mentioned, the -- the belief that they hold their spirit back if they feel they're not needed by not seeing people out on the land"*.[133]

7.6.3. Other Parties' Evidence

Elder Leon Modeste talked about the importance of stories and place names,[134] adding to Dr. Zoe's discussion on the importance of places by constantly watching and walking trails and places, i.e. monitoring all habitat in the Dene way. Elder Modeste emphasized how stories guide Dene to know the dè through time, enabling harvesters to live with the animals by managing one's own behaviour while understanding the places and trails being travelled.[135]

Elder Walter Bezha spoke on habitat during his presentation for Délı̨nę:

> *"You know, there is a lot of -- I think today we probably have a lot of information on the size of habitat. You know, you showed the migration patterns there in that -- one (1) of the slides. It'll be nice -- and I've been to a lot of hearings and we don't spend very much time on -- on the impacts of -- of development. You know, even in the Nunavut area, I think there were some slides where the amount of -- of permits and a lot -- lot of things that are going on that we generally don't -- don't talk about very much, but in this case that's the question, you know, the size of our habitat. I mean, we all know that across Canada, and especially even up here, the habitats are -- are shrinking. We're using more and more land for other things. So that would be the question and then the development impacts."*[136]

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[132] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. pp.99-121.
[133] PR (BNE 2019): 174 - Transcript, April 10, 2019 (DAY 2) - 2019 Bluenose-East Caribou Herd Public Hearing. p.66.
[134] PR (BNE 2019): 175 – Transcript – April 11, 2019 (DAY 3) – 2019 Bluenose-East Caribou Herd Public Hearing. pp.27-32.
[135] Ibid. pp. 27-32.
[136] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. pp.127-128.

7.6.4. Analysis and Recommendations

Although TG and GNWT state in the Joint Proposal that the recovery of Sahtì ekwǫ̀ will require healthy habitat on the herd's range in Nunavut and the Northwest Territories, they provided no metrics even as a baseline for the WRRB to assess the health of the habitat and the effectiveness of their proposed actions. It is also unclear if ʔekwǫ̀ habitats have been assessed as to their priority for management and conservation.

The WRRB acknowledges that these proposed activities will have no direct impact on herd size in the short term but are essential for the long-term health of the herd and thus measurable outcomes and deadlines should be determined. The WRRB acknowledges that ʔekwǫ̀ need all their habitat. However, habitat used at low population densities should be identified and classified as high priority.

'Important' or high priority habitat for Sahtì ekwǫ̀ are places on the range that caribou use for specific purposes during key times of their annual lifecycle. Calving areas, nǫʔokè, tataa, and key winter ranges are some general examples of important habitat. The concept of important habitat for ʔekwǫ̀ incorporates both specific place-based locations and areas known to Tłı̨chǫ elders, and their understanding of what characteristics and features makes those areas important to ʔekwǫ̀ and why.[137] The concepts of nǫʔokè and tataa reflect the Tłı̨chǫ's knowledge of the locations of key migratory corridors and their deep understanding of the importance of migratory movements and habitat connectivity for ʔekwǫ̀.[138]

Recommendation #6-2019 (Sahtì Ekwǫ̀): High Priority Habitat Identification
To work towards protecting Sahtì ekwǫ̀ habitat, TG should work with communities to identify high priority habitat for protection. High priority habitat should include habitat used by Sahtì ekwǫ̀ at low population densities. Once identified, the high priority habitat should be shared with the WRRB.

Protected areas, conservation areas or habitat designations are legally designated areas that describe restrictions on the types of activities that can occur. These restrictions can range from completely prohibiting human activity to identifying the types and timeframe of restricted activities.[139]

Recently available habitat protection and conservation provisions under the *Wildlife (NWT) Act* and *Species at Risk (NWT) Act* offer new tools to provide habitat conservation for identified high priority habitat areas. The specific legislative provisions

[137] PR (BNE 2019): 009 – TG and ENR Responses to Information Requests Round No. 1.
[138] Ibid.
[139] PR (BNE 2019) 048 - Bathurst Caribou Range Plan (Dec 2018 Draft). ENR. 2018.

to be further explored include: conservation area under Section 89 of the *Wildlife Act*; habitat protection under Section 93 of the *Wildlife Act*; habitat conservation under Section 152 of the *Species at Risk Act*; and, habitat designation under Section 80 of the *Species at Risk Act*.[140]

The Bathurst Caribou Range Plan points to Mobile Caribou Conservation Measures (MCCM) as a way of minimizing disturbance to ʔekwǫ̀ in areas of the range where ʔekwǫ̀ are particularly sensitive and at times when the herd is particularly vulnerable.[141] The purpose of developing MCCMs is to guide land use activities and operational practices in order to reduce disturbance of ʔekwǫ̀. MCCMs do not protect habitat from physical disturbance; habitat loss could still occur in areas where only MCCMs are used.

For success, detailed development of systems is required to prescribe how and when land use activity levels should be reduced or halted when wildlife is present or within an identified distance. Community members have called for this type of management response and traditional cultural rules help provide some of the context for guiding land use activity related to ʔekwǫ̀ and ʔekwǫ̀ habitat.[142] While this type of guidance is already implemented on an individual project basis, establishing a consistent approach for managing/restricting the timing and location of human land use activity would establish clearer guidelines for industry and provide a basis for improved habitat management at a range scale. Compliance and enforcement are critical.

Recommendation #7-2019 (Sahtì Ekwǫ̀): Legal Protections
Following identification of high priority habitat for Sahtì ekwǫ̀, and to ensure this habitat remains intact, legally enforceable habitat protection measures should be implemented by GNWT under the *Wildlife Act* or *Species at Risk Act (NWT).* In the interim, Mobile Caribou Conservation Measures should be implemented by GNWT and TG by September 2020.

7.7. Education

7.7.1. Introduction

Communication with and education of harvesters, Tłı̨chǫ citizens, and the public is crucial in the management of Sahtì ekwǫ̀. These initiatives aim to increase compliance, improve hunter practices, and reduce wounding and wastage.

[140] Wildlife Act, SNWT 2014, c 31, http://canlii.ca/t/5315s; and Species at Risk (NWT) Act, SNWT 2009, c 16, http://canlii.ca/t/5315r.
[141] PR (BNE 2019) 048 - Bathurst Caribou Range Plan (Dec 2018 Draft). ENR. 2018.
[142] Ibid.

Mrs. Lucy Lafferty, Tłı̨chǫ Language Culture Coordinator, Tłı̨chǫ Community Services Agency, stated

> *"We want the students in the school to be able to learn about the caribou, to be able to live with the caribou, to be able to hunt and eat the caribou if they want, but if other people are not making the right decision or proper decision, then how -- what are the students going to -- to do? They see people over-hunting, because the Dene laws that we're teaching the kids in the school, we're teaching them to share. We're teaching them to have respect. We're teaching them to only take what they need".*[143]

7.7.2. Proponent's Evidence

TG and GNWT's Joint Proposal offered no evidence about the frequency and effectiveness of education activities since the 2010 and 2016 proposals. The proposal did include a table listing proposed educational activities including annual and possible meetings, GNWT website updates, posters, and radio interviews. No firm plans were provided to the Board.

Both Dr. Zoe and Ms. Steinwand-Deschambeault talked about the importance of education if they are to monitor and manage the land to ensure the Tłı̨chǫ keep their voice. Dr. Zoe expressed the need to stop being *"herded [*like they've been] *for the last hundred and fifty years (150)".*[144] Tammy Steinwand-Deschambeault provided a solution, one that is reflected in the Tłı̨chǫ monitoring program designed by elders and researchers during the early 2000s. This program uses both story-telling and experiential knowledge of the land.

> *"We need to go back to the land ourselves with the Elders and with researchers who are trained to just write down what people see and what they hear, so that it's recorded and we can start using it for our own management because we have a say now, but how far -- how -- how do we exercise it in a way that -- that it helps the recovery. And one (1) of the things that we know is that we need to train 15 young people."*[145]

[143] PR (BNE 2019): 174 - Transcript, April 10, 2019 (DAY 2) - 2019 Bluenose-East Caribou Herd Public Hearing. p178.
[144] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. pp.111-112.
[145] Ibid. p.112.

7.7.3. Other Parties' Evidence

Elder Walter Bezha focused on Délı̨nę's plan, *Belare wíle Gots'ę́ ʔekwę́ – Caribou for All Time*, discussing the interconnectedness of all things and how a restricted harvest of ʔekwǫ̀ fits into this plan. He noted that DGG and the Délı̨nę Renewable Resources Council have started training people, working with them to understand the Plan.[146]

NSMA and YKDFN did not raise concerns about the proposed communication and education initiatives as presented in the Joint Proposal.

7.7.4. Analysis and Recommendations

Continuing efforts to increase awareness among Tłı̨chǫ̀ communities and the public about the status of NWT ʔekwǫ̀ herds, the need for conservation actions and how harvesters can contribute to conservation, such as harvesting alternative species, is essential to promote recovery of the Sahtì ekwǫ̀ herd.

Tammy Steinwand-Deschambeault commented

> *"To the Tłı̨chǫ̀ people's well-being, way of life and land-based economy with a focus on our people's connection to the caribou, the social and cultural effects of the decline. … Key messages on Tłı̨chǫ̀ nawo (phonetic) or from the Tłı̨chǫ̀ Agreement, Chapter 12.1.1 which is very important and talks about caribou and its habitat. To the Tłı̨chǫ̀ people's well-being, way of life and land-based economy with a focus on our people's connection to the caribou, the social and cultural effects of the decline. And number, we'll finish up our presentation and talking about education and how we want to do better in terms of informing and working with and learning from our Elders and also sharing back information to the people that -- that we serve. How can we better work with the caribou? The traditional caribou laws that we need to continue to abide by, how do we share this knowledge with all?"*[147]

Tammy Steinwand-Deschambeault added to above statement to emphasize the fact that Dene thrive with ʔekwǫ̀.

> *"If our wise, late Tłı̨chǫ̀ Chief's words are ignored and we are subject to a complete ban from harvesting the Sahtì Ekwo, we lose more than the meat [food security]. We lose our traditional way of life. Our identity as an Indigenous people very closely connected to the land is threatened. Mental health and wellness in*

[146] PR: (BNE 2019): 175 – Transcript, April 11, 2019 (DAY 3) – Bluenose-East Caribou Herd Public Hearing, pp.10-27.
[147] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.69.

our Elders will be affected. Our Elders will no longer be able to eat the food they love, the food they grew up on, the food that feeds their soul Mental health and wellness will be affected in our harvesters, who no longer will be able to provide for their family and community. Mental health and wellness will be affected in our women, who will no longer be able to contribute to the family by sharing the teachings of working on hides, making clothing, and preparing the meat for a shared meal. Our youth will be missing out on traditions and teachings that have been passed down for generation after generation. If we have no caribou to harvest, what will fill that void? What can fill that void with something as precious as caribou? There is nothing."[148]

Tłı̨chǫ knowledge systems are well suited for learning, guiding behaviour, remembering past information, comparing past and present in relation to monitoring both human and animal behaviour and the habitat in which they thrive. Indigenous monitoring styles are particularly useful when solutions and decisions are required so actions can take place. The recommendation below came from the presentation made by Dr. John B. Zoe, who emphasized that one way in which to manage human interaction with ʔekwǫ̀ is to encourage Tłı̨chǫ citizens to be on the land harvesting, watching, and experiencing (monitoring) other wildlife resources.[149]

Recommendation #8-2019 (Sahtì Ekwǫ̀): Alternative Wildlife Species
To help people thrive within dè, including having food security, and in light of a limited harvest on Sahtì ekwǫ̀, the WRRB recommends that TG and GNWT encourage Tłı̨chǫ citizens to harvest alternative country foods, starting in September 2019.

7.8. Adaptive Management Framework

7.8.1. Introduction

The WRRB already utilizes adaptive management principles in its operations and decision-making. However, an adaptive management framework with clear thresholds may lead to specific management actions that could lead to timelier implementation of management and monitoring actions.

[148] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. pp.123-124.
[149] Ibid. p.111.

7.8.2. Proponent's Evidence

Table 4 describes the biological monitoring proposed by TG and GNWT for 2019-2023.[150] These biological indicators all have corresponding adaptive monitoring options. When asked about the possibility of expanding and revising Table 4 to make it more

detailed and responsive, GNWT stated that they would need to discuss with their senior level management and pointed to the *Taking Care of Caribou Management Plan*.[151]

7.8.4. Analysis and Recommendations

The WRRB is concerned about avoiding delays in management actions. TG and GNWT acknowledge the need to speed up management, as in the Joint Proposal, they propose changing reviews of management actions from every three years to annually.[152] However, a mechanism is not proposed. During the public hearings, the WRRB asked GNWT about delays. GNWT stated that they considered the flow of information to the WRRB to be adequate.[153] An adaptive management framework could minimize delay in the implementation of management action and proposals. An adaptive management framework must involve the Board for the reasons set out in Section 12.2 of the Tłı̨chǫ Agreement. Such an approach provides for pre-identified management actions based on thresholds agreed to by management authorities.

Adaptive Management is now a standard part of management although in practice, it has sometimes struggled in the implementation phase.[154] The WRRB is of the view that such a framework can be developed in collaboration with governments. The Joint Proposal has already provided a rationale for specific monitoring thresholds and the management decisions that those thresholds trigger. An adaptive management framework would also be compatible with ACCWM's management plan but with more specific details and actions for the Sahtì ekwǫ̀ herd. The framework should also identify how to integrate ground observations and climate change into management activities. The WRRB is aware of examples integrating observations.[155] The strength of an adaptive management framework is to build it collaboratively, which is the basis of the WRRB recommendation.

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[150] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[151] PR (BNE 2019): 174 – Transcript, April 10, 2019 (DAY 2) – 2019 Bluenose-East caribou Herd Public Hearing. pp.42
[152] PR (BNE 2019): 001 - Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.
[153] PR (BNE 2019): 174 - Transcript, April 10, 2019 (DAY 2) - 2019 Bluenose-East Caribou Herd Public Hearing. p.37.
[154] PR (BNE 2019): 178 - Adaptive Management in the Courts. Fischman and Ruhl. 2010.
[155] PR (BNE 2019): 179 - Evaluating Success Criteria and Project Monitoring in River Enhancement Within an Adaptive Management Framework. O'Donnell and Galat. 2008; and PR (BNE 2019): 185 - Arctic Borderlands Ecological Knowledge Cooperative: can local knowledge inform caribou management? Russell et al. 2011.

Table 4: Biological Monitoring of Sahtì Ekwǫ̀.[156]

Indicator(s)	Rationale	Desired Trend	Adaptive Management Options	How Often	Notes
1. Estimate of breeding cows and extrapolated herd size from calving ground photo survey	Most reliable estimate for abundance of breeding cows and total number of cows & can be extrapolated to herd size based on sex ratio.	Stable or increasing trend in numbers of breeding cows and herd size in 2023.	If trend in breeding cows increasing, continue as before; if trend stable-negative, re-consider management.	Every 2 years	Last survey 2018, next surveys in 2020 and 2022. Trend in breeding females is most important for herd trend.
2. Cow productivity; composition survey on calving ground in spring (June)	Proportion of breeding females in June at peak of calving establishes initial productivity or approximate pregnancy rate.	Proportion of breeding cows at least 80%.	Low ratio indicates poor fecundity and suggests poor nutrition in previous summer; survey data integrates fecundity & neonatal survival.	Annual	Essential component of calving ground photographic survey. Proposed increase to annual survey to more closely monitor initial productivity and following calf survival
3. Fall sex ratio and calf:cow ratio; composition survey (October)	Tracks bull:cow ratio and fall calf:cow ratio. Fall calf:cow ratio provides an index of calf survival from birth through initial 4.5 months.	Bull:cow ratio above 30:100; calf:cow ratio of more than 40:100.	If bull:cow ratio below target, consider reducing bull harvest. Low fall calf:cow ratios suggest poor calf survival.	Annual	Sex ratio needed for June calving ground extrapolation to herd size.
4. Calf:cow ratio in late winter (March-April); composition survey	Herd can only grow if enough calves are born and survive to one year, i.e., calf recruitment is greater than mortality.	At least 30-40 calves:100 cows on average.	Sustained ratios ≤ 30:100, herd likely declining; may re-assess management.	Annual	Calf productivity & survival vary widely year-to-year, affected by several variables, including weather.
5. Caribou condition assessment from harvested animals	Condition assessment provides overall index of nutrition/environmental conditions and changes over time.	High hunter condition scores (average 2.5-3.5 out of 4); target 70 animals/year.	Sustained poor condition suggests unfavourable environmental conditions and possibly further decline.	Annual	Sample numbers to date limited (2010-2018). TG working to improve program, sampling.
6. Cow survival rate estimated from OLS model and annual survival estimates from collared cows	Cow survival estimated 75-78% in 2013 (from model). Need survival of 83-86% for stable herd. Increased collar number to 50 cows should improve annual estimation.	At least 83-86% by 2022.	If cow survival continues <80%, herd likely to continue declining.	Annual	Population trend highly sensitive to cow survival rate; recovery will depend on increased cow survival.
7. Total harvest from this herd by all users groups (numbers & sex ratio)	Accurate tracking of all harvest is essential to management and to knowing whether management actions are effective.	All harvest reported accurately and within agreed-on limits.	Re-assess recommended harvest annually; if herd continues to decline, re-assess harvest limit.	Annual	Multiple factors other than harvest may contribute to decline but harvest is one of the few factors humans control.
8. Maintain up to 70 satellite/GPS collars on herd (50 on cows, 20 on bulls)	Collar information is key to reliable surveys, tracking seasonal movements and ranges, monitoring survival and herd fidelity.	Additional collars added every March/April to maintain up to 70 collars on herd.		Annual additions to keep total of 70.	Information from collared caribou is essential to monitoring and management of all N. America caribou herds.
9. Wolf Harvest on BNE range	Several Indigenous governments and communities have expressed interest in increasing wolf harvest by hunters and trappers to increase caribou survival.	Increased harvest of wolves	If herd continues to decline, consider increased focus on wolf harvest to slow herd decline and increase likelihood of recovery.	Annual	Herd overlap in winter likely means mixing of wolves associated with those herds and may influence effectiveness of wolf removals.

[156] PR (BNE 2019): 001 - Joint Proposal on management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019 – 2021.

Recommendation #9-2019 (Sahtì Ekwǫ̀): Adaptive Management Framework
WRRB, TG and GNWT to collaborate to develop a herd-specific adaptive management framework with the thresholds linked to specific management actions by January 2020.

7.9. Research and Monitoring

7.9.1. Introduction

Ongoing research and monitoring actions are required to make informed and timely management decisions for the Sahtì ekwǫ̀, including the proposed expansion of Ekwǫ̀ Nàxoède K'è onto the Sahtì ekwǫ̀ range.

7.9.2. Proponent's Evidence

TG and GNWT's Joint Proposal describes (a) biological monitoring; (b) an expansion of TG's Ekwǫ̀ Nàxoède K'è program and (c) support for research on causes of changes in ʔekwǫ̀ abundance.

(a) The biological monitoring included a change to calving ground surveys taking place every two years rather than every three years; an increase from 50 to 70 collars; an increase to annual monitoring of calf survival; continuation of harvest and body condition monitoring and dropping the calving ground reconnaissance surveys. Table 4 summarises the biological monitoring frequency, rationale, and thresholds for management actions.

(b) TG is proposing to extend the Ekwǫ̀ Nàxoède K'è program to include Sahtì ekwǫ̀ herd's summer range. TG is also proposing to monitor the area between the communities and to the barren lands.

> *"And we went there to the barren lands in 2014, I think three (3) of us here and a bunch of Elders and community people, and we didn't see one (1) caribou. We were there for three (3), four (4) days. We walked all over. We didn't see one (1) caribou, and that tell us something. That tells us something that our traditional monitoring of going back to the barren lands in the traditional way has to happen from here all the way to there".*[157] (Dr. John B. Zoe)

[157] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.116.

(c) TG and GNWT recognize the need for research into the complexity of factors driving the declines of ʔekwǫ̀ herds using both traditional knowledge and science as well as university partners.

7.9.3. Other Parties' Evidence

YKDFN is not in favour of the radio collar monitoring program and would like to see a wider discussion around methods available for estimating the population of ʔekwǫ̀. In particular, YKDFN stated that:

> *"This is not how caribou monitoring has been done by Dene peoples. The best way to understand those species is right there on the land. You have to interact with them. You have to watch them daily. Watch what they eat. Watch what they do. Aboriginal people learn by watching the behavior of ekwǫ̀. We don't learn about wildlife remotely. We learn by being in the field, by being with ekwǫ̀ all the time"*.[158]

Additionally, YKDFN noted that there should be a general review of the methods for head counting caribou.

Elder Charlie Neyelle also noted concerns about satellite collars, stating

> *"And he says that to remove all that collar and leave it alone. Leave it alone for two (2) to four (4) years. Leave it alone. And he says that we have fish, moose, and muskox to help us sustain ourselves. He said that that is the only approach we have that would allow the caribou to come back to us..."*.[159]

NSMA supports the proposed increase in collar monitoring and annual composition surveys in June, October, and March/April, which will provide an annual update to cow and calf survival rates. NSMA noted the importance of the cow and calf survival rates in timely adaptive management of the herd.[160]

7.9.4. Analysis and Recommendations

The WRRB's approach to making monitoring and research recommendations is based on three requirements. Firstly, during delays in management actions, the decline in ʔekwǫ̀ numbers continues. This is the basis for the WRRB's recommendation to improve the implementation of adaptive management. Secondly, the WRRB is also concerned as to how traditional knowledge and community experience is used in monitoring and adaptive management. Third, there is the requirement to balance the

[158] PR (BNE 2019): 172 - Yellowknives Dene First Nation Public Hearing Presentation.
[159] PR: (BNE 2019): 177 – Transcript, April 11, 2019 (DAY 3) – Bluenose-East Caribou Herd Public Hearing, p.39.
[160] PR (BNE 2019): 186 - North Slave Métis Alliance Final Written Argument.

perspective of leaving the ʔekwǫ̀ alone against the need for monitoring information for management.

As a rationale for increasing the frequency of the calving ground estimates to every two years, the GNWT cites the rapid decline of the herd and possible dìga management implementation. The Board understands that increasing the frequency of calving ground surveys is potentially a mixed blessing as statistical differences in population numbers may be more difficult to detect. However, the WRRB considers that this possible disadvantage of the increased survey frequency can be reduced by using rates of adult and calf survival to also interpret trends.

Recommendation #10-2019 (Sahtì Ekwǫ̀): Population Surveys
To ensure timely adaptive management, GNWT should conduct population surveys for sahtì ekwǫ̀ every two years. The next population survey should thus take place June 2020.

While GNWT did refer to a change in tracking seasonal calf survival three times a year, they did not mention the need to increase sample size to reliably monitor pregnancy rates which is the first step in monitoring calf survival.[161] Hence, the need for WRRB's recommendation to monitor pregnancy rates through fecal pellet sampling. The WRRB also notes that pregnancy rates are a sensitive indicator to conditions including climate change on the summer ranges and thus can be related to observations from TG's Ekwǫ̀ Nàxoède K'è program.

Recommendation #11-2019 (Sahtì Ekwǫ̀): Pregnancy Monitoring
To better understand the health of the Sahtì ekwǫ̀ herd, GNWT and TG should implement Sahtì ekwǫ̀ pregnancy monitoring through fecal pellet collection in the winter months, starting January 2020. Methodology for this program should include community-based sampling.

Monitoring calf survival in June will require an annual presence of people and aircraft on the calving ground as does WRRB's recommendation to monitor predators. At the same time, however, WRRB acknowledges the sensitivity of calving cows and thus the need to be careful to minimize disturbance. In this context, then, WRRB agrees with GNWT's recommendation to minimize disturbance on the calving grounds by halting the Calving Ground Reconnaissance Surveys (leave the ʔekwǫ̀ alone). The Board understands that by not conducting the calving ground reconnaissance survey, the amount of information on trends in calving densities (ʔekwǫ̀/km^2) is reduced.

[161] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.

Recommendation #12-2019 (Sahtì Ekwǫ̀): Reconnaissance Surveys
In an effort to leave the ʔekwǫ alone, and only cause disturbance that is necessary, GNWT should cease the annual reconnaissance survey for Sahtì ekwǫ.

The importance of monitoring calving densities is that there is a potential for cows to shift calving grounds if their densities become too low for 'safety in numbers' to function.[162] GNWT initially provided no evidence on the relationship between declining calving densities and the likelihood of cows shifting calving grounds. GNWT did later release an analysis of calving densities as an undertaking during the public hearing.[163] In 2018, the densities of Sahtì ekwǫ breeding females had declined to about two cows/km^2. This is similar to the Kǫ̀k'èetì ekwǫ where 27% of the collared cows shifted to the Beverly/Ahiak herd's calving ground in 2018.

In the 2016 Sahtì ekwǫ Joint Proposal, TG and GNWT wrote that *"50 collars should be sufficient for most applications of collar data, including population surveys"*.[164] Tłı̨chǫ elders have consistently objected to collars on a basis that they are disrespectful and have identified a need to leave the ʔekwǫ alone.[165]

While the GNWT did not present any evidence to justify the proposed increase of 20 collars (from 50 to 70) on Sahtì ʔekwǫ, the WRRB believes that the additional collars will provide information necessary for herd distribution, movement and switching.

Recommendation #13-2019 (Sahtì Ekwǫ̀): Collars
To have a better understanding of herd distribution, movements, and switching, GNWT should increase the number of collars on the sahtì ekwǫ herd from 50 to 70. Additional analysis gathered from the collars should be provided to the WRRB from GNWT annually including but not limited to: 1) Dispersal at calving in relation to historic data; 2) Timing of calving in relation to historic data; 3) Calf:cow ratios; and, 4) Rates of herd switching and rutting locations.

Recommendation #14-2019 (Sahtì Ekwǫ̀): Collars
Relative to the views of elders and to clarify what analyses require a larger sample size, TG and GNWT should present a detailed rationale for the collar increase to the WRRB. This will be completed using the collars on an annual basis as part of adaptive management.

[162] PR (BNE 2019): 045 - Assessing the Impacts of Summer Range on Bathurst Caribou's Productivity and Abundance since 1985. Chen et al. 2014.
[163] PR (BNE 2019): 188 - Undertaking #1, Part A, ENR to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.
[164] PR (BNE 2019): 149 - 2016 Reasons for Decision Related to a Joint Proposal for the Management of the Bluenose-East ʔekwǫ (Barren-ground Caribou) Herd - Part A.
[165] PR: (BNE 2019): 177 – Transcript, April 11, 2019 (DAY 3) – Bluenose-East Caribou Herd Public Hearing, p.39.

While the Joint Management Proposal mentioned the effects of climate change, it did not provide any evidence about options for including such information in management decisions. Under questioning, GNWT briefly described trends in climate, including an increase in summer droughts and in weather favorable for warble flies.[166] TG provided direct observations from the Ekwǫ̀ Nàxoède K'è Program (on the Bathurst herd's summer range) about hotter summers stressing ʔekwǫ̀.[167] TG also spoke to the need to incorporate their on-the-ground observations into adaptive management.[168] Throughout TG's presentation, they stressed the importance of having harvesters on the dè, and it is these harvesters that watch the land.[169]

The WRRB is aware that the effects of climate change are already being felt and that the changes on the ekwǫ̀ ranges are measurable. The question now is what can be done about the effects of climate change on ʔekwǫ̀, and their ecological relationships, including people. The WRRB sees this as best answered by having more observers on the ground[170] and then ensuring that their observations are integrated into adaptive management for the herd. An example of community-based monitoring for ʔekwǫ̀ is the Bathurst and Porcupine herds.[171] The WRRB believes that using more people on the ground (as indexed, for example by the number of observer days) is essential for adaptive management.

Recommendation #15-2019 (Sahtì Ekwǫ̀): Climate Change
To collect on-the-ground climate change observations, TG's Ekwǫ̀ Nàxoède K'è program should be expanded to the post-calving and summer ranges of Sahtì ekwǫ̀ by October 1, 2019. Results of the monitoring program should be designed to feed into an adaptive management framework.

Grand Chief Jimmy Bruneau directed the Tłı̨chǫ people to know both Western and Tłı̨chǫ knowledge so each Tłı̨chǫ citizen would be *"strong like two people"*.[172] This philosophy has been noted in oral narratives where Tłı̨chǫ leaders learned the knowledge and experiences of others to better prepare themselves for negotiating at trading posts to ensure the best return for their furs.[173]

[166] PR (BNE 2019): 009 - TG and ENR Responses to Information Requests Round No.1.
[167] PR (BNE 2019): 174 - Transcript, April 10, 2019 (DAY 2) - 2019 Bluenose-East Caribou Herd Public Hearing. p.50.
[168] PR: (BNE 2019): 177 – Transcript, April 11, 2019 (DAY 3) – Bluenose-East Caribou Herd Public Hearing, p.82.
[169] PR (BNE 2019): 061 - Caribou migration and the state of their habitat. Legat et al. 2001; and PR: (BNE 2019): 177 – Transcript, April 11, 2019 (DAY 3) – Bluenose-East Caribou Herd Public Hearing, p.82.
[170] PR: (BNE 2019): 177 – Transcript, April 11, 2019 (DAY 3) – Bluenose-East Caribou Herd Public Hearing, p.93.
[171] PR (BNE 2019): 185 - Arctic Borderlands Ecological Knowledge Cooperative: can local knowledge inform caribou management? Russell et al. 2011.; and PR (BNE 2019): 181 - Calibration of Hunters' Impressions with Female Caribou Body Condition Indices to Predict Probability of Pregnancy. Lyver and Gunn. 2004.
[172] PR (BNE 2019): 073 - Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board 22-26 March 20105-6 August 2010 Behchokǫ̀, NT. Appendix F.
[173] Ibid.

Tłı̨chǫ oral narratives stress the importance of understanding a problem, finding a solution and taking action.[174] Their approach to learning and knowing is evident in the manner in which past research projects were approached. The Tłı̨chǫ insist that they take an active part in research and monitoring.[175]

Today, it is vital that the Tłı̨chǫ lead by undertaking their own harvesting and monitoring studies as the impacts of development on Tłı̨chǫ lands and the environment are becoming ever more evident.

Dr Zoe emphasized this in his statement:

> *"All of the evidence in the form of stories and experiences and "the early evidence of how people lived in the landscape is in the place names that describe the … method of harvesting." tell the Tłı̨chǫ … and," they're using all their knowledge from last winter -- .the year – the year before, to try to use all that knowledge as to where they can greet that caribou at that time of the year in the fall time. … Nevertheless, to monitor to use the knowledge properly "It's in the heads of the people here. And we all hold pieces of our history, because it's a collective knowledge. Not everybody knows everything. … [So, to monitor the people must work together to understand what is happening across Wek'èezhìı]. We depend on each other. Not any -- any person can know everything. We rely on each other by telling each other stories."*[176]

Recommendation #16-2019 (Sahtì Ekwǫ̀): Tłı̨chǫ Research & Monitoring Program
To ensure that both ʔekwǫ̀ and ʔekwǫ̀ habitat monitoring and realistic harvesting numbers are recorded in a culturally appropriate manner, the Tłı̨chǫ Research and Monitoring Program should be implemented by TG, starting in September 2019 (See Appendix I).

7.10. Implementation of Recommendations from 2010, 2016 and 2019

As per the WRRB's Rule for Management Proposals,[177] the Board recommends that a summary report be submitted by TG and GNWT within one year of the acceptance or variance of the Board's recommendations on proposed management actions from the

[174] PR (BNE 2019): 073 - Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board 22-26 March 20105-6 August 2010 Behchokǫ̀, NT. Appendix F.
[175] Ibid.
[176] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. pp.102-103.
[177] https://wrrb.ca/sites/default/files/REV%20FINAL%20Rule%20-%20Management%20Proposals%20-%2016oct18.pdf.

2019 Joint Proposal. This report should include an evaluation of the success of implementation of management actions.

While the Board submitted 60 recommendations in 2010 as well as two determinations and 24 recommendations in 2016, in the WRRB's opinion, only the determinations and 20 of the recommendations have been fully implemented (Appendix C and E).

The Board appreciates the information submitted by TG in Undertaking #3 to provide a summary on the progress on specific TK recommendations made in 2010 and 2016.[178] However, the Board notes that continued implementation of the TK recommendations is both mandatory and essential to ensure that the WRRB and other wildlife managers in Wek'èezhìı have appropriate information to make balanced decisions.

The WRRB is unable to comment on the extent of implementation on the remaining recommendations as a detailed report is not available and no measurable levels for implementation have been set. As such, the WRRB requests that TG and GNWT review the 2010 and 2016 recommendations and provide an updated implementation plan and evaluation for all outstanding recommendations.

8.0. Conclusion

With the Sahtì ekwǫ̀ herd in a critical state, there is a real sense of urgency to implement effective management actions to halt the decline as soon as possible. The decisions have been structured to have the least impact on ʔekwǫ̀ users and the greatest benefit to ʔekwǫ̀ that we can provide at this time.

> *"The process today is to try and put forth the best available information on the actions that will lead us into stabilization and recovery of the numbers that have dropped very visibly in the last number of years, but it's not a new story, but an ongoing story but with authorities that will make determinations on what we will do to -- to accommodate a recovery."*[179]
> ~ Dr. John B. Zoe

Users and managers must be willing to act now, in whatever ways possible, to protect the herd so future recovery may be possible.

> *"And one (1) thing we know is that despite all the years of having no say, we know that people survive because they never let the caribou go. They always hang on to it. Like Archie saying, we'll never let it go, because if we let it go, then*

[178] PR (BNE 2019): 200 - Undertaking #3, TG to WRRB, 2019 Bluenose-East Caribou Herd Public Hearing.
[179] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.86.

-- then that's the way it goes, because by not letting it go, we need to strengthen our relationship to the animals by doing things in the traditional way."[180]
~Dr. John B. Zoe

[180] PR (BNE 2019): 173 – Transcript – April 9, 2019 (DAY 1) - 2019 Bluenose-East Caribou Herd Public Hearing. p.115.

APPENDIX A 2019 Joint Proposal

Wek'èezhìi Renewable Resource Board
Management Proposal

1. Applicant Information
Project Title: Government of the Northwest Territories and Tłı̨chǫ Government Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ (Barren-ground caribou) Herd 2019 – 2021
Contact Persons: **Organization Names:** **Addresses:** **Phone/Fax Numbers:** **Email addresses:** Michael Birlea Lands Protection and Renewable Resources Manager Department of Culture and Lands Protection Tłı̨chǫ Government Behchokǫ, NT. X0E 0Y0 Phone: 867-392-6381 Ext: 1355 Fax: 867-392-6406 MichaelBirlea@tlicho.com Bruno Croft Regional Superintendent North Slave Region Department of Environment & Natural Resources Government of the Northwest Territories 2nd Floor, ENR Main Building P.O. Box 2668 3803 Bretzlaff Drive Yellowknife, NT. X1A 2P9 Phone: 867-767-9238 Ext: 53234 Fax: 867-873-6260 Bruno_Croft@gov.nt.ca

2. Management Proposal Summary: provide a summary description of your management proposal (350 words or less).	
Start Date: July 1, 2019	**Projected End Date:** July 1, 2021
Length: 2 years	**Project Year:** 1 of 2
A June 2018 calving ground photographic survey of the Bluenose-East (BNE) herd of caribou resulted in estimates of 11,675 ± 2,040 breeding cows and 19,294 ± 4,729 adults, which indicated that the herd's rate of decline has continued at a relatively constant annual 20-21% since 2010. In June 2010 the herd was estimated at about 120,000 caribou, thus the 2018 estimate represents an 84% decline in 8 years. The Bluenose-East herd in 2018 should be considered as being in the red phase of low numbers as defined by the Advisory Committee for Cooperation on Wildlife Management (ACCWM) management plan of 2014 (pending	

confirmation from ACCWM boards). In view of this rapid continuing decline, the Tłı̨chǫ Government (TG) and Government of the Northwest Territories (GNWT) Department of Environment and Natural Resources (ENR) are proposing management actions to slow the herd's decline and promote recovery for a period of 2 years beginning in July 2019 (the start of the harvest season). Management actions should be reviewed annually as further information becomes available. Proposed actions are highlighted here and greater detail is provided in the main text. Actions are grouped under the 5 categories defined in the ACCWM plan: harvest, predators, habitat and land use, and education. In addition, revised monitoring and research are described.

(1) Harvest: TG and ENR propose that resident and commercial harvest from this herd remain at 0 and that Indigenous harvest be limited on a herd-wide basis to 300 bulls/year. This harvest is a substantial reduction from the 750 bulls determined by WRRB in 2016, but provides some continued opportunity for Indigenous harvesting and the maintenance of cultural practices. The allocation among Indigenous groups proposed retains the same proportions as in 2015 (Tłı̨chǫ 39.3%, Sahtú 17.2%, Dehcho 1.6%, Inuvialuit 0.8%, NWT Métis Nation [NWTMN] 1.5%, Akaitcho 2.1%, and North Slave Métis Alliance [NSMA] 1.8%, and Kugluktuk (NU) 35.8%. Although TG and ENR have no authority over wildlife management in NU, the NWMB in 2016 worked with the allocation formula used in NWT proposals of 2015 (340 of 950 or 35.8% for Kugluktuk). For clarity, the percentages and numbers of caribou are listed below.

Table 1. Proposed percent of harvest and numbers of BNE bulls for harvester groups, with allocation formula used as in 2015 and 2016, for harvest of 750 bulls and 300 bulls. WRRB determined herd-wide harvest of 750 bulls in 2016, recognizing that the board has no authority in the Sahtú region or Nunavut.

Harvester Group	% of Harvest	Harvest 750 Bulls	Harvest 300 Bulls
Tłı̨chǫ	39.3	295	118
Sahtú	17.2	129	52
Dehcho	1.6	12	5
Inuvialuit	0.8	6	2
NWTMN	1.5	11	5
Akaitcho	2.1	16	6
NSMA	1.8	13	5
Kugluktuk (NU)	35.8	268	107
Total	100	750	300

TG and ENR recognize that reduced caribou harvesting opportunities have serious implications for Tłı̨chǫ and other Indigenous communities, including expensive groceries replacing caribou harvest. TG and ENR will explore ways of supporting harvesting of other wildlife (e.g. moose, muskox and fish harvesting). In addition, TG and ENR will look for ways to increase on-the-land activities and cultural practices such as upkeep of old cabins, travel routes and trails.

(2) Predators: A separate TG-ENR joint management proposal to WRRB on reduction of wolf numbers on the Bluenose-East and Bathurst caribou ranges is under development. Demographic evaluation of the herd's trend suggests that recent

pregnancy rates have been healthy but survival rates of adults and calves have been low, which may indicate that predation is limiting recovery. Methods will draw on a collaborative wolf reduction feasibility assessment completed in 2017 for the Bathurst herd. To date, GNWT incentives for wolf harvesters since 2010 have not resulted in any substantive increases in numbers of wolves taken in the North Slave region. In 2019, the GNWT is proposing to increase incentives for wolf harvesters in an area centered on the collar locations of wintering Bluenose-East and Bathurst caribou. TG will continue to develop a program of training wolf harvesters using culturally acceptable methods on the winter range.

(3) Land Use and Habitat: Recovery of the Bluenose-East herd will require a healthy habitat on the herd's range in NU and in the NWT. Currently, there are no active mines and overall there has been limited development on the Bluenose-East range. However, proposed actions to support healthy habitat include the following: promotion of protecting the herd's calving grounds in NU, identifying key unburned winter ranges and increasing fire management on these areas, participation in development of the wildlife management plan for the Tibbett-to-Contwoyto winter road, and participation in any environmental assessments and land use planning in NWT and NU that may affect this herd. In addition, TG and ENR support ongoing TK and scientific research focused on identifying key caribou habitats, such as ekwò no'oke (water crossings), tataa (land crossings), important unburned winter habitat, and the herd's core range used at low numbers, and ensuring conservation of these habitats, including minimizing disturbance.

TG and ENR will continue to support research on climate factors that may affect herd trend and studies of how a changing climate, including forest fires, may be affecting vegetation and foraging conditions for caribou.

(4) Education: ENR and TG recognize the importance of continued communication and engagement with communities and harvesters about the status of the caribou herds and about management actions underway, and the importance of accurate harvest reporting by all harvesters. Initiatives such as sight-in-your-rifle, minimizing wastage and respecting traditional ways of harvesting will be continued. Annual visits to the 4 Tłı̨chǫ communities will be continued and enhanced, beginning with visits in January 2019. The ENR On-The-Land unit and North Slave staff will support and promote these efforts. A key area of emphasis will be providing information about caribou and conservation to affected communities.

(5) Monitoring & Research: Biological monitoring of the herd is proposed to increase, particularly to maintain closer monitoring of calf and adult caribou survival rates. Population surveys would be carried out at 2-year intervals. Annual composition surveys would be carried out in June, October, and March/April to assess initial productivity or pregnancy rates and mortality rates of calves to the fall and late-winter periods. Radio-collars would be increased to 70 in total (50 cows and 20 bulls) with annual additions, to increase monitoring of cow survival rates and better define seasonal distribution and herd fidelity to calving grounds. Reconnaissance surveys on the calving grounds in years between population surveys would be suspended as recent results suggest they are not always reliable trend indicators. Accurate monitoring of harvest will continue to be important; TG and ENR will seek to improve condition assessment of harvested caribou.

TG and ENR support expansion of the Traditional Knowledge caribou monitoring program Boots on the Ground. To date this TG program has been focused on Bathurst caribou on their summer range in July and August. TG and ENR will explore ways to expand the program to the Bluenose-East range and to other seasons.

TG and ENR support continuing scientific and TK research into factors contributing to caribou declines. This includes monitoring and research focused on caribou health, parasites and other diseases, and diseases and parasites from the south that may be expanding into the NWT.

Please list all permits required to conduct proposal.

Renewable Resource Boards (WRRB, SRRB and NWMB) may hold public hearings to review proposals involving a Total Allowable Harvest (TAH) for the BNE herd, as included in this proposal.

NWT and NU Wildlife Research Permits will be required annually to conduct monitoring recommended in this proposal.

3. Background (Provide information on the affected wildlife species and management issue)

A. Bluenose-East Caribou Status in 2018

A June 2018 calving ground photographic survey of the Bluenose-East (BNE) herd of caribou resulted in estimates of 11,675 ± 2,040 breeding cows and 19,294 ± 4,729 adults, which indicated that the herd's rate of decline has continued at a relatively constant annual 20-21% since 2010 (Boulanger 2018a). In June 2010 the herd was estimated at about 120,000 caribou (Adamczewski et al. 2017), thus the 2018 estimate represents an 84% decline in 8 years. Both the herd and the estimated number of adult cows have declined by about half since 2015 (Fig. 1, Boulanger et al. 2016).

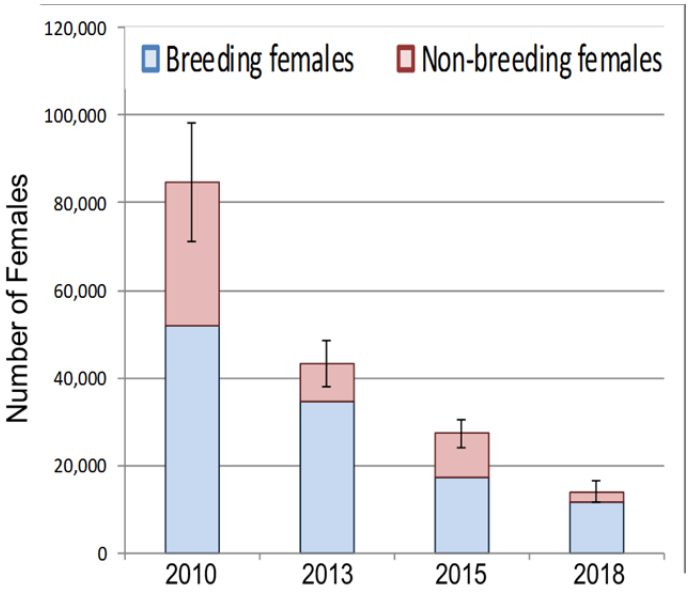

Fig. 1a. Trend of Bluenose-East herd breeding and non-breeding cows 2010-2018 based on photographic calving ground surveys (Means ± 95% Confidence Intervals).

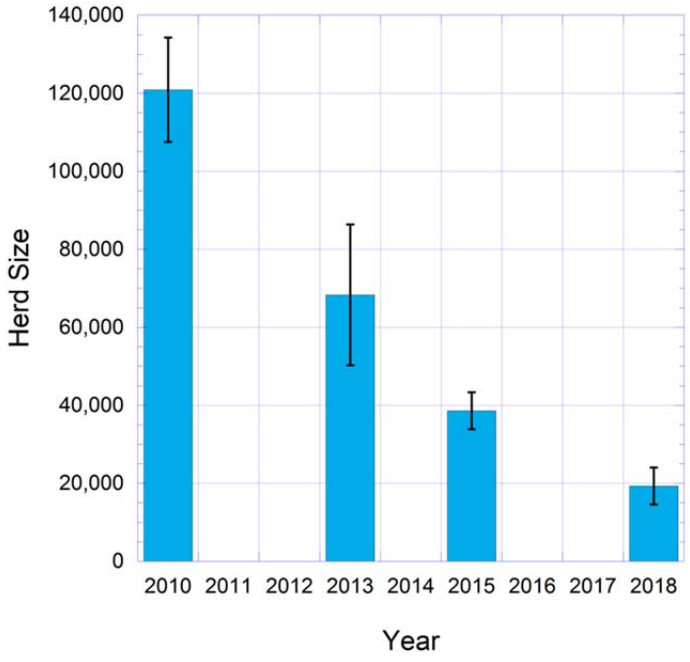

Fig. 1b. Trend of Bluenose-East herd estimates 2010-2018 based on photographic calving ground surveys (Means ± 95% Confidence Intervals).

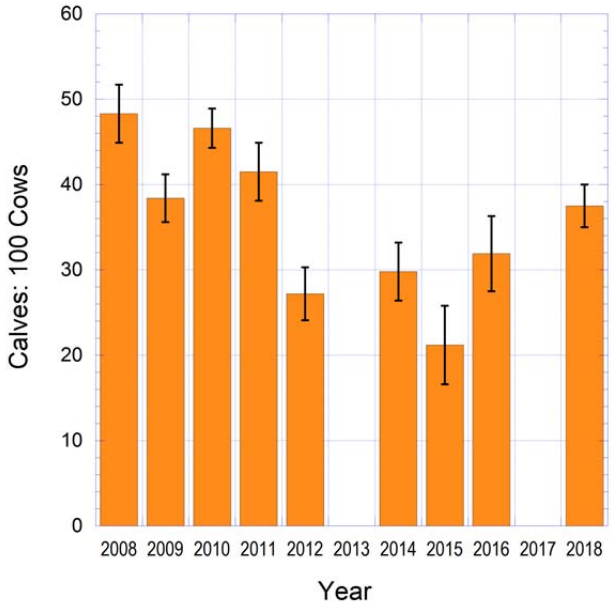

Fig. 2. Bluenose-East caribou late-winter (March/April) calf:cow ratios 2008-2018.

Population trend in caribou herds can in part be understood by examining vital rates like the pregnancy rate and survival rates of calves and adults. Cow survival was estimated 2013-2015 for the BNE herd at 71% (Boulanger et al. 2016), well below the 83-86% needed for a stable

herd (Boulanger et al. 2011). An updated cow survival estimate will be generated for 2015-2018, and it will likely be similar to the 71% given that annual rates of change have been relatively constant. The pregnancy rate in 49 cows captured for collar placement 2013-2015 was 94% (46/49) and the proportion of breeding females on the Bluenose-East calving ground in 2018 was 83.4%. These results suggest that pregnancy rates have been healthy for this herd in the last few years. Late-winter calf:cow ratios provide an index of the number of the previous year's calves that survived their first 9-10 months. The last calf:cow ratio for the herd was 37.5 ± 2.5 calves: 100 cows, higher than the 21-31 calves: 100 cows observed 2014-2016. A ratio of 30 calves: 100 cows has been considered a benchmark of a stable herd, however this depends on adult survival rates being healthy (83-86%). If adult survival rates are 71% as in the BNE herd 2013-2015, then these calf:cow ratios are insufficient for a stable herd. Overall, the vital rates for the BNE herd suggest that recent pregnancy rates have been healthy but adult survival rates remain well below those associated with a stable herd and calf survival has not been sufficient for a stable herd.

The average estimated/reported Bluenose-East harvest in winters 2009-2010 to 2012-2013 was about 2700 caribou/year, and likely at least 65% cows (Adamczewski et al. 2016; BGTWG 2014). These estimates are considered minimums; wounding losses were not included, some harvest was un-reported and the true harvest may have been at least 4000/year (Adamczewski et al. 2016).

Reported harvest for the BNE herd has been as follows for 2016-2017 and 2017-2018 (Table 2).

Table 2. Bluenose-East harvest by region for 2016-2017 and 2017-2018. Numbers should be considered preliminary until confirmed with ACCWM status reports. Kugluktuk numbers from Government of NU staff, Déljne harvest as reported by Déljne, Wek'èezhìı harvest as reported by TG and ENR wildlife officers.

Harvest by Region	**2016-2017**	**2017-2018**
Wek'èezhìı	15 bulls	142 bulls
Déljne	93 bulls, 33 cows	7 bulls
Kugluktuk	232 caribou	174 caribou
Total	373 caribou	323 caribou

The overall totals of 373 and 323 caribou were well below the harvest limits established in 2016 and reflect in part limited access to the herd, particularly in winter. These relatively limited harvest numbers likely contributed proportionately little to the herd's most recent decline 2015-2018.

B. Management Context for the Bluenose-East Caribou Herd

Guidance for the management and monitoring of the Bluenose-East herd is primarily found within the ACCWM's management plan for the Cape Bathurst, Bluenose-West and Bluenose-East herds, finalized in November 2014 (ACCWM 2014). In 2017 the ACCWM developed an Action Plan for the Bluenose-East herd and this plan was updated in 2018. The ACCWM held annual status update meetings in November for the three herds in 2016, 2017 and 2018. In 2017 the BNE herd was assessed as being in the orange phase (declining), and in 2018 the herd was assessed as being in the red zone (low numbers and below 20,000 – pending confirmation from ACCWM boards).

As a result of hearings in 2016 of the WRRB, SRRB and NWMB, harvest limits for this herd were established, respectively, as 750 bulls (intended to be herd-wide) under the WRRB, 150 (80% bulls) under the SRRB for Déljne, and 340 caribou (no gender) under the NWMB for Kugluktuk. The allocation among Indigenous harvester groups established in 2015 based primarily on previously documented harvest levels was Tłı̨chǫ 39.3%, Sahtú 17.2%, Dehcho 1.6%, Inuvialuit 0.8%, NWT Métis Nation [NWTMN] 1.5%, Akaitcho 2.1%, and North Slave Métis Alliance [NSMA] 1.8%. This would leave an allocation of 35.8% BNE caribou for Nunavut.

4. Description of Proposed Management Action

Goal of Management Actions

The short-term goal of the management actions proposed is to slow the herd's decline and promote recovery. Over the longer-term, the goal is to enable sustainable caribou harvesting that addresses Indigenous community needs levels across this herd's range. In particular within Wek'èezhìi, the goal is to allow the exercise of Tłı̨chǫ rights to harvest caribou throughout Mǫwhì Gogha Dè Nı̨ı̨tłèè.

1. Harvest management

In view of the continuing rapid decline in the BNE herd and its status assessment in 2018 by the ACCWM as being in the red phase (low numbers and below 20,000, pending confirmation from ACCWM boards), TG and ENR recommend that harvest be reduced further from the limits established in 2016. Resident and commercial harvest from this herd should remain at 0. Aboriginal harvest should be limited on a herd-wide basis to 300 caribou/year with the harvest being 100% bulls.

	Harvest Sex Ratio	
	100% Cows	100% Bulls
Harvest Number	Herd Size	Herd Size
0	9923	9923
100	9702	9731
250	9370	9443
500	8818	8963
750	8266	8484
950	7824	8100
2000	5504	7086

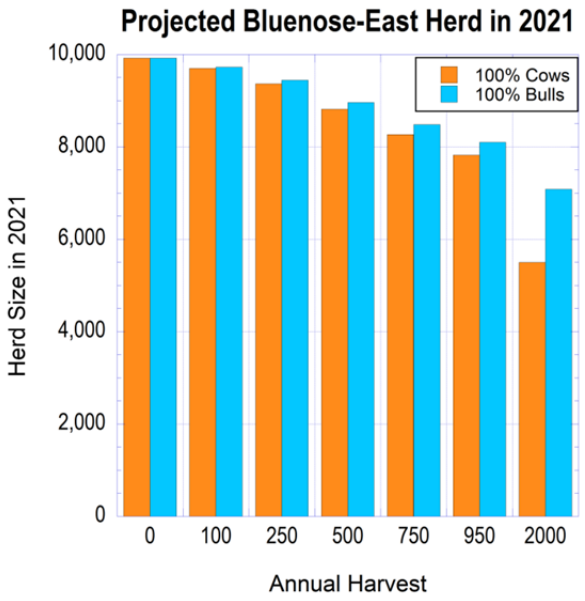

Table 3 and Figure 3. Projected herd size in the Bluenose-East herd in 2021 with various

levels of harvest and harvest sex ratio. Key assumptions: Cow survival rate at 71% with no harvest, and average calf recruitment.

Modeling of the herd's likely trend over the next 3 years by J. Boulanger (2018b) suggests that if the 2015-2018 trends continues, the herd will be near or below 10,000 caribou in 2021 (Table 3 and Figure 3). Any harvest would reduce projected herd size further, but harvest levels of 100-300/year would result in limited additional decline. As harvest level increases, the incremental effect on herd decline increases. The effects of cow harvest (compared to bull harvest) are most noticeable at higher harvest levels. A larger range of modeling outcomes and details are provided by Boulanger (2018b). Estimated/reported harvest in the 2016/2017 (373 caribou) and 2017/2018 (323 caribou) seasons was relatively limited and well below the 750 caribou determined by WRRB in 2016, but harvest reduction remains one of the actions that can help support recovery.

The proposed harvest is a substantial reduction from the 750 bulls herd-wide determined by WRRB in 2016, but provides some continued opportunity for Indigenous harvesting and the maintenance of cultural traditions. TG and ENR recognize that the closure of Bathurst caribou harvest greatly reduced Tłı̨chǫ caribou harvesting opportunities, thus allowing for a limited BNE harvest is important for these communities.

Unless a revised allocation formula accepted by all user groups is determined, the proposed allocation among Indigenous groups retains the same proportions as in 2015 (Tłı̨chǫ 39.3%, Sahtú 17.2%, Dehcho 1.6%, Inuvialuit 0.8%, NWT Métis Nation [NWTMN] 1.5%, Akaitcho 2.1%, and North Slave Métis Alliance [NSMA] 1.8%, and 35.8% BNE caribou for Kugluktuk in Nunavut (NU). Although TG and ENR have no authority over wildlife management in NU, the NWMB in 2016 worked with the allocation formula used in NWT proposals (340 of 950 for Kugluktuk, or 35.8%). TG and ENR will continue to work with management authorities in NWT (Sahtú and Wek'èezhìi regions) and NU (Kugluktuk, NWMB and GN) to ensure a consistent approach to harvest management for this herd. For clarity, the percentages and numbers of caribou are listed below for three levels of harvest. The 118 authorization cards (caribou bulls) for Tłı̨chǫ communities are for Tłı̨chǫ harvesters to continue cultural practice on the land and the harvest will be allocated to the elders.

Table 4. Proposed percent of harvest and numbers of BNE bulls for harvester groups, with allocation formula used as in 2015 and 2016, for harvest of 750 bulls and 300 bulls. WRRB determined herd-wide harvest of 750 bulls in 2016, recognizing the board has no authority in Sahtú region or Nunavut (WRRB 2016 a, b).

Harvester Group	% of Harvest	Harvest 750 Bulls	Harvest 300 Bulls
Tłı̨chǫ	39.3	295	118
Sahtú	17.2	129	52
Dehcho	1.6	12	5
Inuvialuit	0.8	6	2
NWTMN	1.5	11	5
Akaitcho	2.1	16	6
NSMA	1.8	13	5
Kugluktuk (NU)	35.8	268	107
Total	100	750	300

ENR will create and print new authorisation cards to harvest Bluenose-East caribou males in July of each year and make them available to all Indigenous groups as per their allocations in August prior to the beginning of the fall hunt.

ENR will consider adding mobile patrol stations at key locations along the winter roads, if there is an increased need for enforcement and compliance resulting from a change in the winter caribou distribution and obvious evidence of potential illegal caribou harvesting, as resources allow.

TG with ENR support will take a lead role in reporting on Bluenose-East caribou harvest by Tłı̨chǫ harvesters, based on authorization cards, and on increasing reporting of caribou condition by harvesters.

Support for harvest of other wildlife and on-the-land activities:

TG and ENR recognize that reduced caribou harvesting opportunities have serious implications for Tłı̨chǫ and other Indigenous communities, and that limitations on hunting have negative impacts on the continuity of Tłı̨chǫ culture, language and way of life. Lack of caribou harvesting opportunities means real hardships in Indigenous communities that have depended on caribou. TG and ENR will explore ways of supporting other harvesting initiatives - for example, moose, muskox and fish harvesting, as well as supporting traditional on-the-land activities that help maintain cultural practices.

The Tłı̨chǫ Government plans to continue and expand programs focused on cultural practices on the land. These programs include: sustain TG-owned hunting and trapping cabins; traditional canoe trails from the communities to cultural and harvesting locations; and winter skidoo trails to caribou hunting areas, along with other programs currently operated by the Tłı̨chǫ Government. The long-term aim is continuation of projects that teach Traditional Knowledge of the land and caribou by bringing elders, youth and community members together on the land. By maintaining traditional trails and TG-owned cabins, community members share knowledge of these important cultural and environmental locations, thus re-visiting and maintaining these sites are important to maintain the Tłı̨chǫ knowledge base. Such activities are important for the practice of the hunting culture, and maintaining cultural identify and continuity as a hunting people, ultimately, to condition people with skills and knowledge of the land, for when caribou return.

ENR's new On-The-Land unit, in collaboration with Wildlife Division and North Slave region, will play an active role working with Tłı̨chǫ Government and Tłı̨chǫ communities to identify appropriate cultural activities and harvest of other wildlife and fish, and sources of support for them.

2. Predators

The continued rapid decline in the BNE and Bathurst herds 2015-2018 occurred despite a very limited harvest of both herds between the NWT and NU. Low adult and calf survival rates in the BNE herds suggest that predation may be a key limiting factor for the BNE herd. A number of actions are proposed for more comprehensive management of predators that may assist with recovery of the Bluenose-East herd.

(a) Bathurst Wolf Management Feasibility Assessment 2017:

A collaborative feasibility assessment of wolf management options for the Bathurst caribou

range led by the WRRB, ENR and TG was completed in 2017 (Wolf Feasibility Assessment Technical Working Group 2017). The assessment considered 11 options including lethal and non-lethal methods, their potential effectiveness, costs and humaneness. While this feasibility was focused on the Bathurst range, the assessment can also be applicable to possible wolf reduction options for the Bluenose-East range.

(b) Continued TG program to train wolf harvesters:

A separate proposal to WRRB from TG described the approach that has been initiated to train Tłı̨chǫ wolf hunters from the 4 communities in harvesting wolves using culturally appropriate methods. This program will be continued and will likely form a key component of the larger wolf management proposal being developed.

(c) Increased GNWT incentives for wolf harvesters:

In 2010, GNWT increased incentives for wolf harvesters to reduce predation and promote caribou recovery. The incentives were increased in 2015 and at that time, the incentives included $200 for an intact unskinned wolf, $450 for a wolf pelt skinned to traditional standards and up to $800 for a wolf pelt skinned to taxidermy standards. Overall, wolf harvest levels across the NWT and in the North Slave region showed no real increase in wolf harvest as a result of these incentives. A substantial portion of the wolves that were taken were near community landfills, thus not from caribou winter ranges. Recognizing that the incentives to date have been ineffective, GNWT is proposing to increase them to $900 for an unskinned wolf, $1300 for a wolf pelt skinned to traditional standards and $1650 for a pelt skinned to taxidermy standards (Fig. 4). These higher incentives would apply in an area in the North Slave region centered on the collar locations of wintering BNE and Bathurst caribou. Wolf hunters would be required to check into and out of the wolf harvesting zone with increased incentives at winter road access points. This would ensure that wolves taken under the higher incentives are associated with the two caribou herds. The incentives are proposed in part to help increase interest in the TG program to train wolf harvesters from the Tłı̨chǫ training program described above.

(d) Wolf management proposal for BNE and Bathurst ranges:

In addition to joint management proposals for the two caribou herds (including this document), a separate joint proposal wolf management is currently under development that will include the ranges of both herds. Efforts to date to increase wolf harvest in the North Slave region, including GNWT incentives for wolf harvesters and the TG program to train wolf harvesters in culturally appropriate ways to hunt wolves, have not resulted in a meaningful increase in numbers of wolves taken. The new proposal will recommend ways to ensure that wolf harvest is increased to a level where caribou survival rates will be measurably increased. This will require more intensive wolf removal programs because small-scale wolf removals are generally ineffective at increasing caribou survival rates.

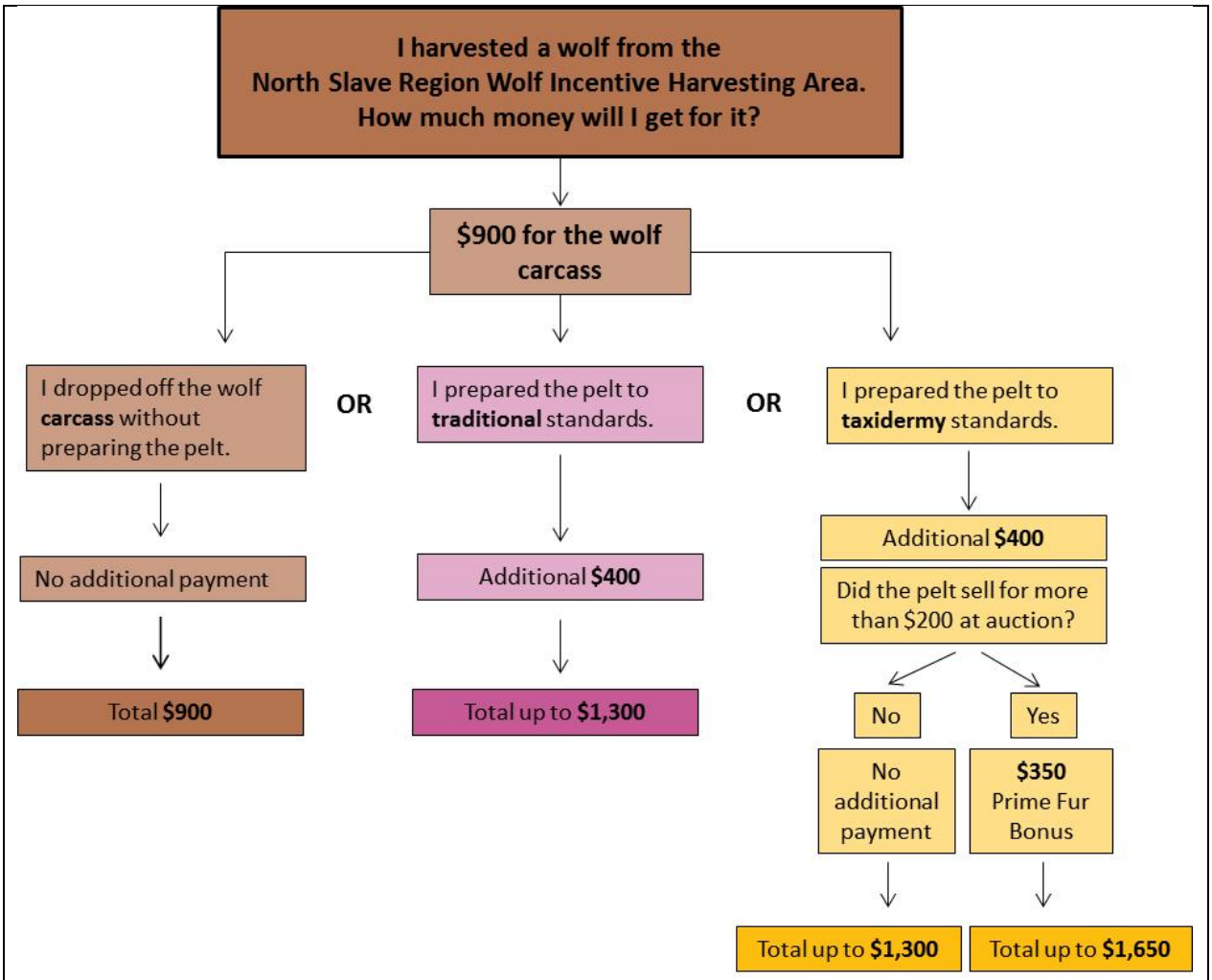

Fig. 4. Proposed new incentives for wolf harvesters in North Slave region in areas with BNE and Bathurst caribou.

(e) Collaboration between NWT and NU managers about predator management:
The calving grounds and a large portion of the summer ranges of the BNE and Bathurst caribou herds are in Nunavut. At these times of year (June-August), the herds are generally well separated and their ranges well-defined spatially. In contrast, winter ranges tend to be larger and more variable from year to year, but they are also more accessible to hunters and trappers. Range overlap of wintering caribou herds has often included extensive overlap between neighbouring herds; for example, the BNE, Bathurst and Beverly/Ahiak collared caribou were well mixed in December 2018. Wolf removals on calving and summer ranges would affect the target caribou herds directly. Wolf removal on the winter range is challenged by the overlap of caribou herds and mixing of the wolves associated with these herds; in this situation the overall number of wolves associated with the caribou herds will be larger and likely require more wolf removals to be effective.

There has been a series of discussions involving GNWT and GN wildlife staff and more senior officials (ministers and deputy ministers) about the potential for collaboration centered on predator reduction on the NU ranges of the BNE and Bathurst herds. As with harvest management or other possible management actions in NU, the GNWT, TG, WRRB and other

management organizations in the NWT have no authority in NU and potential predator management would need to respect NU processes and be approved by the NWMB. However, coordinated harvest and wolf management actions across jurisdictional boundaries are key to effectiveness and likelihood for caribou recovery. Harvesters associated with the Kugluktuk Hunters and Trappers Organization have expressed interest in contributing to recovery of the BNE and Bathurst herds by reducing predator numbers. GNWT and TG will pursue these discussions further to develop and implement coordinated predator removals across the BNE and Bathurst herd ranges.

3. Habitat and Land Use

Recovery of the Bluenose-East herd will require a healthy habitat on the herd's range in NU and the NWT. Currently, there are no active mines and overall there has been limited development on the Bluenose-East range. However, proposed actions to support healthy habitat include the following:

- Promotion of protecting the herd's calving grounds in NU;
- Participation in development of the wildlife management plan for road access into herd range, as the Tibbitt-to-Contwoyto winter road (limiting speed limits, traffic and other mitigations for caribou);
- Participation in any environmental assessments and land use planning in NWT and NU that may affect this herd's range;
- Identifying key unburned habitat on the winter range to be included in the Values at Risk hierarchy, and increased fire management activity in these areas during the fire season.
- Continuation of ongoing TK research focused on identifying and conserving key caribou habitat:
    - Ekwò no'oke (water crossings),
    - Tataa (land crossings), and
    - Important unburned winter habitat.

For the Bathurst Caribou Range Plan (BCRP), the TG conducted TK research and identified valuable caribou habitat as Ekwò no'oke (water crossings), tataa (land crossings), migration routes and seasonal ranges. The BCRP process can serve as a model for identifying key habitat for the BNE herd by using scientific data and traditional knowledge to identify the Bluenose-East core range (centre of habitation) and other important areas. This model can be followed to identify key BNE caribou habitat, by combining recent years of collar data and Tłı̨chǫ traditional knowledge to identify critical habitat. The Bluenose-East fall and winter ranges overlap with the Bathurst herd, thus parts of its range will be included in the habitat protection recommendations in the Bathurst Caribou Range Plan. Continuation of ongoing research can lead to further identification of important habitats for potential protection on the full Bluenose-East range.

4. Education

TG and ENR recognize that continuing effort is needed to increase awareness among harvesters, communities and the public about the status of NWT caribou herds, the need for conservation actions to promote recovery and how people can contribute to conservation. The following actions are proposed to continue and increase public and hunter education:

The following are education/public awareness initiatives to improve hunter practices and reduce wounding and wastage:

- Continue to work with the communities, in particular more closely with schools, on promoting Indigenous laws and respecting wildlife, including how to prevent wastage; and

- Invite elders to work with the youth to teach traditional hunting practices and proper meat preparation.

Posters, pamphlets, media and road signs will be used to better inform the public about respecting wildlife, traditional hunting practices, wastage, poaching and promoting bull harvest. Table 5 below summarizes the TG and ENR objectives for increased public engagement and hunter education.

ENR has promoted sound hunter harvest practices, preventing meat wastage, harvesting bulls instead of cows, and implementing related conservation education in NWT communities for a number of years. In response to community requests, ENR has developed a Hunter Education program that is meant to be tailored to the needs of individual communities and organizations.

An important area to emphasize will be ensuring that information on the status and management of regional caribou herds is provided in appropriate ways and on an on-going basis to harvesters, elders and other community members.

Table 5. Summary of approaches and objectives for increased public engagement and hunter education for caribou in Wek'èezhìi.

General Approach	Description & Objective	Lead (Support)
Public hearings	A (likely) public hearing on wildlife management actions for BNE herd in 2019	WRRB & SRRB (TG, ENR)
Community meetings	1 meeting per year in each Tłı̨chǫ community to discuss and update wildlife management issues and actions	TG and ENR
Radio programs	When needed radio announcements, interviews and/or updates on wildlife management in Tłı̨chǫ language during winter hunting season (annual)	TG & ENR
Sight-in-your-rifle programs	Conduct community-based conservation education programs with an objective of 1 workshop / Tłı̨chǫ community / hunting season (annual)	ENR and TG; need to coordinate with community leaders
Boots on the Ground and other Traditional Knowledge programs	Highlight the programs and their results with Tłı̨chǫ communities and the public (annual)	TG and ENR

Outreach through internet and social media	Regular updates (10 updates per season) on government websites and social media during fall and winter hunting seasons (Facebook & Tłı̨chǫ website)	TG, ENR (WRRB)
Poster campaign	Produce posters for distribution in each Tłı̨chǫ community: posters to be developed annually as needed	TG and ENR

5. Monitoring and Research

Three aspects of monitoring and research are described in this section: (a) biological monitoring mostly led by ENR, (b) expansion of the Tłı̨chǫ Boots on the Ground caribou monitoring from Bathurst range to Bluenose-East range, and (c) support for biological or TK research that helps explain changes in caribou abundance.

(a) Biological monitoring:

Table 6 lists updated biological monitoring of the Bluenose-East herd, mostly led by ENR, proposed for 2019-2023. A key focus of the increased monitoring is to provide annual information on productivity and survival of caribou calves and adult cows, as well as increased surveys to estimate herd size. The increased monitoring in part anticipates more intensive wolf management, for which assessment of effectiveness in improving caribou survival rates will be needed. The table includes a rationale for changes from previous monitoring as in the 2015 joint proposal for this herd. Changes are also described and a brief rationale given for them below.

I. *Population surveys every 2 years*: In recent years, calving photo surveys for the BNE and Bathurst herds have been carried out every 3 years and the new population estimates have been benchmarks for revised management. The continued rapid decline of the two herds and expected increase in wolf management are the main rationale for proposing population surveys every 2 years for the two herds, i.e. in 2020 and 2022.

II. *Collar increase to 70 (50 cows and 20 bulls)*: A technical rationale for increasing the number of collars on the Bathurst herd to 65 (50 cows and 15 bulls) was provided by Adamczewski and Boulanger (2016). Some applications, such as monitoring cow survival rates with good precision, would require 100 collared caribou, while other applications can be addressed reliably with 50 or fewer collars. At this time, increasing the number of collars on cows to 50 would provide more reliable annual estimates of cow survival rates, as well as increasing confidence in defining distribution of caribou throughout the year, assigning harvest to herd reliably, and monitoring of herd fidelity to calving grounds. Range use by bulls shows patterns that vary from those of cows, thus maintaining the 20 bull collars used in recent years will also be important. The collars may also assist in determining where and when predators should be removed as well as in monitoring whether predator management actions are having an effect on the herd.

III. *Annual composition surveys in June, October and March/April*: To date composition

surveys have been carried out on a nearly annual basis for the BNE herd in late winter, as an index of calf survival to 9-10 months of age. Composition surveys on the calving grounds have been carried out every 3 years as part of the calving photo surveys and provide a measure of initial productivity. Fall composition surveys have been carried out every 2-3 years to monitor the bull:cow ratio, which is needed to convert the estimate of cows from the June calving photo surveys to an overall herd estimate. Fall composition surveys also provide a calf:cow ratio that gives a measure of how many calves have survived the first 4-5 months. The recommended increase to annual June, October and late-winter composition surveys will provide annual information on initial productivity of young and the survival rates of calves to the fall and late-winter periods. Increased survival of adults and calves are the key changes that need to happen for this herd to stabilize and potentially increase. Increased survival will also be a key indicator of effectiveness of predator management.

IV. *Suspension of June calving reconnaissance surveys in years between photo surveys*: Reconnaissance surveys over the calving grounds have been used for the Bathurst and Bluenose-East herds in years between photographic population surveys as a way of tracking the numbers of cows on the calving grounds. In most years they have tracked trend from the more complete photo surveys well. However, the variance on these surveys has usually been high, which reduces confidence in the estimates. In June 2017 a recon survey of the BNE calving grounds suggested that the decline had ended and the herd had increased from 2015; the June 2018 survey showed that the herd had in fact declined further by about half. In view of the high variance on these surveys and the questionable 2017 results, these surveys are being discontinued.

V. *Harvest monitoring*: Accurate reporting of caribou harvest remains a priority for the Bluenose-East caribou herd. TG and ENR will work together to ensure that all harvest by Tłı̨chǫ harvesters is reported based on authorization cards and community monitors. ENR will continue overall monitoring of harvest via check-stations at Gordon Lake and McKay Lake, regular patrols by officers on the ground and periodic aerial monitoring. ENR will continue to monitor compliance within the Bathurst mobile no-harvest zone using the check-stations and patrols as in previous winters.

VI. *Condition Assessment and Visual Monitoring:* Limited sample numbers have somewhat constrained the reliability of the assessments of trends in condition of harvested BNE caribou (see Garner 2014). Reliable reporting of caribou condition with adequate sample numbers could improve understanding of the herd's nutritional status and the influence of environmental conditions that are tracked through the drought index, oestrid (warble and bot fly) index and indices of snow conditions on herd condition. Condition sampling in winter from hunter-killed caribou will continue (led by TG with ENR support) with a focus on increasing sample sizes and completeness of monitoring, when and if funding allows. Training will be needed in each community to ensure qualified staff are available.

(b) Expansion of Boots on the Ground TK monitoring to Bluenose-East caribou range:

TG and ENR support expansion of the Traditional Knowledge caribou monitoring program Boots on the Ground, and will explore ways to expand the program to the Bluenose-East range. For three years, this TG program has been focused on Bathurst caribou on their

summer range in July and August, by having Tłı̨chǫ monitors for six weeks, in July and August, on the summer range of the herd. The Tłı̨chǫ Government aims to expand the program in both time and space, but this will be dependent on availability of staff, elders and other resources.

The Tłı̨chǫ Government is considering plans to purchase boats to be placed on other larger lakes on the summer and fall range that are used by both herds. By placing boats on several larger lakes, monitoring teams can fly to these lakes, where it is possible to walk in proximity to the herds and monitor caribou. Currently, TG relies on two boats on Contwoyto lake and Fry Inlet. This gives access to a larger area around these two large water bodies. The monitoring has been successful for the Bathurst herd as the herd has remained around these large lakes during the last years. On the summer and fall range of the Bluenose-East herd, there are fewer large lakes where the herd tend to aggregate. Thus, Boots on the Ground monitoring of Bluenose-East caribou is conditional on the herd remaining relatively stable around larger waterbodies, such as Point Lake, and on sufficient resources, including qualified staff. The locations for the boats are not determined yet, and will be based on recent years of collar data and Tłı̨chǫ harvesters' local knowledge. The expansion will be phased in over the next monitoring seasons, as training new monitors and building capacity in the monitoring team is a key to the success of the program. On-the-land monitoring will continue to inform decision makers on herd demographics, behaviour and migration, quality of summer and fall range habitat, and cumulative effects of predators, mining activities, and climate change on caribou.

(c) Research on drivers of change in caribou abundance:

TG and ENR recognize that there are likely multiple factors that have contributed to the BNE herd's decline since 2010. While harvest levels of 3000 or more caribou annually likely contributed to the herd's decline between 2010 and 2015, harvest was relatively low 2015-2018, thus other factors including predation, disturbance like mining camps and roads, and climate factors may have been key to the herd's decline over that period. Adverse environmental conditions may be important in some years to the herd's vital rates. For example, a drought year in 2014 potentially led to poor feeding conditions, poor cow condition and a low pregnancy rate in winter 2014-2015. A study by Chen et al. (2014) suggested that spring calf:cow ratios in the Bathurst herd were correlated with indices of summer range productivity one and a half years earlier; the mechanism proposed was that cows with poor summer feeding conditions were likely to be in poor condition during the fall breeding season, leading to low pregnancy rates and low June calf:cow ratios. An assessment by Boulanger and Adamczewski (2017) of relationships between environmental climate variables from a remote sensing database and demographic rates of the BNE and Bathurst herds demonstrated that climate variables such as the summer warble fly index, summer drought index, and winter climate indicators such as snow depth can help explain trends in cow survival, calf survival and pregnancy rate.

The two governments support increased research into underlying drivers of change in herd abundance by partnership with academic researchers and remote sensing specialists, using both scientific and Traditional Knowledge approaches. There is a need to better understand predation rates and their significance to caribou, environmental factors affecting caribou condition and population trend, and on the effects of climate change on these relationships. A further area of importance is monitoring and research focused on caribou health, parasites and other diseases, and diseases and parasites from the south that may be expanding into the NWT. Research results may lead to expanded monitoring using scientific and TK approaches. Monitoring should focus on methods that involve community members and increase their knowledge and sense of involvement.

Table 6: Biological monitoring of Bluenose-East herd (ENR and/or TG lead)

Indicator(s)	Rationale	Desired Trend	Adaptive Management Options	How Often	Notes
1. Estimate of breeding cows and extrapolated herd size from calving ground photo survey	Most reliable estimate for abundance of breeding cows and total number of cows & can be extrapolated to herd size based on sex ratio.	Stable or increasing trend in numbers of breeding cows and herd size in 2023.	If trend in breeding cows increasing, continue as before; if trend stable-negative, re-consider management.	Every 2 years	Last survey 2018, next surveys in 2020 and 2022. Trend in breeding females is most important for herd trend.
2. Cow productivity; composition survey on calving ground in spring (June)	Proportion of breeding females in June at peak of calving establishes initial productivity or approximate pregnancy rate.	Proportion of breeding cows at least 80%.	Low ratio indicates poor fecundity and suggests poor nutrition in previous summer; survey data integrates fecundity & neonatal survival.	Annual	Essential component of calving ground photographic survey. Proposed increase to annual survey to more closely monitor initial productivity and following calf survival
3. Fall sex ratio and calf:cow ratio; composition survey (October)	Tracks bull:cow ratio and fall calf:cow ratio. Fall calf:cow ratio provides an index of calf survival from birth through initial 4.5 months.	Bull:cow ratio above 30:100; calf:cow ratio of more than 40:100.	If bull:cow ratio below target, consider reducing bull harvest. Low fall calf:cow ratios suggest poor calf survival.	Annual	Sex ratio needed for June calving ground extrapolation to herd size.
4. Calf:cow ratio in late winter (March-April); composition survey	Herd can only grow if enough calves are born and survive to one year, i.e., calf recruitment is greater than mortality.	At least 30-40 calves:100 cows on average.	Sustained ratios ≤ 30:100, herd likely declining; may re-assess management.	Annual	Calf productivity & survival vary widely year-to-year, affected by several variables, including weather.
5. Caribou condition assessment from harvested animals	Condition assessment provides overall index of nutrition/environmental conditions and changes over time.	High hunter condition scores (average 2.5-3.5 out of 4); target 70 animals/year.	Sustained poor condition suggests unfavourable environmental conditions and possibly further decline.	Annual	Sample numbers to date limited (2010-2018). TG working to improve program, sampling.
6. Cow survival rate estimated from OLS model and annual survival estimates from collared cows	Cow survival estimated 75-78% in 2013 (from model). Need survival of 83-86% for stable herd. Increased collar number to 50 cows should improve annual estimation.	At least 83-86% by 2022.	If cow survival continues <80%, herd likely to continue declining.	Annual	Population trend highly sensitive to cow survival rate; recovery will depend on increased cow survival.
7. Total harvest from this herd by all users groups (numbers & sex ratio)	Accurate tracking of all harvest is essential to management and to knowing whether management actions are effective.	All harvest reported accurately and within agreed-on limits.	Re-assess recommended harvest annually; if herd continues to decline, re-assess harvest limit.	Annual	Multiple factors other than harvest may contribute to decline but harvest is one of the few factors humans control.
8. Maintain up to 70 satellite/GPS collars on herd (50 on cows, 20 on bulls)	Collar information is key to reliable surveys, tracking seasonal movements and ranges, monitoring survival and herd fidelity.	Additional collars added every March/April to maintain up to 70 collars on herd.		Annual additions to keep total of 70.	Information from collared caribou is essential to monitoring and management of all N. America caribou herds.
9. Wolf Harvest on BNE range	Several Indigenous governments and communities have expressed interest in increasing wolf harvest by hunters and trappers to increase caribou survival.	Increased harvest of wolves	If herd continues to decline, consider increased focus on wolf harvest to slow herd decline and increase likelihood of recovery.	Annual	Herd overlap in winter likely means mixing of wolves associated with those herds and may influence effectiveness of wolf removals.

5. Consultation

Describe any consultation undertaken in preparation of the management proposal and the results of such consultation.

A letter with results of the Bluenose-East and Bathurst June 2018 surveys was sent from ENR by email to Indigenous governments, boards and other key stakeholders on Nov. 20, 2018. In the letter, organizations were invited to speak to the minister or deputy minister of ENR in person or by phone. A letter was also sent to the minister of Environment with the Government of Nunavut on the same day with an offer of further discussion in person or by phone. Senior leadership from the Sahtú region (SSI and other organizations) met with the GNWT premier and other senior officials on Nov. 20 to discuss barren-ground caribou among other matters. A media briefing on the Bluenose-East and Bathurst survey results was also held at the NWT legislature on Nov. 20. ENR officials will present to the GNWT Standing Committee on Economic Development and the Environment (SCEDE) on the status and proposed management of the Bathurst and BNE herds on Jan. 16, 2019 to increase GNWT-wide understanding of the caribou herds' status and management.

ENR staff presented on June 2018 survey results and other monitoring of the Bluenose-East herd on Dec. 21, 2018 at the annual ACCWM caribou herd status meeting in Yellowknife. This meeting was attended by representatives from Nunavut, including Kugluktuk, and all the boards making up the ACCWM.

Staff from the Government of Nunavut (GN) and observers from Kugluktuk participated in the June 2018 surveys of the BNE and Bathurst herds. Staff from GN and Nunavut Tunngavik Incorporated (NTI) worked with ENR staff at a technical meeting Oct. 16 and 17, 2018 to review results of the GNWT-led surveys of the BNE and Bathurst herds and the GN-led survey of the Beverly herd in the Queen Maud Gulf in June 2018. This meeting was a continuation of collaboration between GN and GNWT staff on trans-border caribou issues.

TG and ENR staff began to meet in late November 2018 and continuing into December 2018 and January 2019 to develop joint management proposals for the two caribou herds. Between these meetings, staff met with leaders and more senior staff of the two governments to discuss specific items to include in the management proposals.

TG, ENR and WRRB staff met monthly in fall and winter 2018-2019 to talk about status and management of the Bluenose-East, Bathurst and Beverly/Ahiak caribou herds; these 3 groups comprise the Barren-Ground Caribou Technical Working Group.

Meetings in the four Tłı̨chǫ communities are planned for January 2019. These will include the Tłı̨chǫ chiefs and senior officials from ENR to talk about the caribou herds and proposed management.

ENR staff attended meetings of the Délı̨ne Renewable Resource Council Dec. 10-12, 2018 and Jan. 8, 2019 to participate in discussions of wildlife issues, including the status of the Bluenose-East herd and potential adjustments to the Délı̨ne caribou conservation plan.

6. Communications Plan

Describe the management proposal's communications activities and how the Tłı̨chǫ communities will be informed of the proposal and its results.

TG and GNWT leadership will, together, hold an information session in each of the 4 Tłı̨chǫ communities. Emphasis will be placed on visual aids that are easily understood and on hearing from community members.

Table 5 (listed earlier in this proposal) describes approaches and objectives for increased public engagement and hunter education for caribou in Wek'èezhìi.

7. Relevant Background Supporting Documentation

List or attached separately to the submission all background supporting documentation, including key references, inspection/incident reports and annual project summary reports.

Adamczewski, J., and J. Boulanger. 2016. Technical rationale to increase the number of satellite collars on the Bathurst caribou herd. Department of Environment and Natural Resources, Government of Northwest Territories. Manuscript Report 254.

Adamczewski, J., J. Boulanger, B. Croft, B. Elkin, and H. D. Cluff. 2016. Overview: monitoring of Bathurst and Bluenose-East caribou herds, October 2014. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada. Manuscript Report 263.

Adamczewski, J., J. Boulanger, B. Croft, T. Davison, Heather Sayine-Crawford, and B. Tracz. 2017. A comparison of calving and post-calving photo-surveys of the Bluenose-East herd of barren-ground caribou in northern Canada in 2010. Canadian Wildlife Biology and Management 6(1): 4-30.

Advisory Committee for the Cooperation on Wildlife Management (ACCWM). 2014. Taking Care of Caribou – The Cape Bathurst, Bluenose-West, and Bluenose-East Barren Ground Caribou Herds Management Plan (Final). C/O Wek'èezhìi Renewable Resources Board, 102A, 4504 – 49 Avenue, Yellowknife, NT, X1A 1A7.

Barren-ground Technical Working Group (BGTWG). 2014. Barren-Ground Caribou 2013/14 Harvest & Monitoring Summary. Unpublished Report. Wek'èezhìı Renewable Resource Board, Tłı̨chǫ Government, and Government of the Northwest Territories. Yellowknife, NT. Online [URL]: http://wrrb.ca/sites/default/files/2013-2014%20BGC%20Harvest%20Summary%20Report%20_%20FINAL_Oct15_2015.pdf

Boulanger, J. 2018a. Notes on the analysis of the photo data for the Bluenose-East herd calving ground survey 2018. Draft Nov. 9, 2018. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada. Unpublished draft report.

Boulanger, J. 2018b. Preliminary harvest simulations for the Bluenose-East herd 2018. Draft Jan. 2, 2019. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada. Unpublished draft report.

Boulanger, J., A. Gunn, J. Adamczewski, and B. Croft. 2011. A data-driven demographic model to explore the decline of the Bathurst caribou herd. Journal of Wildlife Management 75:883-896.

Boulanger, J., B. Croft, J. Adamczewski, D. Lee, N. Larter, L.-M. Leclerc. 2016. An estimate of breeding females and analyses of demographics for the Bluenose-East herd of barren-ground caribou: 2015 calving ground photographic survey. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada. Manuscript Report 260.

Boulanger, J., and J. Adamczewski. 2017. Analysis of environmental, temporal, and spatial factors affecting demography of the Bathurst and Bluenose-East caribou herds. Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada. Manuscript Report (draft contract report).

Chen, W., L. White, J. Z. Adamczewski, B. Croft, K. Garner, J. S. Pellissey, K. Clark, I. Olthof, R. Latifovic, G. L. Finstad. 2014 Assessing the Impacts of Summer Range on Bathurst Caribou's Productivity and Abundance since 1985. *Natural Resources*, **5**, 130-145. http://dx.doi.org/10.4236/nr.2014.54014

Garner, K. 2014. Tłı̨chǫ Caribou Health and Condition Monitoring Program. Final Report, Department of Culture and Lands Protection, Tłı̨chǫ Government, Behchokǫ̀, NT. 34 pp.

Wolf Feasibility Assessment Technical Working Group. 2017. Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd. Wolf Feasibility Assessment Technical Working Group, Yellowknife, Northwest Territories. C/O Wek'èezhìi Renewable Resources Board,

102A, 4504 – 49 Avenue, Yellowknife, NT, X1A 1A7.

WRRB 2016a. Report on a Public Hearing Held by the Wek'èezhìı Renewable Resources Board 6-8 April 2016 Behchokǫ̀, NT & Reasons for Decisions Related to a Joint Proposal for the Management of the Bluenose-East (Barren-ground caribou) Herd. Part A, June 13, 2016. Wek'èezhìı Renewable Resources Board, 102A, 4504 – 49 Avenue, Yellowknife, NT, X1A 1A7.

WRRB 2016b. Reasons for decisions related to a joint proposal for the management of the Bluenose-East (Barren-ground caribou) Herd. Part B, Oct. 3, 2016. Wek'èezhìı Renewable Resources Board, 102A, 4504 – 49 Avenue, Yellowknife, NT, X1A 1A7.

8. Time Period Requested

Identify the time period requested for the Board to review and make a determination or provide recommendations on your management proposal.

Management actions proposed here would apply from July 1, 2019 (start of the harvest season) until July 1, 2021 with the results of the next calving ground photo surveys of the BNE herd expected in 2020 and 2022. In recent years the term of management proposals was 3 years to match the interval between surveys. TG and ENR suggest that management actions, including the harvest and other actions, be reviewed annually or whenever key additional information is available (e.g. additional survey information or recommendations from ACCWM or boards).

9. Other Relevant Information

If required, this space is provided for inclusion of any other relevant project information that was not captured in other sections.

TG and ENR support efforts by the WRRB and other boards, through recommendations and public hearings, to address the possible multiple causes of the BNE decline and the implementation of the ACCWM management plan.

10. Contact Information

Contact the WRRB office today to discuss your management proposal, to answer your questions, to receive general guidance or to submit your completed management proposal.

Jody Pellissey
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Wek'èezhìı Renewable Resources Board
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APPENDIX B Review of 2010 Proceeding & Decisions

B.1. Receipt of 2009 Joint Proposal

On November 5, 2009, TG and GNWT submitted the *Joint Proposal on Caribou Management Actions in Wek'èezhìı*, which proposed nine management actions and eleven monitoring actions, including harvest limitations, for the Bathurst, Bluenose-East and Ahiak ʔekwǫ̀ herds. While there was agreement on the majority of actions proposed, there was no agreement reached on the proposed levels of Indigenous harvesting.

Upon review of the proposal, the WRRB held that any restriction of harvest or component of harvest to a specific number of animals would constitute a TAH. Thus, the Board ruled that it was required to hold a public hearing. Registered Parties were notified on November 30, 2009 of the Board's decision to limit the scope of the public hearing to Actions 1 through 5 of the Joint Proposal, which prescribed limitations on harvest. All other proposed actions were addressed through written submissions to the Board.

On January 1, 2010, GNWT implemented interim emergency measures, which included the closure of ʔekwǫ̀ commercial, outfitted,[181] and resident harvesting in the North Slave regions. In addition, all harvest was closed in a newly established no-hunting conservation zone (Figure B-1). This decision was made by the Minister of GNWT under the authority of Section 12.5.14 of the Tłı̨chǫ Agreement. The Board was informed of the Minister's decisions on December 17, 2009.

[181] Non-residents and non-resident aliens require an outfitter to hunt big game (but not small game). Outfitters provide licenced guides for the hunters they serve. A non-resident is a Canadian citizen or landed immigrant who lives outside the NWT or has not resided in the NWT for 12 months; a non-resident alien is an individual who is neither an NWT resident nor a non-resident. GNWT. 2015. Northwest Territories Summary of Hunting Regulations, July 1, 2015 to June 30, 2016.

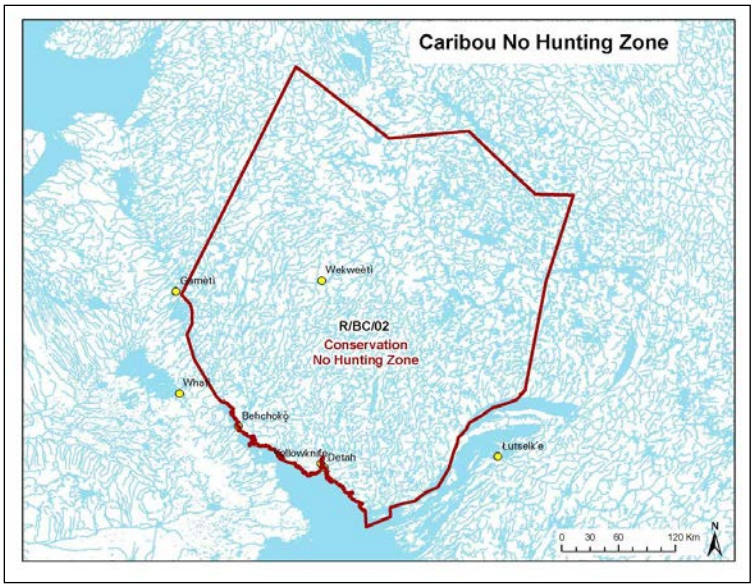

Figure B-1. No-Hunting Conservation Zone, R/BC/02, January 1, 2010 to December 8, 2010.[182]

Originally scheduled for January 11-13, 2010, the public hearing took place March 22-26, 2010 in Behchokǫ̀, NT. Once the evidentiary phase of the proceeding was completed, TG requested the WRRB adjourn the hearing in order to give TG and GNWT time to work collaboratively to complete the joint management proposal. The Board agreed to grant the application for adjournment with the condition that any revised proposal be filed by May 31, 2010 and that such a proposal address both harvest numbers and allocation of harvest for both the Bathurst and Bluenose-East ʔekwǫ̀ herds.

On May 31, 2010, TG and GNWT submitted the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhìı*. This revised proposal changed the original management and monitoring actions and incorporated an adaptive co-management framework and rules-based approach to harvesting. TG and GNWT were able to reach an agreement on Indigenous harvesting. Following review of the information and comments from registered Parties, the WRRB accepted the revised proposal. Therefore, the WRRB reconvened its public hearing on August 5-6, 2010 in Behchokǫ̀, NT, where final presentations, questions and closing arguments were made.

B.2. 2010 Board Decision

On October 8, 2010, the WRRB submitted its final recommendations and Reasons for Decision Report to TG and GNWT. Many of the recommendations were related to the

[182] GNWT-GNWT 2010. http://www.GNWT.gov.nt.ca/_live/documents/content/No-Hunting_Conservation_Zone_Map.pdf

Bathurst ʔekwǫ̀ herd and relevant management actions vital for herd recovery, including harvest restrictions.

The Board recommended a harvest target of 2800 (± 10%) Bluenose-East ʔekwǫ̀ per year for harvest seasons 2010/11, 2011/12, and 2012/13 in Wek'èezhìı. Further, the Board recommended that the ratio of bulls harvested to cows should be 85:15. Although the evidence suggested that the Bluenose-East herd had not continued to decline, the Board concluded that a limited harvest of 2520-3080 ʔekwǫ̀ with 420 or fewer cows was a cautious management approach based on the current herd size and trend.

The Board recommended that all commercial, outfitted and resident harvesting of the Bluenose-East ʔekwǫ̀ herd in Wek'èezhìı be set to zero. The Board also made harvest recommendations for the Ahiak ʔekwǫ̀ herd.

The WRRB made additional ʔekwǫ̀ management and monitoring recommendations to TG and GNWT, specifically implementation of detailed scientific and Tłı̨chǫ knowledge monitoring actions and implementation of an adaptive co-management framework.

The WRRB also recommended to the Minister of CIRNAC (formerly Indian and Northern Affairs Canada (INAC)) and GNWT to collaboratively develop best practices for mitigating effects on ʔekwǫ̀ during calving and post-calving, including the consideration of implementing mobile ʔekwǫ̀ protection measures, and for monitoring landscape changes, including fires and industrial exploration and development, to assess potential impacts to ʔekwǫ̀ habitat.

The Board recommended that the harvest of dìga should be increased through incentives but that focused dìga control not be implemented. The Board understood if TG and GNWT were to plan for focused dìga control in the future, a management proposal would be required for WRRB consideration.

The Minister's emergency interim measures remained in effect until the WRRB's recommendations on ʔekwǫ̀ management in Wek'èezhìı were implemented on December 8, 2010. On January 13, 2011, TG and GNWT responded to the Board's recommendations, accepting 35, varying 22 and rejecting three of the 60 recommendations. TG and GNWT submitted an implementation plan to the WRRB on June 17, 2011, which the Board formally accepted on June 30, 2011.

APPENDIX C Review of 2010 WRRB Recommendations

Review of 2010 WRRB Recommendations				
No.	**WRRB Recommendation**	**TG/GNWT Response**	**Management Objective**	**Status**
1	TG and GNWT report annually on the overall success of the harvest target approach in meeting the objectives of effective collaborative management and the long-term recovery of the Bathurst caribou herd.	Accepted - GNWT and TG will provide a report on the overall success of the harvest target approach in June 2011.	Increase communication among the management authorities. Provide an opportunity to review the efficacy of management actions and make revisions if necessary.	Incomplete; no recommendations provided
2	All commercial harvesting of Bathurst caribou within Wek'èezhìı be set to zero for 2010-2013.	Accepted - As per changes to the Big Game Hunting Regulations made on January 1, 2010.	Reduce harvest of the Bathurst caribou herd and set priority to Aboriginal harvest.	Completed
3	All outfitted harvesting of Bathurst caribou within Wek'èezhìı be set to zero for 2010-2013.	Accepted - As per changes to the Big Game Hunting Regulations made on January 1, 2010.	Reduce harvest of the Bathurst caribou herd and set priority to Aboriginal harvest.	Completed
4	GNWT and TG, prior to the next survey of the Bathurst caribou herd, provide the Board and make public their positions with regard to the reinstatement of outfitting within Wek'èezhìı.	Varied - This will be addressed in the development of a long-term management plan for the Bathurst herd. The target date for the long-term management plan is the end of 2012.	Make criteria for reinstating Outfitted and Resident harvest public.	Incomplete; no criteria developed
5	All resident harvesting of Bathurst caribou within Wek'èezhìı be set to zero for 2010-2013.	Accepted - As per changes to the Big Game Hunting Regulations made on January 1, 2010.	Reduce harvest of the Bathurst caribou herd and set priority to Aboriginal harvest.	Completed
6	GNWT and TG, prior to the next survey of the Bathurst caribou herd, provide the Board and make public their positions with regard to the reinstatement of resident harvesting within Wek'èezhìı. In developing this position, the Governments will review, assess, and implement, where conservation permits, a limited-entry draw system to facilitate the reinstatement of resident harvesting at the earliest opportunity.	Varied - This will be addressed in the development of a long-term management plan for the Bathurst herd. The target date for the long-term management plan is the end of 2012.	Make criteria for reinstating Outfitted and Resident harvest public.	Incomplete; no criteria developed

7	Establishment of a harvest target of 300 Bathurst caribou per year for 2010-2013.	Accepted - This was implemented on December 8, 2010 through a regulation change that established limited harvest zones inside and outside of Wek'èezhìı to reflect the current wintering area for the Bathurst caribou herd.	Set a level of harvest that can be sustained by the Bathurst herd.	Completed
8	Allocating the annual harvest target of Bathurst caribou between Tłı̨chǫ Citizens (225) and members of an Aboriginal people with rights to hunt in Mǫwhì Gogha Dè Nı̨ı̨tłèè (75)	Varied - As per prior agreement with TG to share a limited harvest of Bathurst caribou equally (150 animals for Tłı̨chǫ citizens and 150 caribou outside of Wek'èezhìı)	Establish a sharing of harvest between the Tłı̨chǫ and other Aboriginal hunters that is equitable.	Completed
9	The harvest of Bathurst caribou should target an 85:15 bull/cow ratio, i.e. the annual harvest of Bathurst caribou cows should be less than 45	Varied - GNWT and TG both agree that the harvest should focus on bulls but would prefer to use a target ratio of 80:20 males: females as agreed in revised joint proposal (cow harvest of 60). The modeling projections suggest that small changes in the harvest sex ratio would have negligible impacts on the Bathurst herd's likely trend.	Set a harvest sex ratio that can be sustained by the Bathurst herd.	Incomplete (excludes unknowns); target exceeded in all three years
10	TG and GNWT have information to suggest that the harvest of Bathurst caribou has or will in the near future exceed the harvest target of 300 by 10% or more, then regulations should be put in place to close all harvesting in areas occupied by the Bathurst herd.	Accepted - GNWT and TG will be closely monitoring harvest levels throughout the fall and winter hunting seasons and will keep communities and the WRRB informed.	Closely monitor and report harvest such that if it exceeds the target, actions can be taken to ensure no further harvest occurs	Not required
11	TG and GNWT have information to suggest that the harvest of Bathurst caribou has or will or in the near future materially exceed 45 cows, then regulations should be put in place to close all harvesting in areas occupied by the Bathurst herd.	Varied (as per response #9) - GNWT and the TG will monitor the sex ratio of the harvest and work with hunters to target male caribou, wherever possible.	Closely monitor and report harvest such that if it exceeds the target, actions can be taken to ensure no further harvest occurs	Incomplete; targets exceeded, and no regulations implemented

12	GNWT should, in discussion with TG and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Bathurst caribou herd.	Accepted - There will be ads in the local newspaper to inform the public about the new management zones within which Bathurst caribou harvest is limited. Detailed information on recent locations of radio-collared caribou will not be publicized.	Ensure that the public know where the Bathurst and Bluenose-East caribou herds reside such that requirements for harvest restrictions and reporting are known.	Incomplete; information not consistently provided on time
13	GNWT should, in discussion with TG and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Bathurst caribou herd.	Accepted - There will be ads in local newspaper to inform the public about the new management zones where Bathurst caribou harvest is limited.	Ensure that the public know where the Bathurst and Bluenose-East caribou herds reside such that requirements for harvest restrictions and reporting are known.	Incomplete; information not consistently provided on time
14	All commercial, outfitted and resident harvesting from the Bluenose-East caribou herd within Wek'èezhìı be set to zero for 2010-2013.	Accepted - As per changes to the Big Game Hunting Regulations made on January 1, 2010.	Reduce harvest of the Bluenose-East caribou herd and set priority to Aboriginal harvest.	Completed
15	Establishment of a harvest target of 2800 Bluenose-East caribou per year for 2010-2013, with the annual harvest target and its allocation finalized in discussions between the existing wildlife co-management boards and Aboriginal governments in the Sahtú, Dehcho and Tłı̨chǫ.	Varied - Based on new 2010 estimate of the Bluenose-East herd's size, wildlife co-management boards are reviewing information and the proposed harvest targets recommended by the WRRB. GNWT and TG will be working together to promote harvest of bulls, monitor the harvest closely throughout the winter and keep the communities, as well as WRRB, SRRB and Nunavut informed.	Set a level of harvest that can be sustained by the Bluenose-East herd. Establish as sharing of harvest between the Tłı̨chǫ and other Aboriginal hunters that is equitable.	Incomplete
16	The harvest of Bluenose-East caribou should target an 85:15 bull/cow ratio, i.e. the annual harvest of Bluenose-East caribou cows should be less than 420 – Original recommendation varied to 80:20 bull/cow harvest (cow harvest of 560)	Varied (as per response #9 and #15) - GNWT and TG agree the harvest should focus on bulls but would prefer a target of 80:20 males: females as agreed to in the revised joint proposal.	Set a harvest sex ratio that can be sustained by the Bluenose-East herd.	Incomplete (excludes unknowns); target exceeded in 2 of 3 years

17	TG and GNWT have information to suggest that the harvest of Bluenose-East caribou has or will in the near future exceed the target by 10% or more, then regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East herd.	Varied - Based on new 2010 estimate of the Bluenose-East herd, wildlife co-management boards and Aboriginal governments are reviewing information and the proposed target recommended by the WRRB and plan to develop a strategy which will be shared with affected wildlife co-management boards.	Closely monitor and report harvest such that if it exceeds the target, actions can be taken to ensure no further harvest occurs	Incomplete; targets exceeded, and no regulations implemented
18	TG and GNWT have information to suggest that the harvest of Bluenose-East caribou has or will or in the near future materially exceed 420 cows, then regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East herd.	Varied (as per response #15) - Based on new 2010 estimate of the Bluenose-East herd, wildlife co-management boards are reviewing information and proposed harvest targets recommended by WRRB.	Closely monitor and report harvest such that if it exceeds the target, actions can be taken to ensure no further harvest occurs	Incomplete; targets exceeded, and no regulations implemented
19	GNWT should, in discussion with TG and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Bluenose-East caribou herd.	Accepted (as per response # 12)	Ensure that the public know where the Bathurst and Bluenose-East caribou herds reside such that requirements for harvest restrictions and reporting are known.	Incomplete; information not consistently provided on time
20	GNWT should, in discussion with TG and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Bluenose-East caribou herd.	Accepted (as per response #13)	Ensure that the public know where the Bathurst and Bluenose-East caribou herds reside such that requirements for harvest restrictions and reporting are known.	Incomplete; information not consistently provided on time

21	TG and GNWT do not provide harvester assistance and/or incentives to access the Bluenose-East herd.	Rejected - GNWT and TG agree that conservation measures for the Bluenose-East herd are required. However, GNWT had previously agreed to provide support to construct a winter road to Hottah Lake so that people from Wekweètì could access the Bluenose-East herd as a measure to reduce pressure on Bathurst caribou herd, whose numbers are still very low.	Allow for alternative harvest opportunities while not placing undo pressure on adjacent herds.	Recommendation rejected - CHAP funding provide to assist harvesters for fall hunts to access Bluenose-East caribou.
22	TG consider negotiating caribou harvesting overlap agreements with Nunavut and the Sahtú region to make certain that existing relationships endure.	Varied - TG will consider.	Ensure informal traditional harvest sharing agreements among Aboriginal groups continue to be respected into the future.	Incomplete; no agreements negotiated
23	All commercial, outfitted and resident harvesting from the Ahiak caribou herd within Wek'èezhìı be set to zero in order to prevent incidental	Accepted	Reduce harvest of the Ahiak caribou herd and set priority to Aboriginal harvest. Reduce incidental harvest of Bathurst caribou herd.	Completed

	harvest of Bathurst caribou for 2010-2013.			
24	TG and GNWT do not provide harvester assistance and/or incentives to access the Ahiak herd.	Rejected - GNWT and TG did not provide support for fall caribou harvests in 2010. However, for GNWT, it may be necessary to provide some assistance as part of accommodation for limiting harvest of the Bathurst herd. GNWT is working with harvesters to carefully monitor the harvest of the Ahiak herd.	Allow for alternative harvest opportunities while not placing undo pressure on adjacent herds.	Recommendation rejected - CHAP funding provide to assist harvesters for fall hunts to access Ahiak caribou.
25	TG consider negotiating caribou harvesting overlap agreements with Nunavut and the Akaitcho region to make certain that existing relationships endure.	Varied (as per recommendation # 22 for overlap agreements with Nunavut) - TG currently has a boundary agreement with Akaitcho.	Ensure informal traditional harvest sharing agreements among Aboriginal groups continue to be respected into the future.	Incomplete; no agreement negotiated with Nunavut; overlap agreement in place with Akaitcho.
26	GNWT should, in discussion with TG and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Ahiak caribou herd.	Accepted (as per response #12)	Ensure that the public know where the Ahiak caribou herd resides such that requirements for harvest restrictions and reporting are known.	Incomplete; information not consistently provided on time
27	GNWT should, in discussion with TG and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Ahiak caribou herd.	Accept (as per response #13)	Ensure that the public know where the Ahiak caribou herd resides such that requirements for harvest restrictions and reporting are known.	Incomplete; information not consistently provided on time
28	TG implement the Special Project, Using Tłı̨chǫ Knowledge to Monitor Barren Ground Caribou of the overall TK Research and Monitoring Program.	Varied - TG will be implementing the project based on its obligations and commitments pursuant to the provisions in the Tłı̨chǫ Agreement. Start date of the TK Research and Monitoring Program is anticipated in summer 2011.	Harvest monitoring to be controlled at community level and done in a manner that is consistent with Tłı̨chǫ cultures of sharing information and building knowledge.	Incomplete; not implemented

PREAMBLE: (#29-39) - The Tłı̨chǫ Government agrees with the recommendations 28-42 of the Recommendation Report related to the Revised Joint Proposal on Caribou Management Actions in Wek'èezhìı. We are committed to documenting and reporting on observations and trends observed by caribou harvesters and elders. Implementation of the Tłı̨chǫ Knowledge Research and Monitoring Program: Special Project, Using Tłı̨chǫ Knowledge (to Monitor Barren Ground Caribou' will take approximately eight months. The traditional monitoring system continues among the harvesters and elders. Nevertheless, the logistics of realizing a system that will rigorously and accurately document and report harvesters' observations and trends have yet to be initiated. The program requires trained Tłı̨chǫ researchers, offices, and equipment, all of which requires a realistic annual budget and extensive fundraising with those who will also benefit from Tłı̨chǫ knowledge research and monitoring.				
29	TG and GNWT implement the *spring calf survival* monitoring action as identified for TK and SK.	Scientific: Accepted - GNWT will provide the Board with a power analysis of how frequently spring composition surveys are required. GNWT has not recently used collars to assess cow mortality rate. GNWT would appreciate any suggestions from the Board on alternative methods to estimate cow mortality. Because the existing numbers of radio-collars on the Bathurst herd are insufficient to reliably monitor cow mortality rates, the joint proposal emphasized annual calving reconnaissance surveys to monitor the trend in the herd's numbers of breeding cows. High mortality rates in cows would translate to a declining trend in numbers of cows on the calving ground: low cow mortality rates would translate to increasing numbers of cows on the calving ground. TK – See Preamble	Ensure scientific monitoring of the Bathurst, Bluenose-East and Ahiak herds is conducted on an annual cycle such that management authorities can assess the status of the herd with the best available information at hand. This includes spring composition, calving reconnaissance, calving ground composition and fall composition. Calving or post-calving population surveys are to be completed in spring/summer 2012.	TK - Incomplete; Special Project not implemented SK - Completed

30	TG and GNWT implement the *health and condition* monitoring action as identified for TK and SK.	Scientific: Accepted - GNWT expects that some Bathurst cows will be taken by hunters; therefore, sample kits will be available to all hunters to record basic information on health, condition and pregnancy rates of cows. Details of samples to be collected will be provided to TG community caribou monitors and GNWT staff. Typically, community hunts are an opportune time to take such samples. TK – See Preamble	Monitor the health and condition of Bathurst, Bluenose-East and Ahiak caribou in a way that does not increase the harvest of cows or take away from community harvest of cows.	TK - Incomplete; Special Project not implemented SK -Incomplete; no systematic approach
31	TG and GNWT implement the *birth rate* monitoring action as identified for TK and SK.	Scientific: Varied - Birth rate information will be collected in different ways for different herds. - For example, the size of the Ahiak and Bathurst caribou herds is estimated using the calving ground photo census surveys. Birth rate is estimated from a composition survey that is conducted on the calving ground right after the photo census. - This photo census technique is not usually used for the Bluenose-East herd (rather, herd size is estimated from a post-calving ground photo census survey). Instead, pregnancy rates are based on information collected from harvested Bluenose-East cows, and indirectly from composition surveys that assess the calf:cow ratio. TK – See Preamble	Ensure scientific monitoring of the Bathurst, Bluenose-East and Ahiak herds is conducted on an annual cycle such that management authorities can assess the status of the herd with the best available information at hand. This includes spring composition, calving reconnaissance, calving ground composition and fall composition. Calving or post-calving population surveys are to be completed in spring/summer 2012.	TK - Incomplete; Special Project not completed SK - Completed

32	TG and GNWT implement the *adult sex ratio and fall calf survival* monitoring action as identified for TK and SK.	Scientific: Accepted - The result of the fall composition survey is one of the parameters used to determine a population estimate for the Bathurst and Ahiak herds. Fall adult sex ratio surveys for these herds are planned for 2011 and 2012 prior to photographic survey scheduled for 2011 (Ahiak/Beverly) and 2012 (Bathurst). The next Bluenose-East fall adult sex ratio survey is planned for 2011 to get more basic information on the number of bulls and cows for this herd. TK – See Preamble	Ensure scientific monitoring of the Bathurst, Bluenose-East and Ahiak herds is conducted on an annual cycle such that management authorities can assess the status of the herd with the best available information at hand. This includes spring composition, calving reconnaissance, calving ground composition and fall composition. Calving or post-calving population surveys are to be completed in spring/summer 2012.	TK - Incomplete; Special Project not implemented SK - Incomplete; survey not conducted annually
33	TG and GNWT implement the *estimate of herd size* monitoring action as identified for TK and SK.	Scientific: Accepted - GNWT will work with all partners to undertake the: • Bathurst calving ground photo survey in June 2012. • Ahiak calving ground photo survey in 2011. • Bluenose-East post calving ground survey in 2012 or 2013. TK – See Preamble	Ensure scientific monitoring of the Bathurst, Bluenose-East and Ahiak herds is conducted on an annual cycle such that management authorities can assess the status of the herd with the best available information at hand. This includes spring composition, calving reconnaissance, calving ground composition and fall composition. Calving or post-calving population surveys are to be completed in spring/summer 2012.	TK - Incomplete; Special Project not implemented SK - Completed

34	TG and GNWT implement the *wolf abundance (den occupancy)* monitoring action as identified by TK and SK.	Scientific: Varied - GNWT will continue with current wolf den surveys, which provide an index of wolf abundance. GNWT in consultation with the TG will provide a proposal with potential options and costings that are relevant to wolf monitoring, research, and management. The Parties will continue to explore new options with respect to monitoring and managing wolves. TK – See Preamble	Monitor wolf abundance as well as health and condition as it relates to productivity.	TK - Incomplete; Special Project not implemented SK - Completed
35	TG and GNWT implement the *wolf condition and reproduction* monitoring action as identified by TK and SK.	Scientific: Accepted - Through the Genuine Mackenzie Valley Fur Program the GNWT provides harvesters $200 for each intact wolf carcass and will provide a collection report to the WRRB and TG in June 2011 on the carcass collection. TK – See Preamble	Monitor wolf abundance as well as health and condition as it relates to productivity.	TK - Incomplete; Special Project not implemented SK - Completed, but no report
36	TG and GNWT implement the *wolf harvest* monitoring action as identified by TK and SK.	Scientific: Accepted - GNWT will provide a report to the WRRB and TG in June 2011 on wolf harvest data. TK – See Preamble	Monitor wolf harvest to assess if harvest incentives have led to changes in harvest.	TK - Incomplete; Special Project not implemented SK - Completed
37	TG and GNWT implement the *state of habitat* monitoring action as identified by TK and SK.	Scientific: Varied - GNWT will continue to provide an annual report to the WRRB and TG on fire activity. GNWT expects a number of research projects investigating the impact of fires on caribou habitat to be completed in 2012 and will provide an annual progress report to the WRRB and TG. GNWT will continue to explore new ways to monitor landscape change	Ensure the landscape is managed in such a way that considers the sustainability of the Bathurst, Bluenose-East and Ahiak caribou herds.	TK - Incomplete; Special Project not implemented SK - Incomplete; no report provided

		driven by industrial exploration and development with our partners (e.g., INAC). TK – See Preamble		
38	TG and GNWT implement the *pregnancy rate* monitoring action as identified by TK and SK.	Scientific: Accepted - Note: GNWT will make available, sample kits to hunters so that any Bathurst or Bluenose-East cows that are harvested can be tested to determine pregnancy rates. The community hunts are opportune times to do this work. TK – See Preamble	Monitor the health and condition of Bathurst, Bluenose-East and Ahiak caribou in a way that does not increase the harvest of cows or take away from community harvest of cows.	TK - Incomplete; Special Project not implemented SK -Completed
39	GNWT implement the *density of cows on calving ground* monitoring action as identified.	Scientific: Varied - GNWT will undertake these surveys for the Bluenose-East, Bathurst and Ahiak herd in 2011 and 2012. TK – See Preamble	Ensure scientific monitoring of the Bathurst, Bluenose-East and Ahiak herds is conducted on an annual cycle such that management authorities can assess the status of the herd with the best available information at hand. This includes spring composition, calving reconnaissance, calving ground composition and fall composition. Calving or post-calving population surveys are to be completed in spring/summer 2012.	Completed

40	TG implement the *caribou harvest* monitoring action as identified.	Varied - GNWT and TG will continue to work with harvesters to report harvests. Methods will be based on the last 2 years of harvest monitoring in the Tłı̨chǫ communities. A community-based program will be developed in the 2010/11 season.	Harvest monitoring to be controlled at community level and done in a manner that is consistent with Tłı̨chǫ cultures of sharing information and building knowledge.	Incomplete; information not consistently provided
41	TG and GNWT reporting on monitoring results to the WRRB and the general public a minimum of three times per year in April, September and December. April meeting changed to late-May.	Accepted -To make information available to the public, GNWT will also post reports provided to the WRRB on the GNWT website.	Share information in a timely manner with management authorities and the public.	Incomplete; information not consistently provided
42	TG develop and implement a TK conservation education program to support the relationship and respect Tłı̨chǫ have for caribou.	Accepted - TG has developed a Tłı̨chǫ Ekwo Working Group (TEWG) which held its orientation workshop on Dec 13-15. This group will assess and make recommendations for the TK conservation education program.	Ensure Tłı̨chǫ and other Aboriginal harvesters follow traditional practices with respect to appropriate harvest practices. Ensure that harvesters are not wasting or wounding animals that are not retrieved.	Incomplete; not implemented
43	GNWT develop and implement a scientific conservation education program to foster an increased appreciation of the resource.	Accepted - GNWT will undertake this work jointly with TG in Wek'èezhìı and with other Aboriginal groups outside of Wek'èezhìı. GNWT will prepare facts sheets that will be posted on the GNWT website. GNWT has developed an interactive Caribou Educational Program that can be used in schools for youth to learn about scientific management practices.	Ensure Tłı̨chǫ and other Aboriginal harvesters follow traditional practices with respect to appropriate harvest practices. Ensure that harvesters are not wasting or wounding animals that are not retrieved.	Completed

44	TG and GNWT implement a process of information flow, review and assessment.	Varied - The flow chart from the WRRB recommendation on page 44 suggests that the TK and scientific programs will be developed independently of one another. TG and GNWT would like to see a more integrated strategy between science and TK as discussed in the joint revised proposal.	Establish a process for sharing information in a timely manner among management authorities, to discuss the implementation of management actions and how well they are working. Increase communication among the management authorities. Provide an opportunity to review the efficacy of management actions and make revisions if necessary.	Completed: Barren-ground Caribou Technical Working Group created
46	Criteria be developed by TG and GNWT for assessing success or failure that would indicate when management actions are to be revised, including reinstatement of harvest for residents, outfitters and commercial tags.	Accepted - As per recommendations #4 and #6, these criteria will be developed as part of a long-term management plan.	Establish a process for sharing information in a timely manner among management authorities, to discuss the implementation of management actions and how well they are working. Increase communication among the management authorities. Provide an opportunity to review the efficacy of management actions and make revisions if necessary.	Incomplete; criteria not developed
47	GNWT continue discussions with the Government of Nunavut for identifying opportunities for calving ground protection.	Accepted - Note: This issue is also being raised in Nunavut by the Beverly and Qamanirjuaq Caribou Management Board (BQCMB). INAC is the primary land manager in the NWT and Nunavut. Discussion will need to take place with INAC and Nunavut.	Make progress on opportunities for minimizing impacts of development on the Bathurst, Bluenose-East and Ahiak caribou herds.	Completed; ongoing
48	GNWT and INAC collaboratively develop best practices for mitigating effects on caribou during calving and post-calving, including the	Varied - This can be tied into the long-term management plan. Discussion will be needed	Ensure development on calving and post-calving ranges of the Bathurst, Bluenose-East and Ahiak herds	Incomplete; not implemented

	consideration of implementing mobile caribou protection measures.	to take place with INAC and Nunavut.	does not unduly affect the sustainability of these herds.	
49	TG work towards development and implementation of a land use plan for Wek'èezhìı, including the consideration of thresholds for industrial land use.	Rejected - As per chapter 22.5 of the Tłı̨chǫ Agreement, it is the responsibility of Canada or GNWT to develop and implement a land use plan for Wek'èezhìı.	Ensure the landscape is managed in such a way that considers the sustainability of the Bathurst, Bluenose-East and Ahiak caribou herds.	Recommendation rejected - GNWT responsibility; Tłı̨chǫ Land Use Plan completed
50	GNWT and INAC monitor landscape changes, including fires and industrial exploration and development, to assess potential impacts to caribou habitat.	Varied (as per response #37) - GNWT has carried out some cumulative effects modeling to assess effects to date of diamond mines on the Bathurst herd, and will continue to build on this modeling.	Ensure the landscape is managed in such a way that considers the sustainability of the Bathurst, Bluenose-East and Ahiak caribou herds.	Incomplete; Bathurst Caribou Range Plan completed but not implemented
51	TG and GNWT assess the need for forest fire control in areas of important caribou habitat.	Accepted	Ensure the landscape is managed in such a way that considers the sustainability of the Bathurst, Bluenose-East and Ahiak caribou herds.	Incomplete; no assessment completed
52	Harvest of wolves should be increased through the suggested incentives, except for assisting harvesters to access wolves on wintering grounds.	Accepted	Increase harvest of wolves to reduce predation pressure on Bathurst caribou herd.	Incomplete; incentives unsuccessful
53	Focused wolf control should not be implemented. If TG and GNWT believe that focused wolf control is required, a management proposal shall be provided to the WRRB for its consideration.	Accepted	Allow for assessment and review of wolf harvest incentives on an annual basis.	Incomplete; feasibility assessment completed but no management proposal submitted
54	TG and GNWT submit a joint management proposal for wood bison in Wek'èezhìı by the fall of 2011 to substantiate the establishment of zones and quotas made through the Interim Emergency Measure.	Varied - 10-year Wood Bison Management Plans for the Nahanni, Slave River Lowland, and Mackenzie herds are set to be completed by the winter of 2012. Development of these plans will review current interim harvest measures	Allow for harvest of wood bison to offset hardship of reduced Bathurst caribou harvest. Ensure bison harvest is sustainable in the long term through a management planning process.	Incomplete; not submitted

		for Wood Bison in Wek'èezhìı. Draft plan will be provided to WRRB for approval. In December 2010, GNWT completed a regulation change to extend the season to September 1st.		
55	TG and GNWT work collaboratively to meet the obligations of Section 12.11 of the Tłı̨chǫ Agreement with support from WRRB staff as needed and a meeting be convened by January 2011.	Accepted	Develop guidance on managing caribou herds through abundance cycles by undertaking a collaborative management planning process.	Completed; ongoing
56	TG increase their capacity to ensure full participation in monitoring and management of caribou.	Accepted	Provide a forum for discussion of scientific and traditional ways of understanding caribou ecology. Allow for Tłı̨chǫ communities to be partners in management and decision-making.	Completed; Wildlife Coordinator hired
57	GNWT, TG and INAC implement its recommendations no later than January 1, 2011. GNWT's Emergency Interim Measures, put into effect on January 1, 2010, should remain in place until then.	Varied - Will be incorporated as part of the implementation plan.	Ensure timely implementation of management actions and that they are understood by Tłı̨chǫ and other Aboriginal harvesters.	Completed
58	TG and GNWT conduct consultations regarding the Recommendations Report prior to January 1, 2011.	Accepted	Ensure timely implementation of management actions and that they are understood by Tłı̨chǫ and other Aboriginal harvesters.	Completed
59	TG and GNWT develop a detailed implementation and consultation plan incorporating the WRRB's recommendations as soon as possible.	Accepted	Ensure timely implementation of management actions and that they are understood by Tłı̨chǫ and other Aboriginal harvesters.	Completed

60	GNWT develop and implement an effective and continuing enforcement and compliance program.	Accepted - The current protocol for GNWT enforcement and compliance program is effective. However, given the scope of the issues GNWT has enhanced its program to be a partnership with other affected Aboriginal organizations.	Ensure that harvest limits are respected, and that wastage and wounding loss is minimized.	Completed

APPENDIX D Review of 2016 Proceeding & Decisions

D.1. Request for Joint Proposal

On May 31, 2013, the WRRB reviewed and recommended continued implementation of Bathurst ʔekwǫ̀ herd recommendations made in its October 2010 Recommendations Report for the 2013/2014 harvesting season. The Board did not provide harvest recommendations for the Bluenose-East ʔekwǫ̀ herd as a separate management proposal for the herd was expected in the near future.

TG and GNWT submitted the *"Joint Proposal on the Caribou Management Actions in Wek'èezhìı (2014-2019)"* under separate cover on June 30, 2014. In the proposal, it was noted that for Bluenose-East ʔekwǫ̀ herd management, the draft *"Taking Care of Caribou"* management plan provided guidance and, if needed, a management proposal would be submitted separately. On July 16, 2014, the WRRB recommended that TG and GNWT begin developing a joint management response to the sharp decline in the Bluenose-East ʔekwǫ̀ population and number of breeding females.

Following the June 2014 reconnaissance survey of the Bluenose-East ʔekwǫ̀ herd, on August 27, 2014, the Minister of GNWT held a meeting of Indigenous leaders and wildlife management authorities to discuss the results, which suggested a continuing declining trend. The leadership agreed to create a technical working group that was tasked with reducing uncertainties regarding the causes behind the herd declines and developing a corresponding plan of action. Technical meetings were held in Yellowknife, NT on October 9-10, 2014 and October 22-23, 2014. Follow-up leadership meetings were held on November 7, 28 and December 4, 2014 in Yellowknife, NT to discuss the working group's proposed plan of action and reach agreement on implementation.

On November 5, 2014, based on the estimated 2013 herd size, the 2014 reconnaissance survey information and the principles stated in the *Taking Care of Caribou* management plan, the ACCWM proposed the herd status colour zone as orange and recommended NWT-specific orange management actions for the Bluenose-East ʔekwǫ̀ herd, related to education, habitat, land use activities, predators and harvest. Further, on November 19 and December 4, 2014, the ACCWM proposed an interim voluntary harvest target of 2800 Bluenose-East ʔekwǫ̀ per year (NWT overall harvest of 1800 ʔekwǫ̀), with a focus on a majority-bulls harvest, emphasizing younger and smaller bulls and not the large breeders and leaders. The ACCWM stated that if GNWT had evidence to suggest that the harvest target had been exceeded by 10% or more for the 2014/2015 harvesting season, then, after consultation with the ACCWM, regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East ʔekwǫ̀ herd.

GNWT responded to the ACCWM on December 17, 2014 with a commitment to implement the *Taking Care of Caribou* management plan, ensuring that land claim processes are honoured. Further, GNWT requested advice from the ACCWM on a proposed overall approach for Bluenose-East ʔekwǫ̀ herd management, including a reduced harvest target for the NWT, mandatory harvest reporting, an allocation formula, and an increase in the number of satellite collars. On January 9, 2015, the ACCWM responded with its concerns about the proposed short-term management approach for the Bluenose-East ʔekwǫ̀ herd undermining the process set out in the management plan and setting unrealistic timelines for the development, community approval and implementation of a harvest allocation and harvest monitoring and reporting program. The ACCWM requested that GNWT respect the processes set out in the management plan for action planning, implement the previous recommendation of a voluntary harvest target of 2800 Bluenose-East ʔekwǫ̀ per year (NWT overall harvest of 1800 ʔekwǫ̀), and actively enforce a proposed 80:20 bull:cow harvest ratio.

On January 21, 2015, GNWT accepted the ACCWM's recommendation of a limit of 1800 Bluenose-East ʔekwǫ̀ for the NWT for the 2014/15 harvest season, including an 80:20 bull:cow harvest ratio, and proposed regulations to required authorizations to harvest bull-only barren-ground caribou in R/BC/01, R/BC/02 and R/BC/03. On January 26, 2015, the ACCWM supported GNWT's proposal to require bull-only authorization cards for harvest within R/BC/01, R/BC/02 and R/BC/03, with emphasis on younger and smaller bulls and not the large breeders and leaders. While GNWT also requested input on the harvest allocation of the 1800 Bluenose-East ʔekwǫ̀ for the Sahtú and Wek'èezhìı regions, the ACCWM felt that it was inappropriate to make any decisions on harvest allocation without input and approval from all Indigenous harvesters of the Bluenose-East ʔekwǫ̀ herd. Therefore, the ACCWM recommended that a meeting of all Indigenous users be held to determine the allocation of the Bluenose-East ʔekwǫ̀ herd and have clarity on any proposed regulations.

The SRRB sponsored the *Sahtú Gathering for the Caribou* on January 27-29, 2015 in Délı̨nę, NT. The meeting included representatives from the five Sahtú communities, the NWT Wildlife Management Advisory Council, the Inuvialuit Game Council, Kugluktuk Angoniatit Association, TG, and Parks Canada. At the gathering, GNWT requested feedback on the issues to be considered regarding harvest allocations for the Bluenose East ʔekwǫ̀. Following discussion, seven points of consensus were presented: 1) decisions are needed about how to share the caribou; 2) important matters require an in-person meeting of the parties; 3) timelines for discussions and decisions should not be imposed by the Minister; rather, they need to be agreed upon by the parties. Allocations should be arrived at and implemented for the 2015-2016 harvesting season as it is not feasible to accomplish this for the current harvesting season; 4) according to the best available information, the current status of the Bluenose East caribou does not constitute an emergency.; 5) the health of the caribou depends on the health of the

Indigenous peoples, their ability to *Dene Ts'ılı* (Be Dene); 6) the full range of actions, as presented by the Indigenous Caucus at the November 28, 2014 meeting with the Minister, and as outlined in the Bluenose Caribou Management Plan, is needed to address declining trends; and, 7) education is needed in the communities to prepare the ground for any decisions that will be made.

A conference call was convened on February 2, 2015 with all affected Indigenous organizations and wildlife management authorities of the Bluenose-East ʔekwǫ̀ herd to discuss a proposed harvest allocation for the remainder of the 2014/2015 harvest season. Unfortunately, many organizations were unable to participate in the call, and those able to call in were uncomfortable with supporting an allocation or criteria for allocation without all traditional users of the herd taking part in the discussion.

Taking into consideration the discussion during the February 2, 2015 conference call and the consensus points provided from the *Sahtú Gathering for the Caribou*, GNWT responded on February 6, 2015 with the following allocation of 1800 authorizations for the Bluenose-East ʔekwǫ̀ herd for the 2014/15 harvest season: Tłı̨chǫ: 1100; Sahtú: 480; Inuvialuit: 25; NWT Métis Nation: 40; Akaitcho Territorial Government: 60; and, NSMA: 50. In addition to caribou harvest measures, GNWT indicated additional approaches to be implemented would include predator management measures, such as increased payments for the wolf incentive program; monitoring actions; compliance and enforcement measures; enhanced education and communication activities; "sight in your rifle" events; and addressing impacts of disturbance on ʔekwǫ̀ herds with land use planners and industry.

On July 9 and September 24, 2015, GNWT provided updates to the WRRB about the Bluenose-East ʔekwǫ̀ herd calving group surveys conducted in June 2015. The results presented indicated a continued decline in the total number of breeding cows since the 2013 calving ground photo survey. The final population estimate would be provided by the end of October, following a composition survey to estimate the sex ratio.

On August 25, 2015 and September 22, 2015, respectively, TG and GNWT provided short-term ʔekwǫ̀ management recommendations for the 2015/16 harvest season. The Board responded to TG and GNWT, on September 25, 2016, with reasons for decisions and a list of recommendations for the 2015/16 harvest season, including agreeing on and implementing a reduction in the number of ʔekwǫ̀ harvested by subsistence users[183] of the Bluenose-East ʔekwǫ̀ herd. In addition, in order to implement determinations and/or recommendations by July 1, 2016, the WRRB requested the submission of a joint management proposal for the Bluenose-East ʔekwǫ̀ herd, for the 2016/17 harvest season and beyond, by no later than November 15, 2015. Due to

[183] Subsistence users include Tłı̨chǫ Citizens and members of an Aboriginal people, with rights to harvest wildlife in Wek'èezhìı, as per Section 12.6.5(b)(i) of the Tłı̨chǫ Agreement.

consultation requirements, TG and GNWT approached the Board on October 15, 2015 requesting an extension of the time for the submission of a joint management proposal for the Bathurst ʔekwǫ̀ herd until December 15, 2015. On October 21, 2015, the Board accepted the extension request despite concerns about future timing issues, including the implementation of management actions in the 2016/2017 harvest season.

On November 27, 2015, TG and GNWT accepted the WRRB's recommendations and came to an agreement to implement, for the 2015/16 harvest season, a harvest target of 950 bulls only for Indigenous harvest of the Bluenose-East ʔekwǫ̀ herd (including Nunavut). Additionally, it was noted that work will continue with authorities in Nunavut towards implementing a consistent approach to harvest of Bluenose-East ʔekwǫ̀ in Nunavut and NWT.

A final update on the status and management of the Bluenose-East ʔekwǫ̀ herd was provided by GNWT on December 2, 2015, including the final population estimate and the suggestion that the Bluenose-East herd is close to the red zone, as per the *Taking Care of the Caribou* management plan.

On January 20, 2016, GNWT and representatives of traditional users and wildlife management authorities met to discuss and come to agreement on a proportional harvest allocation for the Bluenose-East herd for the 2016/17 harvest season and beyond. Meeting participants agreed that the proposed TG and GNWT harvest allocation formula is 'close' and should be seriously considered and consulted on by all groups.

D.2. Receipt of 2015 Joint Proposal

In June 2015, GNWT conducted a calving ground photographic survey and estimated the Sahtì ekwǫ̀ herd had declined to 38,600 ʔekwǫ̀. On December 15, 2015, TG and GNWT submitted the "*Joint Proposal on Management Actions for Bluenose-East Caribou 2016-2019"* to the Board outlining proposed management actions for the Sahtì ekwǫ̀ herd in Wek'èezhìı, including new restrictions on hunter harvest, predator management and ongoing monitoring. More specifically, TG and GNWT proposed implementing a herd-wide total allowable harvest of 950 bulls only and allocation for the Sahtì ekwǫ̀ herd and conducting a feasibility assessment of a full range of dìga management actions. The WRRB considered the proposed restriction of harvest as the establishment of a TAH and, therefore, was required to hold a public hearing. The public hearing took place April 6-8, 2016 in Behchokǫ̀, NT.

In anticipation of the proposal, the SRRB and the WRRB signed a *"Memorandum of Understanding Regarding Collaborative Efforts for the Management of the Bluenose-East Caribou Herd"* in October 2015 to ensure management of proceedings related to

the Sahtì ekwǫ̀ herd would be as effective as possible. Each Board conducted its own proceeding, including public hearings in both the Sahtú and Wek'èezhìı areas. Each Board submitted its own Reasons for Decision report.

D.3. 2016 Board Decisions

In order to allow careful consideration of all the evidence on the record and to meet legislated timelines, the WRRB decided to prepare two separate reports to respond to the proposed management actions in the joint management proposal. The first report, Part A, dealt with the proposed harvest management actions that required regulation changes in order for new regulations to be in place for the start of the 2016/17 harvest season, as well as the proposed dìga feasibility assessment. The second report, Part B, dealt with additional predator management actions, biological and environmental monitoring, and cumulative effects.

On June 10, 2016, the WRRB submitted its final determinations and recommendations and Part A Reasons for Decision Report to TG and GNWT. The WRRB determined that a TAH of 750 bulls only should be implemented for all users of the Bluenose-East ʔekwǫ̀ herd within Wek'èezhìı for the 2016/17, 2017/18, 2018/19 harvest seasons. Further, the Board determined that the proportional allocation of the TAH of the Sahtì ekwǫ̀ herd for the 2016/17, 2017/18, 2018/19 harvest seasons should be as follows: Tłı̨chǫ Citizens – 39.29%, and Members of an Indigenous people who traditionally harvest Sahtì ekwǫ̀ (including Nunavut) – 60.71%.

The Board recommended that TG and GNWT agree on an approach to designating zones for aerial and ground-based surveillance throughout the fall and winter harvests seasons from 2016 to 2019. Additionally, the WRRB recommended weekly communication updates, timely implementation of hunter education programs for all harvesters of the Sahtì ekwǫ̀ herd, and development of harvesting overlap agreements with the Sahtú and Nunavut.

The WRRB recommended that the dìga feasibility assessment set out in the proposal be led by the Board with input and support from TG and ENR. As well, if deemed successful, the Community-based Dìga Harvesting Project would be extended in 2016-2017 to the Sahtì ekwǫ̀ herd and incorporated into an adaptive wolf management approach.

On October 3, 2016, the WRRB submitted its final recommendations and Part B Reasons for Decision Report to TG and GNWT. The WRRB recommended consultations with Tłı̨chǫ communities to determine a path forward for implementation of Tłı̨chǫ laws to continue the Tłı̨chǫ way of life and maintain their cultural and spiritual connection with ʔekwǫ̀.

In addition, the WRRB recommended several Tłı̨chǫ Knowledge (TK) research and monitoring programs focusing on dìga, sahcho, stress and other impacts on ʔekwǫ̀ from collars and aircraft over-flights, and an assessment of quality and quantity of both summer and winter forage.

The Board recommended a biological assessment of sahcho as well as requesting that the Barren-ground Caribou Technical Working Group (BGCTWG) prioritize biological monitoring indicators and develop thresholds under which management actions can be taken and evaluated. All scientific and TK monitoring data will be provided to BGCTWG annually to ensure ongoing adaptive management.

The WRRB recommended the implementation of Tłı̨chǫ Land Use Plan Directives as well as completing a Land Use Plan for the remainder of Wek'èezhìı. The Board also recommended the development of criteria to protect key ʔekwǫ̀ habitat, including water crossings and tataa, using the Conservation Area approach in the NWT's *Wildlife Act*, offsets and value-at risks in a fire management plan. Additionally, the WRRB recommended the development of monitoring thresholds for climate indicators.

APPENDIX E Review of 2016 WRRB Determinations and Recommendations

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
WWRB Reasons for Decision Part A			
Determination #1-2016	♦ A total allowable harvest of 750 bulls only for all users of the Bluenose-East herd be implemented for the 2016/17, 2017/18, 2018/19 harvest seasons.		♦ Completed
Determination #2-2016	♦ The proportional allocation of TAH of the Bluenose-East herd for the 2016/17, 2017/18, 2018/19 harvest seasons shall be as follows: Tlicho citizens (39.2%); Members of an Aboriginal people who traditionally harvest Bluenose East (includes Nunavut) (60.71%). TG should determine distribution of the allocation within Tlicho communities, and GNWT should determine distribution of the allocation to members of an Aboriginal people who traditionally harvest Bluenose-East in consultation with those groups.		♦ Completed
Recommendation #1-2016	♦ TG and GNWT come to an agreement on the most effective wildlife management zone approach to differentiate herds, and then implement the approach with criteria for managing any overlaps between	♦ Appears to accept. In our response dated June 29, 2016 on WRRB determinations and recommendations for the Bathurst herd, TG and GNWT described a revised version of the Bathurst mobile no-harvest	♦ Completed, Mobile Core Bathurst Caribou Conservation Area implemented

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	herds, for the 2016/17, 2017/18, and 2018/19 harvest seasons.	zone that they had agreed on. Details of that option are set out in Appendix "A". We note that regulations required for the Bathurst mobile zone are already in place and will be modified as quickly as practicable to reflect the updated definition of mobile zone boundaries as listed in Appendix "A". GNWT will amend regulations to reflect the WRRB determination for BNE harvest within Wek'èezhìı as soon as practicable.	
Recommendation #2-2016	♦ TG and GNWT provide weekly harvest updates to the WRRB and the general public for the Bluenose-East herds throughout the fall and winter harvest seasons for the 2016/17, 2017/18, and 2018/19.	♦ Recommendations 2 and 3 – Vary. As noted in the June 29th, 2016 joint response to the WRRB on recommendations for Bathurst caribou, the GNWT is currently going through a period of severe fiscal restraint and budget reduction. It is not possible for GNWT to commit to weekly aerial monitoring of harvesting areas where Bluenose-East caribou are being harvested during winter. As in previous winters areas where Bluenose-East caribou are being harvested will be monitored by a combination of community monitors a game-check station on the winter road to the Tłı̨chǫ communities aerial reconnaissance	♦ Incomplete; inconsistent reporting

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
		surveys, and ground patrols on winter roads and trails in Bluenose-East range. Weekly updates on any new monitoring information on harvest and compliance will be provided to the WRRB, and periodic updates can be provided to the general public.	
Recommendation #3-2016	♦ TG and GNWT provide weekly updates to the WRRB and the general public on aerial and ground-based compliance surveillance of the Bluenose-East herd throughout the fall and winter harvest seasons for the 2016/17, 2017/18, and 2018/19.	♦ Recommendations 2 and 3 – Vary. As noted in the June 29th, 2016 joint response to the WRRB on recommendations for Bathurst caribou, the GNWT is currently going through a period of severe fiscal restraint and budget reduction. It is not possible for GNWT to commit to weekly aerial monitoring of harvesting areas where Bluenose-East caribou are being harvested during winter. As in previous winters areas where Bluenose-East caribou are being harvested will be monitored by a combination of community monitors a game-check station on the winter road to the Tłı̨chǫ communities aerial reconnaissance surveys, and ground patrols on winter roads and trails in Bluenose-East range. Weekly updates on any new monitoring information on harvest and compliance will be	♦ Completed

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
		provided to the WRRB, and periodic updates can be provided to the general public.	
Recommendation #4-2016	♦ TG and GNWT increase public education efforts and implement GNWT's recently developed Hunter Education program in Tlicho communities. GNWT should also implement the Hunter Education program for Aboriginal people who traditionally harvest Bluenose-East caribou.	♦ Recommendation 4 – Accept	♦ Completed
Recommendation #5-2016	♦ TG negotiate caribou harvesting overlap agreements with Nunavut and the Sahtú region to make certain that existing relationships endure.	♦ Recommendation 5 – This recommendation was addressed in previous discussions with WRRB and the Chief's Executive Council has authorized staff to initiate discussions with Nunavut and Sahtú.	♦ Incomplete; agreements not negotiated
Recommendation #6-2016	♦ If the Community-based wolf Harvesting Project is to be expanded to other Tlicho communities, a management proposal must be submitted to the WRRB for review and approval. Further, if the Project is to be expanded in scope, prior to the submission of a management proposal to the WRRB, an index of	♦ Accept	♦ Not required

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	changing wolf abundance must be available and research on habitat quality and quantity on the Bluenose-East herd range must be conducted.		
Recommendation #7-2016	♦ TG and GNWT support a collaborative feasibility assessment of options for wolf management, led by the Board.	♦ Appears to accept. A working group with representatives of GNWT, WRRB, TG, NSMA and YKDFN has been meeting in summer 2016 to collaboratively develop the wolf management feasibility assessment for the Bathurst range in the NWT. Łutsel K'e Dene First Nation (LKDFN) has been invited to participate in the working group. As noted in the TG and GNWT joint management proposal on the Bluenose-East herd, methods being developed for the feasibility assessment underway for the Bathurst herd could be extended to the Bluenose-East herd's range once the Bathurst assessment is complete. The working group that is developing the feasibility assessment for the Bathurst herd could be re-configured to consider wolf management in the range of the BNE herd.	♦ Completed
WWRB Reasons for Decision Part B			

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
Recommendation #1B-2016	♦ TG consult with Tlicho communities by March 2017 to ensure Tlicho laws are implemented with respect to caribou harvesting practices to maintain the Tlicho way of life and the relationship with caribou.	♦ TG vary. TG agrees with recommendation insofar as it concerns consultation with Tlicho communities with respect to caribou harvesting practices and maintaining the Tlicho way of life and relationship with caribou. However, the passage and/or implementation of Tlicho laws is a matter outside the jurisdiction of the Board. This recommendation should be varied to remove that reference.	♦ Incomplete
Recommendation #2B-2016	♦ TG conduct TK research to define, from the Tlicho perspective, types of caribou, their behaviour, and their annual range, and their relationship with caribou and people by March 2017.	♦ TG vary. TG agrees that studies are needed. TG wants to combine Recommendations 2B, 3B, 5B, 15B and 21B into a comprehensive TK student.	♦ Incomplete
Recommendation #3B-2016	♦ TG conduct TK research on sahcho (grizzly bear) predation on caribou and their relationship with caribou, other wildlife and people by June 2017.	♦ TG vary. See recommendation 2B.	♦ Incomplete
Recommendation #4B-2016	♦ TG/GNWT conduct a collaborative grizzly bear biological assessment, following completion of the ongoing wolf feasibility assessment for the Bathurst herd. The assessment should include summarizing available information	♦ TG/GNWT appear to agree. NWT Species at Risk Committee to prepare species status report for grizzly bear in NWT and will address recommendation 4B.	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	on sahcho (grizzly bear) abundance, movement and diet for the Bluenose-East herd's as well as including TK collected in Recommendation #3B-2016.		
Recommendation #5B-2016	♦ TG conduct TK research about stress and impacts on caribou and people related to collars and aircraft over-flights by September 2017, which should be considered in determining numbers of collars deployed in 2018 and beyond.	♦ TG vary. See recommendation 2B.	♦ Incomplete
Recommendation #6B-2016	♦ GNWT determine whether reconnaissance surveys should be conducted during non-photo survey years with renewable resource boards, Aboriginal governments and other affected organizations in the NWT and Nunavut prior to conducting the next reconnaissance survey in June 2017.	♦ GNWT vary. Suggests that Barren Ground Caribou Technical Working Group (BGCTWG) review value of reconnaissance surveys.	♦ Incomplete; no longer required
Recommendation #7B-2016	♦ Recommendation 7B – TG/GNWT provide a summary of scientific and TK monitoring data, including harvest and collar mortalities as soon as available each year, to the BGCTWG.	♦ TG/GNWT accept.	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
Recommendation #8B-2016	♦ TG/GNWT work with the BGCTWG to prioritize biological monitoring indicators in order of need for effective management and develop thresholds under which management actions can be taken and evaluated. Additionally, TG and GNWT should work with the BGCTWG to outline the trade-off between concerns about effects on and the collection of statistically credible information for both the number of collars and over-flights on the calving grounds. Implementation of this recommendation should be completed by no later than the end of March 2017.	♦ GNWT/TG vary. Suggest current monitoring of herds to be reviewed with BGCTWG during winter 2016-2017 to assess priorities for monitoring particularly if budget constraints limit resources.	♦ Incomplete
Recommendation #9B-2016	♦ TG refine and implement Tlicho Land Use Plan Directives, under Chapter 6 related to caribou, land use, and cumulative effects by March 2018.	♦ TG acknowledges suggestion and advises the Board that it intends to refine and implement the Tlicho LUP directives related to caribou. TG notes that land use planning in Wek'èezhìı is beyond the jurisdiction of the Board.	♦ Incomplete
Recommendation #10B-2016	♦ TG/GNWT initiate, develop and implement a land use plan for Wek'èezhìı by March 2019.	♦ GNWT vary. Suggests that GNWT work collaboratively with TG, federal government, and other Aboriginal Government Organizations and planning partners to initiate, develop and implement a	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
		government-led approach to land use planning for public lands in Wek'èezhìı. GNWT notes that this suggestion goes beyond the authority of the Board (should be a suggestion, not a recommendation). ♦ TG agrees in substance with GNWT.	
Recommendation #11B-2016	♦ TG/GNWT develop criteria under which Conservation Areas in the NWT's Wildlife Act will be used to protect key caribou habitat by March 2018.	♦ TG/GNWT vary. Suggest that TG, GNWT, and partners, through the Bathurst Range Planning Process, develop criteria to determine when to protect key caribou habitat by March 2018. Until the range plan assessment is complete, it is premature to assume that the Conservation Areas will be the best tool to achieve protection objectives. GNWT commits to ensuring that the Conservation Area approach will be considered.	♦ Incomplete; conservation areas noted as tool in Bathurst Caribou Range Plan
Recommendation #12B-2016	♦ TG/GNWT develop criteria to protect caribou water crossings from exploration and development activities in the NWT by 2018 to be included in the Tlicho and Wek'èezhìı Land Use Plans.	♦ TG/GNWT accept.	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
Recommendation #13B-2016	♦ TG/GNWT investigate and report to the WRRB and other stakeholders on the potential use of offsets for caribou recovery to compensate for losses caused by exploration and development activities by March 2018. A set of criteria should be developed to assess effectiveness of each type of offset as it is investigated.	♦ TG/GNWT accept.	♦ Incomplete
Recommendation #13B-2016	♦ TG/GNWT complete and implement a fire management plan with criteria identifying under which the key caribou habitat is defined as a value-at-risk by March 2018.	♦ TG/GNWT vary. Suggest recommendation is opportunity to involve community members in identifying important caribou habitat and to explain how fire management decisions are made and how wildland fires play a crucial role in the boreal ecosystem. GNWT is limited in its ability to control all fires on vast NWT landscape and total exclusion of wildland fire would not be ecologically healthy for the environment or wildlife. While caribou habitat is identified as a value at risk, it is lower in priority than the protection of life and property.	♦ Incomplete
Recommendation #16-2016	♦ TG conduct a TK monitoring project with elders to document how climate conditions have affected	♦ Recommendation 15B – TG vary. See response to Recommendation 2B.	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	preferred summer forage and impacted caribou fitness by September 2018.		
Recommendation #16-2016	♦ TG conduct TK monitoring to assess the quality and quality of winter forage by September 2018.	♦ TG vary. See response to Recommendation 2B.	♦ Incomplete
Recommendation #17-2016	♦ TG/GNWT work with the BGCTWG to develop monitoring thresholds for climate indicators by March 2017.	♦ GNWT/TG vary. GNWT/TG are willing to review with the BGCTWG annual information on climate indicators and discuss thresholds for indicators relevant to caribou. GNWT/TG would support research that links climate indicators to caribou demography; at this point, linkage between climate indicators and caribou population trend is not well established. GNWT would request clarification of what WRRB is proposing on thresholds for climate indicators.	♦ Incomplete

APPENDIX F List of Registered Parties

Proponents
Tłı̨chǫ Government
Department of Environment & Natural Resources, Government of the Northwest Territories

Intervenors
Canadian Arctic Resources Committee
Délı̨nę Got'ı̨nę Government
North Slave Métis Alliance
Yellowknives Dene First Nation

Registered General Public
Louis Wedawin
Chief Charlie Football
Lucy Lafferty
Phillip Dryneck
Henry Gon
Jimmy Kodzin
Michel Moosenose
Bobby Pea'a
Pierre Tlokka
Jimmy Arrowmaker
Alphonse Apples
Charlie Apples
Joe Mantla

APPENDIX G Summary Table of Party Recommendations

Total Allowable Harvest		
Intervenor	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government	Follow the Dél̨ı̨nę Got'ı̨nę Plan of Action for Caribou Conservation, entitled *"Belare wíle Gots'ę́ ʔekwę́ – Caribou for All Time"*	
North Slave Métis Alliance	Set a variable TAH of up to 300 bull-only BNE caribou per season.	Sec 7.2.4. Determination #1-2019 (Sahtì Ekwǫ̀)
Yellowknives Dene First Nation		
Harvest Allocation		
Party	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government	Follow the Dél̨ı̨nę Got'ı̨nę Plan of Action for Caribou Conservation, entitled *"Belare wíle Gots'ę́ ʔekwę́ – Caribou for All Time"*	
North Slave Métis Alliance		
Yellowknives Dene First Nation	Do not agree with the proposed harvest allocation of 6 bulls for YKDFN	Sec 7.3.4., Determination #2-2019 (Sahtì ekwǫ̀)
Harvest Monitoring		
Intervenor	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government	Follow the Dél̨ı̨nę Got'ı̨nę Plan of Action for Caribou Conservation, entitled "Belare wíle Gots'ę́ ʔekwę́ – Caribou for All Time"	
North Slave Métis Alliance		
Yellowknives Dene First Nation	TG and ENR need to outline within the management plan how exactly they will deal with the enforcement to ensure adherence.	Sec 7.4.4., Recommendation #1-2019 (Sahtì Ekwǫ̀)
	Consideration should be given to ensuring capacity building in the event thae ENR staff cannot already distinguish among caribou herds by appearance in the field	
Predators		
Party	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government		
North Slave Métis Alliance	The ENR should undertake predator population surveys and collar monitoring programs immediately, starting in 2019. The surveys and monitoring should precede any aggressive programs (e.g., aerial shooting or ground shooting at den sites). At a minimum, the following data must be obtained before aggressive predator (wolf or grizzly) removal programs take place: - Population - Productivity - Pup survival rate - Main prey and its % of the diet - Satellite collar monitoring	Appendix H - WRRB Predator Management Recommendations and Government Response
Yellowknives Dene First Nation	Wolves should be collared to provide a dataset that can be matched against exisiting and future collared caribou data.	Appendix H - WRRB Predator Management Recommendations and Government Response

Habitat and Land Use		
Intervenor	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government		
North Slave Métis Alliance		
Yellowknives Dene First Nation	Further analysis should be done on how caribou behaviour is affected by development and mines.	Sec 7.9 Research & Monitoring, Recommendation #15-2019 (Sahtì E)
Adaptive Management		
Intervenor	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government		
North Slave Métis Alliance	TAH should be annually reviewed based on cow and calf survival rates, using an adaptive management framework and response plan.	Sec 7.8. Adaptive Management
Yellowknives Dene First Nation		
Research and Monitoring		
Intervenor	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government		
North Slave Métis Alliance		
Yellowknives Dene First Nation	Caribou should not be monitored with collars.	Sec 7.9. Research and Monitoring, Recommendation #13-2019 (Sahtì Ekwǫ̀)
	Caribou should be monitored on the land.	Sec 7.9. Research and Monitoring, Recommendation #15-2019 (Sahtì Ekwǫ̀)
Other		
Intervenor	**Recommendation**	**WRRB Response**
Dél̨ı̨nę Got'ı̨nę Government		
North Slave Métis Alliance	"The management proposal on reduction of wolf numbers", GNWT should immediately invite the NSMA to the ongoing discussion, without waiting for the completion of the full draft	
	Identifying "appropriate cultural activities and harvest of other wildlife", the GNWT should invite the NSMA to the ongoing discussion or initiate a new bilateral discussion with the NSMA	
	The "monthly" staff meeting on the management of BNE, Bathurst, and Beverly/Ahiak caribou herds, GNWT should immediately invite the NSMA staff to the meetings.	
	"Supporting other harvesting initiatives", GNWT should invite the NSMA to the ongoing discussion or initiate a new bilateral discussion with the NSMA	
Yellowknives Dene First Nation	Management Proposals should be written with input from YKDFN and other Indigenous communities.	

APPENDIX H WRRB Predator Management Recommendations and Government Response

February 6, 2019

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Grand Chief George Mackenzie
Tłı̨chǫ Government
Box 412
Behchokǫ̀, NT X1A 1Y0
Email: georgemackenzie@tlicho.com

Re: Section 12.5.6 of the Tłı̨chǫ Agreement – WRRB Predator Management Recommendations

Dear Minister McLeod & Grand Chief Mackenzie:

Background:
The *Kokètì Ekwǫ̀* (Bathurst caribou) and *Sahtì Ekwǫ̀* (Bluenose-East caribou) herds are both in a precipitous decline. The decline of the kokètì ekwǫ̀ herd was first documented in 1996 when the population was estimated at 349,000 animals, down from 420,000 in 1986. Management actions to date have failed to halt the decline and the herd's population was estimated at 8,200 animals in 2018. The decline of the sahtì ekwǫ̀ herd was first documented in 2013 when the herd's population was estimated at 68,000 animals, down from 121,000 in 2010. In 2018, the herd's population was estimated at 19,000 animals.

Range management, harvest restrictions and intensive study are being implemented or are already occurring in Wek'èezhìı for both herds. Previous joint management proposals for the kokètì ekwǫ̀ herd by the Department of Environment & Natural Resources (ENR), Government of the Northwest Territories (GNWT) and Tłı̨chǫ Government (TG) resulted in the Wek'èezhìı Renewable Resources Board (WRRB) holding public hearings in 2010 and again in 2016. A public hearing was also held to address management proposals for the sahtì ekwǫ̀ herd in 2016.

On January 14 and January 22, 2019 respectively, the WRRB received joint management proposals for the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds. These management proposals propose a number of actions. However, despite WRRB recommendations for the implementation of predator control dating as far back as 2010, neither of the current management proposals includes a plan for predator management in either the sahtì ekwǫ̀ or kokètì ekwǫ̀ ranges. Instead your governments have indicated their intention to address the control of predators, more specifically *Dìga* (wolves), in a separate joint management proposal later in the spring of 2019.

The Issue:
The situation for both of these herds is dire. Analysis of the joint management proposals by the Board and its advisors indicates an immediate need for action to reduce predation on the herds. During its 2016 public hearings and most recently in the TG-ENR *Ekwǫ̀* (barren-ground caribou*)* consultation tours, conducted on January 21-23, 2019, the WRRB has heard from the community members that dìga are continuing to put pressure on ekwǫ̀ populations. Community members would like to see action taken now. The Board agrees.

The Authority for WRRB Recommendations:
Section 12.5.6 of the Tłı̨chǫ Agreement states:

> *The Wek'èezhìı Renewable Resources Board may, without waiting for a proposal from a Party, make the following recommendations or determinations, after consulting with any Party or body with powers to manage any aspect of the subject matter of its recommendation or determination:*
>
> *(a) Recommend actions for management of harvesting in Wek'èezhìı, including*
>
> *(i) A total allowable harvest level for any population or stock of fish,*
>
> *(ii) Harvest quotas for wildlife or limits as to location, methods, or seasons of harvesting wildlife, or*
>
> *(iii) The preparation of a wildlife management plan; …*

The WRRB has chosen not to wait for ENR and TG to submit their predator management proposal to the Board later this spring. The 20% rate of annual decline of the kokètì ekwǫ̀ and sahtì ekwǫ̀ herds is in the Board's opinion so serious that waiting any longer to act will make recovery of the herds even more difficult. The Board is convinced that early action is essential.

In consideration of the updated 2018 sahtì ekwǫ̀ and kokètì ekwǫ̀ herd estimates and recent consultations with Tłı̨chǫ communities the WRRB makes the recommendations set out below to GNWT and the TG:

Recommendation #1-2019 (Predator): The WRRB supports continuing the ENR's dìga harvest incentive program and the TG's Community Based Dìga Harvesting Project as an education tool.

Recommendation #2-2019 (Predator): The WRRB recommends that dìga monitoring be undertaken so that population estimates, or indexes are generated. In addition, as much information as possible, including condition, diet, and reproductive status, should be collected from each harvested dìga.

Recommendation #3-2019 (Predator): The WRRB recommends that dìga management be undertaken in Wek'èezhìı. TG and ENR should review the *"Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd"* submitted in November 2017 to determine the most effective, humane and cost-efficient methods that would have the least impact and disturbance on the ekwǫ̀ herds themselves.

Recommendation #4-2019 (Predator): The WRRB recommends that dìga management should be closely monitored for effectiveness of halting or slowing the decline of the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds in order to provide future harvesting opportunities.

Recommendation #5-2019 (Predator): The WRRB recommends that the GNWT and TG work with the Government of Nunavut to enact predator management actions on the calving grounds of sahtì ekwǫ̀ and kokètì ekwǫ̀ in Nunavut.

Recommendation #6-2019 (Predator): The WRRB commits to striking a working group to begin work on a *sahcho* (grizzly bear) biological assessment by June 2019, specifically on the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds herd ranges. This working group will include at minimum the GNWT, TG and the Government of Nunavut. WRRB staff recommend that sahcho are monitored in order to determine if pressures are increasing on ekwǫ**.**

Recommendation #7-2019 (Predator): WRRB staff recommend that *golden det'ǫcho* (golden eagle) are monitored in order to determine if pressures of golden det'ǫcho are increasing on ekwǫ̀. WRRB staff recommends that TG and the GNWT work with the Government of Nunavut to support golden det'ǫcho monitoring.

In addition, as per Section 12.5.8 of the Tłı̨chǫ Agreement, the Board requests a response to these recommendations by March 6, 2019.

Conclusion:
The WRRB believes that predator management must begin by May 2019 in order to promote recovery of the herds. This action is essential to ensure the potential for a future harvest of sahtì ekwǫ̀ and kokètì ekwǫ̀.

The WRRB will, in accordance with the Tłı̨chǫ Agreement participate in any consultations on these proposals that the ENR or TG decides to undertake.

If there are any questions, please contact our office at (867) 873-5740 or jpellissey@wrrb.ca.

Sincerely,

Joseph Judas, Chair
Wek'èezhìı Renewable Resources Board

Cc Dr. Joe Dragon, Deputy Minister, ENR-GNWT
Rita Mueller, Assistant Deputy Minister, Operations, ENR-GNWT
Bruno Croft, Superintendent, North Slave Region, ENR-GNWT
Laura Duncan, Tłı̨chǫ Executive Officer, TG
Tammy Steinwand-Deschambeault, Director, Culture and Lands Protection, TG
Michael Birlea, Manager, Culture and Lands Protection, TG

Tłı̨chǫ Ndek'àowo
Tłı̨chǫ Government

Government of
Northwest Territories Gouvernement des
Territoires du Nord-Ouest

MAR 0 7 2019

Mr. Joseph Judas, Chair
Wek'èezhìi Renewable Resources Board
4504 49TH AVENUE
YELLOWKNIFE NT X1A 1A7

Dear Mr. Judas:

Re: Section 12.5.6 of the Tłı̨chǫ Agreement – WRRB Predator Management Recommendations

Thank you for your letter dated February 6, 2019 providing the Wek'èezhìi Renewable Resources Board's (WRRB) recommendations to the Tłı̨chǫ Government (TG) and the Department of Environment and Natural Resources (ENR), Government of the Northwest Territories.

TG and ENR are providing the attached joint response to the WRRB's recommendations.

Sincerely,

Grand Chief George Mackenzie
Tłı̨chǫ Government
Behchokǫ̀, NT

Robert C. McLeod, Minister
Environment and Natural Resources
Yellowknife, NT

Attachment

c. Dr. Joe Dragon, Deputy Minister
Environment and Natural Resources

Ms. Rita Mueller, Assistant Deputy Minister, Operations
Environment and Natural Resources

Dr. Brett Elkin, Director, Wildlife
Environment and Natural Resources

Mr. Bruno Croft, Superintendent, North Slave Region
Environment and Natural Resources

Ms. Laura Duncan, Tłı̨chǫ Executive Officer
Tłı̨chǫ Government

Ms. Tammy Steinwand-Deschambeault, Director, Culture and Lands Protection
Tłı̨chǫ Government

Mr. Michael Birlea, Manager, Culture and Lands Protection
Tłı̨chǫ Government

Ms. Jody Pellissey, Executive Director
Wek'èezhìi Renewable Resources Board

WRRB Predator Management Recommendations

Recommendation #1-2019 (Predator): The WRRB supports continuing the ENR's dìga harvest incentive program and the TG's Community Based Dìga Harvesting Project as an education tool.

Response:

ENR and TG accept this recommendation.

ENR thanks the WRRB for their support of the Enhanced North Slave Wolf Harvest Incentive Program and notes that the program will continue until the prime fur season for wolves ends on May 31.

TG acknowledges and thanks the WRRB for its support of the Tłı̨chǫ Community-Based Dìga Harvesting Project, which is still under development. Tłı̨chǫ elders have been key proponents for developing and implementing a training program for Tłı̨chǫ hunters to become knowledgeable and effective harvesters of dìga. The training program engages Tłı̨chǫ elders directly so that Tłı̨chǫ knowledge and practices for hunting dìga are maintained and transmitted to the next generation of hunters. TG staff are working with selected Tłı̨chǫ hunters to provide them with additional training on harvesting and skinning methods through workshops that will be held in collaboration with ENR.

Recommendation #2-2019 (Predator): The WRRB recommends that dìga monitoring be undertaken so that population estimates, or indexes are generated. In addition, as much information as possible, including condition, diet, and reproductive status, should be collected from each harvested dìga.

Response:

ENR and TG accept this recommendation. ENR and TG agree that important aspects for assessing wolf management actions will be to a) monitor the relative abundance of dìga based on indices as removal actions are undertaken and b) evaluate health and condition of dìga including age, sex, diet, and reproductive status.

ENR and TG will develop and pilot a protocol for monitoring relative abundance of dìga in an adaptive manner to evaluate feasibility of sampling and robustness of results.

For each wolf carcass ENR receives, basic data on age, sex, diet, and reproductive status will be collected.

Recommendation #3-2019 (Predator): The WRRB recommends that dìga management be undertaken in Wek'èezhìı. TG and ENR should review the *"Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd"* submitted in November 2017 to determine the most effective, humane and cost-efficient methods that would have the least impact and disturbance on the ekwǫ̀ herds themselves.

Response:

ENR and TG accept this recommendation, and will use the feasibility assessment to develop the program.

ENR's Enhanced North Slave Wolf Incentive Program encourages harvesters to undertake ground-based shooting and/or snaring on the winter range of the Bluenose-East and Bathurst barren-ground caribou herds. The program is an extension of the previous program and was implemented to address requests from Indigenous hunters for further incentives to harvest wolves. This pilot project includes monitoring; ENR will track the number of dìga harvested and the observations of dìga reported by hunters as well as hunters' feedback on the logistics of harvesting dìga on the winter range. ENR will adaptively manage this program; if it is clear that this program is not resulting in a significant number of harvested dìga, enhancements will be made to the program and/or other options outlined in the feasibility assessment will be considered.

Recommendation #4-2019 (Predator): The WRRB recommends that dìga management should be closely monitored for effectiveness of halting or slowing the decline of the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds in order to provide future harvesting opportunities.

Response:

ENR and TG accept this recommendation. ENR and TG are working together to develop management actions to help recover caribou and developing a joint proposal on dìga management. Monitoring will be included as part of the implementation of any wolf management program. At the same time, ENR and TG have proposed to increase the monitoring of both the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds as outlined in the *Joint Proposal on Management Actions for the Bluenose-East ʔekwǫ̀ (Barren-ground caribou) Herd: 2019-2021* and the *Joint Proposal on Management Actions for the Bathurst ʔekwǫ̀ (Barren-ground caribou) Herd: 2019-2021.*

Recommendation #5-2019 (Predator): The WRRB recommends that the GNWT and TG work with the Government of Nunavut to enact predator management actions on the calving grounds of sahtì ekwǫ̀ and kokètì ekwǫ̀ in Nunavut.

Response:

As neither ENR nor TG have law-making jurisdiction in Nunavut we are unable to accept the recommendation as worded. ENR and TG would like to vary this recommendation, as the GNWT and TG can discuss potential predator management actions on the calving grounds of sahtì ekwǫ̀ and kokètì ekwǫ̀ with the Government of Nunavut.

Recommendation #6-2019 (Predator): The WRRB commits to striking a working group to begin work on a *sahcho* (grizzly bear) biological assessment by June 2019, specifically on the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds herd ranges. This working group will include at minimum the GNWT, TG and the Government of Nunavut. WRRB staff recommend that sahcho are monitored in order to determine if pressures are increasing on ekwǫ**.**

Response:

ENR and TG accept the first half of this recommendation. ENR and TG will participate in a collaborative process to work on a sahcho biological assessment led by WRRB staff. ENR can provide information on sahcho from the Northwest Territories. In April 2017, the Northwest Territories Species at Risk Committee released the "Species Status Report for Grizzly Bear (*Ursus arctos*) in the Northwest Territories", which includes both traditional knowledge and science. This status report provides a thorough biological assessment of sahcho within the NWT and should form a basis for the biological assessment.

As neither ENR nor TG have jurisdiction in Nunavut we are unable accept the second half of this recommendation as worded. Despite this, ENR can discuss potential sahcho monitoring in order to determine if pressures are increasing on ekwǫ with the Government of Nunavut. ENR and TG recognize that sahcho are an important predator on the calving and post-calving grounds of ekwǫ. As the majority of the calving grounds and post-calving ranges of the sahtì ekwǫ̀ and kokètì ekwǫ̀ herds are in Nunavut, monitoring the pressures of sahcho on ekwǫ will occur in Nunavut and be the responsibility of the Government of Nunavut.

The TG Boots on the Ground program is one method of tracking sahcho on the Bathurst range and in the future on the Bluenose-East range. Sahcho have been observed during the TG Boots on the Ground program.

Recommendation #7-2019 (Predator): WRRB staff recommend that *golden det'ǫcho* (golden eagle) are monitored in order to determine if pressures of golden det'ǫcho are increasing on ekwǫ̀. WRRB staff recommends that TG and the GNWT work with the Government of Nunavut to support golden det'ǫcho monitoring.

Response:

As neither ENR nor TG have jurisdiction in Nunavut we are unable accept the recommendation as worded. ENR and TG would like to vary this recommendation, as TG and ENR can discuss potential options for monitoring both golden det'ǫcho and bald eagles with the Government of Nunavut.

ENR and TG recognize that eagles and in particular golden det'ǫcho have been identified as a significant predator of caribou calves in other barren-ground caribou herds.

The TG Boots on the Ground program is one method of tracking eagles on the Bathurst range and in the future on the Bluenose-East range. Bald eagles have been observed during the TG Boots on the Ground program.

APPENDIX I Tłı̨chǫ Research and Monitoring Program

Tłı̨chǫ Research and Monitoring Program

By
Allice Legat, Gagos Social Analysts, Inc.
Camilla Nitsiza, Whatì Community
Madelaine Chocolate, Gamètì Community
Rita Wetrade, Gamètì Community

2007

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Tłı̨chǫ Philosophy

Grand Chief Jimmy Bruneau directed the Tłı̨cho̱ people to know both Western and Tłı̨cho̱ knowledge so each Tłı̨cho̱ citizen would be strong like two people. Bruneau's philosophy and direction was not new to the Tłı̨cho̱ people, who have always been interested in the ways and knowledge of others. This philosophy has been noted in both their oral narratives and the journals of the trading post factors. Each tells of Tłı̨cho̱ leaders learning the knowledge and negotiating techniques of trading post factors to ensure the best return for their people's furs. This philosophy is also evident - in oral narratives telling of activities leading up to discussions with the Federal Commissioner in 1921 when Möwhì signed Treaty 11. The stories explain that Tłı̨cho̱ were aware of the European perspective based on information they acquired from the Slavey and Chipewyan further south. Upon learning from the experience of their southern neighbours they were better prepared to deal with the Treaty Party.

Tłı̨cho̱ oral narratives stress the importance of understanding a problem, finding a solution and taking action. Their approach to learning, knowing and taking action is evident in most Tłı̨cho̱ oral narratives, as well as the manner in which past research projects were approached. The Tłı̨cho̱ have rarely allowed others to do research to address a problem they wish to know about themselves. They insist that they take an active part in research and monitoring. Specifically the Tłı̨cho̱:

- Explained to the managers of Rayrock Mine (1950s) that their observations were indicators of serious problems in the environment. They identified problems that they observed with plants and wildlife –such as beaver, marten and fish. These problems were particularly evident to those Tłı̨cho̱ who either used the area frequently or worked at the mine.
- Insist research focus on their needs and priorities – take for example the priorities set by the Dogrib Renewable Resources Committee during the early 1990s: where caribou, habitat, water and heritage were of greatest concern.
- Insist on adequate funding to ensure Tłı̨cho̱ researchers were employed as permanent, full time employees for the life of research projects – take for example the Traditional Justice and Traditional Medicine project in Whatì (1987-92); the Traditional Governance project in Gamètì (1993-1996); and the caribou and place names projects in all the Tłı̨cho̱ communities (1996-2001).
- Use the participatory action research (PAR) method that includes researcher training; an elders – both male and female elders – committee/s; rigorous research methods carried out by Tłı̨cho̱ researchers and overseen by the elders' committee; and verification of shared information. The PAR process ensures accurate understanding of the traditional knowledge that is

documented and ensures it leads to positive actions based on the recommendations.

Today, it is vital that the Tłı̨chǫ lead by undertaking their own harvesting and monitoring studies as the impacts of development on Tłı̨chǫ lands and the environment are becoming ever more evident. The Tłı̨chǫ Government and agencies have been given the authority to manage the land in the Tłı̨chǫ Agreement, but to do this effectively requires a system of research and monitoring that will feed into management decisions.

The Tłı̨chǫ Knowledge Research and Monitoring Program, which includes the collection of harvest information, outlined below is based on Tłı̨chǫ philosophy. First, the current issues for which this TK program was designed to solve are discussed, followed by a summary of the discussion with Tłı̨chǫ citizens that helped formulate the solutions. Thirdly, the program structure is described. There are five appendices that outline activities, outputs, and the evaluation questions so the TK Research and Monitoring Program can be improved through time. Appendices are as follows:

- Appendix I consists of the Program Design and Implementation Plan.
- Appendix II outlines the Evaluation Frameworks for both the on-going program activities and for the implementation activities.
- Appendix III is the Tłıcho Research and Monitoring Program Using Tłıcho Knowledge to Monitor Barren-ground Caribou.
- Appendix IV is a draft Tłıcho Knowledge Policy.

It should be noted that evaluation is done to ensure the best possible TK is being documented for future monitoring, education and understanding of the Tłı̨chǫ perspective.

Current Issue

The Tłı̨cho̱ Agreement directs Boards, Agencies and the Tłı̨cho̱ Government to i)use traditional knowledge, ii) promote cultural perspectives, and iii) select Board members that have knowledge of Tłı̨cho̱ way of life. Yet the current systems – most of which are based on Western perspectives and the British legal system – make it difficult for Tłı̨cho̱ knowledge (TK) to be used in a manner that is consistent within the Tłı̨chǫ cultural perspective and way of life.

The Agreement states that:

Section 12.1.6

> *In exercising their powers under this chapter, the Parties and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.*

Section 13.1.5

> *In exercising their powers in relation to forest management, the Government of the Northwest Territories, the Tłı̨cho̱ Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.*

Section 14.1.4

> *In exercising their powers in relation to the management of plants, the Government of the Northwest Territories, the Tłı̨cho̱ Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.*

Section 22.1.7

> *In exercising their powers, the Mackenzie Valley Environmental Impact Review Board and the Wek'èezhìi Land and Water Board shall consider traditional knowledge as well as other scientific information where such knowledge or information is made available to the Boards.*

Furthermore, Section 12.5.5 of the Tłı̨chǫ Land Claim and Self-government Agreement (the Agreement) states that the Wek'èezhìi Renewable Resources Board (WRRB) shall:

> *(a) Make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal*
>
> *i. Regarding a total allowable harvest level for Wek'èezhìi, except for fish,*

ii. Regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìi to groups of persons or for specified purposes, or

iii. Submitted under 12.11.1 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìi;

The Tłı̨chǫ Agreement authorizes the WRRB responsibility for total allowable harvest (TAH) for wildlife, forests and plants and authorizes the Minister of Fisheries and Oceans (DFO) responsibility for fish conservation and the establishment of TAH for fish stocks. Both WRRB and DFO have an obligation under terms of the Agreement to determine TAH through assessment studies and other research.

For WRRB and DFO to have information necessary for sustainable management it is imperative that the Tłı̨chǫ undertaken their own monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If allocations are to be made among users of the resource it will be necessary to determine basic needs levels of the beneficiaries of the claim. Allocations of fisheries and wildlife resources will be difficult without this basic harvest information from the harvesters themselves.

For the Agreement to be honoured three activities need to occur:

1. Baseline information must be gathered from elders on known trends as harvest, wildlife and vegetation distribution.

2. Information gathered through Tłı̨chǫ traditional methods of monitoring needs to be documented on an on-going basis.

3. Realistic harvest studies need to be ongoing.

Although scientific information is readily available, most Tłı̨chǫ knowledge is in the minds of the elders and harvesters. For this reason, a program is needed so Tłı̨chǫ researchers can work with elders and harvesters to document their knowledge in a manner that does not lose the Tłı̨chǫ perspective. This is usually detailed knowledge of past conditions that they share with their descendants while sharing their current observations of wildlife and wildlife habitat. And, as is the traditional mode of sharing, numbers of species observed and harvested, are shared with others in the community along with other information such as behaviour of wildlife and the people harvesting. All information available is used to make management decisions.

One of the important features of Tłı̨chǫ knowledge is that it is acquired, enhanced and communicated on the land while people are engaged in land-based activities. It is also communicated after harvesters return to the community through oral narratives.

Modern harvest studies often ask harvesters to fill out survey forms in English, or to provide limited information that can be taken out of context. These studies may fail because they are not compatible with how Tłı̨chǫ knowledge, including information about harvest, is transmitted through oral narratives.

This project was designed to ensure that both monitoring and realistic harvesting numbers can be recorded in a culturally appropriate manner. This will help alleviate the problem that many respondents choose not to answer correctly harvest study questions posed by non-community members. (see Harvest Study Report, 2009).

Finding a Solution

In 1999-2000, the Tłı̨chǫ Regional Elders' Committee – under the direction of *K'àowo*[1] Jimmy Martin – requested Dogrib Treaty 11 staff who were working with the elders to bring male and female harvesters from each community to discuss a Tłı̨chǫ monitoring program. Funding for this meeting was secured from Cumulative Impacts and Monitoring Program, Environment Canada. The elders and harvesters directed staff to initiate monitoring around the diamond mines – with research/hunting camps located in strategic locations around the mines that would enable harvesters to observe the behaviour of caribou in relation to the mines. They also suggested a camp be located at Gots'ôkàtì and Deèzhàatì so caribou behaviour could be compared with non-mining areas.

In September 2008 the Wek'èezhìi Renewable Resources Board (WRRB) and the Tłı̨chǫ Government started work towards implementing a Tłı̨chǫ monitoring program. Also at that time members of the Wek'èezhìi Forum requested that work be done to develop TK policy.

The TK program design with associated policy guidelines were developed based on discussions held during the household visits made by the Project Team between April 2009 and December 31, 2009. All households in the three fly-in communities of Gamètì, Wekweetì and Whatì were contacted. Behchokö has a significant population therefore only those households with active harvesters and elders were contacted. During these visits Tłı̨chǫ researchers, along with Dr. Allice Legat, explained the importance of Tłı̨chǫ knowledge in the Tłı̨chǫ Agreement and the possibility of establishing a monitoring program as originally laid out by the elders and harvesters in 1999. Two Tłı̨chǫ researchers – Ms. Camilla Nitsiza and Ms. Madelaine Chocolate - did conducted the household visits, although Ms. Mary Adele Wetrade did assist Madelaine Chocolate in

[1] Translated as 'boss'. The role is significantly different than the Western concept for 'chair'.

Gamètì. Household visits took longer than anticipated because i) individuals wished to express their views after hearing the role of the WRRB as it is mandated in the Tłı̨chǫ Agreement; and ii) individuals were delighted to expound on the potential for harvesters and elders working together with Tłı̨chǫ researchers to monitor the land as first set out by the elders in 1999-2000. Their excitement at building on their traditional management practices was clear.

After completing household visits and analyzing Tłı̨cho̱ responses, it became clear that it would be culturally appropriate to develop interview guidelines that allowed harvesters to share information in a manner similar to how they normally explain their harvest and observations to one another and to their elders. The Tłı̨cho̱ researchers found harvesters would prefer to discuss their activities – both observations (monitoring) and harvesting – in either a home or office setting, but at their own convenience. Finally, they found that harvesters thought if Tłı̨cho̱ were doing the documenting and report writing they could then be assured: i) individual harvest numbers would remain confidential; ii) their information would be documented realistically; and iii) their observations would remain in the context within which their observations were made.

Following the household visits, the next step was to hold community meetings, and establish Community Elders' and Harvesters' Committees to assist with the final design of the program and program guidelines.

After the first community meeting in Gamètì, the elders met to select a committee. The Gamètì Committee met four times with the TK staff, Rita Wetrade, and Allice Legat to discuss what had been heard at the household level and to hear more specific views. During the fourth meeting, the Committee recommended a Regional TK Elders/Harvesters Working Group (TK Regional Working Group) be established to complete the work. Gamètì Committee members thought that it would be better if Tłı̨chǫ from all four communities worked together from the start so they could address all issues together. Six (6) members on the TK Regional Working Group had been active on the TK Regional Elders Committee from 1996-2002 while the remaining ten (10) harvesters and elders were named by the Tłı̨chǫ WRRB members. The Working Group meetings were held between January and March 31, 2010: three in Gamètì,[2] one in Wek'weetì, and one in Behchokö.

[2] Under the direction of John B. Zoe, TEO, a TK Office has been established in Gametì. However office furniture and computers have yet to be purchased and staff has yet to be hired.

The following is a summary of how discussions at the household level and at community and TK Regional Working Group meetings have informed key components of the program design.

Species Important to Local Harvesters

Caribou and fish are always cited as the most important. Nevertheless, all Tłı̨chǫ̨ elders and harvesters explain – as is consistent with members of hunting and gathering societies – that all species are important, including human. They also explained that if one is to understand trends and impacts within Wek'èezhìi, human behaviour should be monitored noting what is being harvested by both male and female harvesters and whether or not all is used or if resources are wasted. [3]

Everyone agreed that all harvested animals should be documented as it would demonstrate a more realistic flow of events and levels during the annual cycle, and a more accurate account of their observations and land use.

Tłı̨chǫ Citizens to be Interviewed

During conversations at the household level, it became apparent that many younger people felt they did not know enough about the environment to speak with the researchers, but did think that they could report what they had harvested and observed as long as older, more experienced elders and harvesters were present to help them to understand their observations. Specifically younger people thought that if elders and harvesters were present they would gain a better understanding of how their observations were similar or different than the past and how their own knowledge and behaviour impacts on their observations.

During past discussions – prior to this project - elders thought that all individuals should be encouraged to report their observations and harvest – even if observations are made while 'picnicking' or traveling with family members and harvesting is not the main goal.

Most of the elders and harvesters participating in the TK Regional Working Group thought leaders should tell harvesters to report their observations and harvest.

During discussions after the meetings, the Project Team thought that once the Community Elders' Committees are established the elders – specifically the *k'aawo* on those committees - would encourage individuals to visit the Tłı̨chǫ̨ Knowledge Research and Monitoring office and report their observations and harvest.

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[3] Although not discussed during the household visits or during the meetings, most elders and active harvesters suggest that human activities associated with industrial development and exploration should be monitored by stewards of the land.

Researchers documenting the information would be trained to note whether the individual is an experienced or inexperienced harvester, and whether or not they are a full-time or part-time harvester; and whether or not their main activity at the time of sighting resources was harvesting.

Sharing Information

Throughout all discussions it became clear that community members would be more open about sharing their harvesting information as well as their observations if they understood that their oral narratives and their observations - 'raw data' - would remain with and be safeguarded by the Tłı̨chǫ Government, and kept in the Tłı̨chǫ communities.

Several individuals expressed that they feel they are being "checked-up on" when non-Tłı̨chǫ ask questions and are worried that it can be used against them.

Schedule of Discussions with Households

Based on the manner in which Dene pass information, it was made abundantly clear during household visits and during the TK Regional Working Group meetings, that oral narratives are the process for sharing detailed information. (see also Basso, Cruikshank, Goulet, and Sharp on the importance of oral narratives among all Dene). For this reason the researchers/interviewers will be trained to use an 'gathering oral narratives guide' while documenting information shared by harvesters.

The TK Regional Working Group thought the office should be open at least five days a week so harvesters could report when convenient and on an ongoing basis so numbers and observations are recorded quickly.

Expectations of Harvesters and Elders

All Tłı̨chǫ citizens with whom the researchers spoke liked the idea that monitoring skills and harvesting information would be given back to the community every few months – by the Tłı̨chǫ researchers. They thought the communities could benefit from hearing this information and verifying the researchers' interpretations so misunderstandings could be clarified.

The TK Regional Working Group thinks that reporting back to the community at public meetings is extremely important. If the researchers share a summary of what they have heard with the community, then harvesters will be more likely to provide their observations and harvest numbers. They reasoned that the harvesters would know they were being heard and that their knowledge and information was being documented accurately. For example,

1. Their observations of the environment about health of animals and state of habitat, etc - are being heard;
2. Harvesters will feel secure that harvesting data is correct and their elders and leaders can use the information for management decisions.

Compensation for Harvesters

This has not been discussed with harvesters during the household visits or at the elders and harvesters meetings. During past discussions with elders, it was thought that harvesters should report on a volunteer basis, but should be compensated when attending the verification and sharing meetings when more information on their observations can be noted. Only those harvesters who participated on a volunteer basis would be compensated at the verification and working group meetings.

It is proposed that this is a decision for the Tłı̨chǫ leadership after being discussed at a Tłı̨chǫ Assembly, recognizing that availability of resources may be a constraint.

Reporting

Since using Tłı̨chǫ knowledge in environmental management is important to Tłı̨chǫ, it is recommended that after the verification meetings with elders and harvesters, report/s – annual or bi-annual - should be written for the Chief Executive Council that would then be released to the public – Boards, agencies, Industry, Federal and Territorial governments.

Duration of Harvest Study within Monitoring Program

During the household visits, the community meeting and the TK Regional Working Group meetings, the vast majority (young people did not speak to this topic) of Tłı̨chǫ citizens thought the harvest study within the monitoring program should be on-going.

Program Structure

The Tłı̨chǫ Knowledge Research and Monitoring Program is designed to capture knowledge in a manner that is compatible with the Tłı̨chǫ cultural perspective. It is also designed to acknowledge the continued importance of oral narratives as the medium with which to share information and the importance of Tłı̨chǫ̨ land-based activities in learning and being able to apply and promote Tłı̨chǫ knowledge.

Program Goals

A Tłı̨chǫ Knowledge Research and Monitoring Program will support goals that assist the Tłı̨chǫ̨ Government, and the boards and agencies under the Tłı̨chǫ Agreement, to fulfill their mandate within the co-management regimes. It will also provide direction to industry and non- Tłı̨chǫ researchers on expectations and costs. This program will support the following program outcomes:

1. Tłı̨chǫ knowledge and perspectives are utilized in management and decision-making.
2. The Tłı̨chǫ Government and its boards and agencies have the information they need to play a strong role in co-managing the environment, and to support programs such as education.
3. The Tłı̨chǫ Government has the information it needs to play a strong role in managing caribou and other wildlife, plants and forests; and has its own information and reports to support bargaining and negotiations.
4. Harvesting maintains its role as a respected and important economic and social endeavour.
5. Tłı̨chǫ knowledge, perspective and language are strengthened through oral narratives and land-based activities.
6. Integrated knowledge transfer is occurring across generations.
7. Tłı̨chǫ place names are documented accurately to express bio-geographical information, and to support the process of acquiring official place name status.

Social Impacts

If the program successfully achieving the above goals, it will help to support broader social impacts such as the following:

- Tłı̨chǫ citizens will fulfil their traditional stewardship responsibilities to care for the land.
- TK is transmitted in a manner that is compatible with Tłı̨chǫ culture and social structure.

- Tłı̨chǫ language is strong and used in daily conversations.
- Tłı̨chǫ citizens are emotionally and spiritually healthy.
- There is a structured process for Tłı̨chǫ youth to learn land-based skills and knowledge.
- Tłı̨chǫ place names become official.

Program Design and Implementation

The establishment of a fully developed, effective Tłı̨chǫ Knowledge Research and Monitoring Program is a necessary but ambitious undertaking. It will require substantial resources and careful planning. It will also require investment in training and in information technology. The program will take approximately two years to implement, and five years to become fully operational. It will take at least two years to develop TK policies, guidelines and directives that are consistent with the Tłı̨chǫ perspective and the Tłı̨chǫ Agreement, and provide direction and clarity for boards, agencies and TG departments that is both practical and respectful of Tłı̨chǫ knowledge. Guidelines and directives developed for boards, agencies and TG departments will reflect Tłı̨chǫ Government policy on access and use of Tłı̨chǫ knowledge.

There are several activities that need immediate attention if the program is going to provide information for caribou management, for the Environmental Assessment of the proposed highway route within Wek'èezhìi, and for Fortune Mineral's mining venture, with respect to impacts on land, wildlife and water.

To ensure harvesters' and elders' observations, knowledge and harvest are documented and used, the following activities will be undertaken within the next two years when initiated in November 2010:

1. Establish a comprehensive database to support the organization and storage of Tłı̨chǫ monitoring and harvest data in a manner that is consistent with oral narrative and protocol;
2. Digitize and enter existing information into the database;
3. Establish operating procedures for the program, including human resource policies and procedures, compensation policies, and development of research methods;
4. Establish training programs for researchers and data entry clerks;
5. Hire and train staff;
6. Undertake promotion and outreach to ensure that communities understand and support the program, and that harvesters participate;
7. Establish community Elders' Committees;

8. Develop a Tłı̨chǫ Knowledge Policy[4] for approval by the Tłı̨chǫ Government.

Appendix I contains a more detailed outline of the proposed structure of the program, including a comprehensive list of proposed activities required to implement the program and a comprehensive list of program activities over the longer term, together with anticipated outputs from those activities.

Appendix II contains a draft evaluation framework for implementation evaluations in Year 2, and a more fulsome outcome evaluation in Year 5. These evaluations will help to measure whether the program is on track to achieve the goals/outcomes outlined above.

The Tłı̨chǫ are faced with two urgent issues that require immediate attention: **i)** the need for caribou monitoring in the face of current concerns about the integrity and health of the Bathhurst caribou herd and harvest numbers; and ii) the Fortune Minerals and all-weather road proposal**s**. It is proposed that program implementation be fast-tracked with specific regard to these two issues. More detail on the activities required for the Special Project: Caribou Monitoring and Harvest Study can be found in Appendix III. Special Project Design for Environmental Assessments TK baseline research associated with Fortune Minerals and the proposed road will be completed in the near future.

In addition, the Tłı̨chǫ Government requires knowledge of several areas that are being proposed as protected areas.

[4] See Draft policy in Appendix IV.

Tłı̨chǫ Knowledge Research and Monitoring Program
Summary Table of Proposed Structure

SOCIAL IMPACTS

- Tłı̨chǫ citizens will fulfil their traditional stewardship responsibilities to care for the land.
- Tłı̨chǫ knowledge is transmitted in a manner that is compatible with Tłı̨chǫ culture and social structure.
- Tłı̨chǫ language is strong and used in daily conversations.
- Tłı̨chǫ citizens are emotionally and spiritually healthy.
- There is a structured process for Tłı̨chǫ to youth learn land-based skills and knowledge.
- Tłı̨chǫ place names become official

GOALS

- Tåîchô knowledge and perspectives -are utilized in management and decision-making.
- The Tåîchô Government and its boards and agencies have the information they need to play a strong role in co-managing the environment, and to support programs such as education.
- The Tåîchô Government has the information it needs to play a strong role in managing caribou and other wildlife, plants and forests; and has its own information and reports to support bargaining and negotiations.
- Harvesting maintains its role as a respected and important economic and social endeavour.
- Tåîchô knowledge, perspective and language are strengthened through oral narratives and land-based activities.
- Integrated knowledge transfer is occurring across generations.
- Tåîchô place names are documented accurately to express bio-geographical information, and to support the process of acquiring official place name status.

ACTIVITIES

- Establish a comprehensive database to support the organization and storage of Tłı̨chǫ monitoring and harvest data in a manner that is consistent with oral narrative and protocol.
- Digitize and enter existing information into the database.
- Establish operating procedures for the program, including human resource policies and procedures, compensation policies, and development of research methods.
- Hire and train staff – research, data entry, etc.
- Undertake promotion and outreach to ensure that communities understand and support the program, and that harvesters participate.
- Establish an Elders' Committees to guide the programme.
- Develop a Tłı̨chǫ Knowledge Policy[1] for approval by the Tłı̨chǫ Government.
- Evaluate the program to make sure it is achieving the goals.
- Implement culturally appropriate research and monitoring activities.

Appendix I
Program Design and Implementation

By Allice Legat
Gagos Social Analysts, Inc

Program Design and Implementation
Tłı̨chǫ Knowledge Research and Monitoring Program

Program Structure: Implementation Phase

	ACTIVITIES *(What needs to be done)*	*OUTPUTS* *(What we hope to achieve)*
Data Base	Design and develop database to compile and retain Tłı̨chǫ knowledge and to follow oral narrative protocol Copy tapes and photos in digital format. Enter photo information into photo data base	• Comprehensive and functioning database completed and operational • Tapes and photos can be used via computer and internet
Tłı̨chǫ Knowledge Policy	Comprehensive TK policy approved by TG	• WLWB and WRRB policies can complement TG • Industry knows TG's expectations • TK staff understand role of TK for future
Training	Identify staff training requirements and design training plans	• Staff will have the skills required to make the program a success • Training programs are designed for all aspects of program operations

	ACTIVITIES *(What needs to be done)*	*OUTPUTS* *(What we hope to achieve)*
TK Elders' Committee/s	Elders Committee are established and functioning as per the Terms of Reference	• Terms of reference are established and approved by TG • Elders Committee is operational • Elders are guiding the design and implementation of the program • Elders are working with community residents to know their traditional roles and responsibilities
Promotion and Outreach	Promote and explain the program to Tłı̨chǫ citizens	• Community residents are aware of the TKRM program • Tłı̨chǫ citizens support the program
	Describe steps taken to develop program in academic setting	• Tłı̨chǫ knowledge program gains credibility with a broader audience • Success in external fund-raising
Program Administration	Develop operating procedures for the program Develop comprehensive guidelines for program including issues such as harvester compensation, participation criteria Develop activity outline for pilot projects: Main office established Budget finalized Funding is secured for program start-up and fund-raising plans are developed	• Job descriptions are written and staff are hired • Required policies and procedures are in place • Compensation policy for participating harvesters is implemented • Concept of "harvester" is defined for the purposes of the program • Protocol for community meetings is established • Protocol for producing and distributing reports is established • caribou monitoring and harvest study • Baseline for Fortune minerals and proposed road • Office space secured • Archival section established • Core funding requirements for six years determined • Final budget approved by TG • Effective fund-raising approach results in external funding support (industry, GNWT, DFO, WLWB, WRRB)

	ACTIVITIES *(What needs to be done)*	*OUTPUTS* *(What we hope to achieve)*
Research and Monitoring Methodology	Implement culturally appropriate process for harvesters to share observations and harvest Describe program development process in academic paper and present at conference	• Harvesters are comfortable with the process • Tłı̨chǫ knowledge is transmitted in a culturally appropriate manner • Papers written • Conference attended

Program Design and Implementation
Tłı̨chǫ Knowledge Research and Monitoring Program

Program Structure: Ongoing

	ACTIVITIES *(What needs to be done)*	*OUTPUTS* *(What we hope to achieve)*
Data Base	Maintain and update database regularly after each information exchange wıth harvesters and elders. Produce reports regularly and review at community meetings and with Elders' Committee Produce reports in response to requests	• Database is up to date and capable of creating reports upon demand • Baseline information is available for environmental assessments, and environmental management • The store of Tłı̨chǫ knowledge is expanded as new information is entered into the database
Tłı̨chǫ Knowledge Policy	The policy and associated directives provide appropriate guidance for TG elected representatives and staff, and external agencies	• The role of Tłı̨chǫ knowledge is understood • Industry is clear about TG expectations • Boards are clear about TG expectations • Federal and Territorial Governments are Clear on TG expectations
Collaborate with TG Departments	Sharing of information and expertise established through inter-department guidelines	• Process for intra-TG access to data base. • Information on TCSA tapes entered in data base. • Information on TK tapes storied in Land Department entered in data base. • Tłı̨chǫ language training schedule. • Land Department uses TK information and reports for management of land, wildlife and associated habitat.

	ACTIVITIES *(What needs to be done)*	*OUTPUTS* *(What we hope to achieve)*

Training	On-going training for program staff to ensure they are effective cultural interpreters	• Process for on-going training established.
		• Process for inter-department training to access and use data base to complete land, wildlife and other applications and permits.
		• Trained TK community researchers are available to work with harvester and elders.
		• Database administrator is trained to maintain the database.
		• Staff have the skill to:
		  ○ Efficiently document interviews.
		  ○ Use interview guidelines.
		  ○ Maintain archives and produce reports.
		  ○ 'Go after' concepts of Tłı̨chǫ and English terms.
		  ○ Write Tłı̨chǫ.
		  ○ Identify similarities and differences between Tłı̨chǫ and western management ideals.

TK Elders' Committee/s	Tłı̨chǫ elders provide on-going guidance to the program	• Elders' Committee is functioning effectively • Elders play a meaningful role in all phases of program • Elders work with Tłı̨chǫ citizens to know their traditional roles and responsibilities
Promotion and Outreach	Elders and leaders promote and explain the program to Tłı̨chǫ citizens Community meetings are held to promote program and review information. Establish network with WRRB and WLWB to ensure they have information needed for environmental management decision. Describe program in academic papers and settings.	• Community residents are aware of the program and its importance for Tłı̨chǫ knowledge • Tłı̨chǫ citizens support the program • A majority of harvesters participate in the program by providing information • Biannual reports are released publicly • Tłı̨chǫ knowledge program gains credibility with a broader audience • Success in external fund-raising

	ACTIVITIES *(What needs to be done)*	*OUTPUTS* *(What we hope to achieve)*
Culturally appropriate research, monitoring and harvest study	Implement culturally appropriate process for researchers to interview and receive information from elders and harvesters Establish protocols for providing monitoring and harvesting reports to appropriate agencies Conduct field camps with elders and Tłı̨chǫ researchers (including those in Land Department) to review data, expand database and build skills of researchers Collaborate with TCSA to link youth to the program	• Harvesters and elders are comfortable with the interview process • Tłı̨chǫ knowledge is transmitted in a culturally appropriate manner • Tłı̨chǫ place names are effectively documented • Three field camps are held annually, with 50 participants including youth • Field camps include participation across four generations • Information compiled by researchers is verified and expanded upon • Harvesters are fairly and appropriately compensated for their contribution. • Trends are made available to agencies on a timely basis
Research and Monitoring Methodology	Program operates efficiently and effectively Participatory Action Research method utilized • Interview guidelines utilized • Information organized • Team members understand final goals • On-going training accomplished Program is successful in achieving goals	• Useful information being collected and analyzed • Working within budget • Evaluation frameworks are established • Evaluation reports are completed • Program changes are made as required based on evaluation

Appendix II
Evaluation Frameworks

By

Allıce Legat
Gagos Social Analysts, Inc.

Evaluation Frameworks
Tłı̨chǫ Knowledge Research and Monitoring Program

Evaluation Framework: Five-Year Outcome Evaluation

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Goal #1: Tłı̨chǫ knowledge and perspectives are used in environmental management and decision-making	Is Tłı̨chǫ knowledge used by the Tłı̨chǫ Government, Boards, other governments to inform environmental management and decision-making? Is industry aware of Tłı̨chǫ Government expectations regarding use of Tłı̨chǫ knowledge? Is this reflected in development proposals? Are harvester observations being used to flag emerging trends and issues for regulatory agencies?	# of reports requested by all government agencies and Boards # of regulatory decisions that incorporate Tłı̨chǫ knowledge in written decisions # of times Tłı̨chǫ knowledge is reflected in government plans and policies # of reports requested by industry # of emerging issues flagged through harvester observations	Program files – TKRMP, TG, WRRB, WLWB Information requests will be entered into the database on an on-going basis Information from external agencies, e.g. federal and territorial departments, MVEIRB, MVLWB Database reports	Program management in consultation with other agencies Contractor or Program Management to conduct interviews with external agencies, file research as required

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Goals #2 and #3: **The Tłı̨chǫ Government and its boards and agencies have the information they need to play a strong role in co-managing the environment and to support programs such as education.** **The Tłı̨chǫ Government has the information it needs to play a strong role in managing caribou and other wildlife, plants and forests; and has its own information and reports to support bargaining and negotiations**.	Is the level of information available sufficient to meet the needs of government agencies for management decisions? Is the program documenting information on all aspects of harvesting, including harvest data, observations about trends, observations from women's as well as men's processing of products? Is the database working as an effective tool to access information? Have Tłı̨chǫ̨ government agencies and boards used the information in reports? Are boards and agencies satisfied with the information that has been provided?	# of information requests received # of requests turned down because information not available # of reports produced in response to requests Compliance with established reporting protocols Reflection of information provided in regulatory and environmental decision-making Level of satisfaction with reports provided Incorporation of TKRMP information incorporated into curriculum development	Database Program files Review of regulatory and environmental decisions and reports Consultation with other TG agencies	Archivist and database manager Program management External contractor to conduct file review, consult clients

	Is information being used to inform curriculum development?			
Evaluation Issue	***Evaluation Question***	***How Will we Measure It?***	***What information will be needed and where will we find it?***	***Who will collect this Information for Evaluations and When?***
Goal #4: **Harvesting maintains its role as a respected and important economic and social endeavour**	Is the proportion of Tłı̨chǫ citizens involved in harvesting activities increasing, decreasing or staying stable? What role does harvesting play in providing food to Tłı̨chǫ̨ households? How many Tłı̨chǫ citizens are earning an income from harvesting activities? Are young people requesting time with harvesters so they can learn harvesting skills, including use of resources through production of crafts?	# of residents involved in harvesting and related activities # of harvesters participating in the TKRMP Amount of country food consumed by Tłı̨chǫ̨ citizens Income from trapping Income from production of traditional crafts (including clothing)	Baseline information on participation in harvesting activities Participation and consumption rates from database Income information from census, GNWT	Baseline information - program management to compile as soon as possible Community researchers to enter results of harvester debriefs daily Program management to work with external contractor to compile

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Goal #5: Tłı̨chǫ knowledge, perspective and language are strengthened through oral narratives and land-based activities	Is TKRMP information being shared in a manner that is culturally appropriate? Is the program utilising the expertise of families with knowledge in specific geographical areas? Is the Elders' Committee effective in providing guidance to the program and participating in on-going evaluation? Is the program achieving recognition and credibility outside the Tłı̨chǫ area?	# of citizens participating in TKRMP review meetings, and trends # of participants who are comfortable with the process, and trends # of harvesters visiting the offices or requesting home visits, and participation trends Effectiveness of research methodology in acquiring enhanced Tłı̨chǫ knowledge Role of the Committee in influencing program operations and reports Number of presentations to external agencies or academic conferences External requests for information	Database Program files Interviews with program participants and clients (using appropriate methods) to determine effectiveness Focus groups and file research Elders' Committee evaluation	Community researchers through regular data inputs Program management External contractor

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Goal #6: Integrated knowledge management and transfer is occurring across four generations	Are field camps being held on a regular basis? How effective are the field camps in providing a forum for knowledge and values transfer? Is the knowledge of elders being transmitted successfully to younger generations? Is information from the TKRMP being used to educate youth and inform school curricula?	# and regularity of field camps Field camp participation rates and level of knowledge acquired by participants Satisfaction levels of field camp participants Ability of youth and elders to communicate about Tłı̨chǫ knowledge in the Tłı̨chǫ language Youth awareness of program and understanding of Tłı̨chǫ knowledge Incorporation of TKRMP information and methods into school programs	Program files Field camp pre- and post-tests Field camp evaluation results Explore partnership with TCSA to monitor TCSA program files and staff	Pre- and post-tests to be designed in Year 2 and administered by program staff at all field camps Field camp evaluation format to be designed in Year 1 and administered by program staff at all field camps Program management and external contractor

Goal #7: Information on Tłı̨chǫ place names is documented accurately to express bio-geographical knowledge, and to support the process of official place names	Is place name information being compiled and documented through research process? Are place names translated and spelled correctly to ensure accuracy of meaning? Is information being used to support the process of establishing Tłı̨chǫ names as official place names?	# of place names identified through research methods Review place names for accuracy and satisfaction # of official place names processed based on TKRMP information	Database Researchers and Elders' Committee to conduct regular review. Tłı̨chǫ Government toponymy files?	Community researchers to update database daily Program management to establish process in Year 2 External contractor to compile

Evaluation Frameworks
Tłı̨chǫ Knowledge Research and Monitoring Program

Evaluation Framework: Implementation Evaluation

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Database	Is the database operational and adequate to meet program needs? Have past records been digitized and entered into the database? Have existing photos been digitized and entered into the data base? Are researchers using the database and regularly updating it? Does database follow oral narrative and protocol? Is information accessible on the internet?	# of tapes digitized # of photos digitized # of new entries made per month relative to harvesters' oral narrations and observations Volume of backlogged data entry being accomplished by staff	- Baseline assessment of existing data to be digitized - Data base - Program files - Researchers	Baseline information - program management as soon as possible Program director in consultation with researchers, at end of first and second years

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Tłı̨chǫ Knowledge Policy	Has the comprehensive TK policy approved by CEC? Has the TK policy been forwarded to Boards and Agencies, GNWT and Federal Departments? Have TG departments and agencies developed associated guidelines and protocols? Is industry aware of Tłı̨chǫ Government expectations?	Status of policy and guidelines Is policy publicly available on TG web page # of Boards, agencies, Government and business receiving policy TG and agency communications with industry	- TG, WLWB and WRRB records - Web page - TG and agency program files - Discussions with TG and agency program staff	Program management at end of first and second years

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Training	Have training plans been developed? Has schedule for training workshops been set? Have training programs been developed for : - Literacy in two languages - TK concepts and perspectives - Interview techniques - Report writing - Archival skills Is further training required?	# of training workshops designed and delivered # of staff who successfully complete training Degree of staff turnover(link to reason) #of staff with literacy in English and Tłı̨chǫ Staff use of interview techniques (guidelines) when listening to harvesters and elders #of documented material with correct numbering Staff acquisition of the necessary skills	- Training evaluation sheets - Personnel files - Program files - Program management observations	Training providers to ensure evaluations are completed of training sessions Program management, in consultation with trainers, harvesters and Elders' Committee; at end of first and second years

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Operation of Elders' Committee	Is the Committee operating as it was intended? Has the Elders Committee replaced the Working Group? Did Regional working Group develop Terms of Reference for elders' committee? Are the elders satisfied with the research results and interactions of program staff with the community?	Status of Terms of Reference Extent to which committee operations are consistent with TOR # of community meetings held Attendance at meetings Satisfaction of Committee members with process and support	- Program files (attendance and committee minutes) - Survey of Committee members	Program management, at end of first and second years

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Promotion and Outreach	Are elders and leaders encouraging participation?	# of community residents who are aware of program	Comparative information with household visits 2008-2010	Baseline information - program management as soon as possible
	Are harvesters aware of the program?	# of introductory meetings held	Program files and data base	Community researchers to enter results of harvester debriefs daily
	Are harvesters fairly and adequately compensated for their participation?	# of home visits Degree of expressed support for the program		Program management to compile annually
		Degree of participation by harvesters		
		Degree of satisfaction with compensation		
	Are program goals and achievements being shared with a broader audience?	Number of presentations to external agencies or academic conferences	Program files	Program management to compile annually
		External requests for information		

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
Research and Monitoring Methodology	Are harvesters comfortable with the process? Is Tłı̨chǫ knowledge transmitted in a culturally appropriate way? Has a methodology been established to ensure an effective role for elders in program evaluation?	# of harvesters sharing observations and harvest information through the program Harvester participation rates by category (i.e. women, youth, children) degree of harvester comfort with research methodology rate of participation in community meetings success of discussions at community meetings	- Data base - List of harvesters - Comments to researchers - Elders Committee evaluation	Community researchers to enter results of harvester debriefs daily Elders' Committee to provide input Program management, at end of first and second years

Evaluation Issue	*Evaluation Question*	*How Will we Measure It?*	*What information will be needed and where will we find it?*	*Who will collect this Information for Evaluations and When?*
<u>Program administration</u>	Do all staff have job descriptions? Are required policies and procedures in place? Has a space been secured for TK office? Are training and procedure manuals available for staff? Funding: Has core funding been established Has a funding raising plan been developed Does program have adequate funding	% of job descriptions completed % of policies, procedures, manuals and guidelines completed status of compensation guidelines and number of issues raised by harvesters or program administrators Funding: Status of budget development Availability of funding Success of external fund-raising efforts	Program files TG, WRRB and WLWB program files	Program management, at end of first and second years

Appendix III

Tłı̨chǫ Research and Monitoring Program

Using Tłı̨chǫ Knowledge to Monitor Barren-ground Caribou

Consultation, Verification and Program Design
Allice Legat
Camilla Nitsiza
Madeline Chocolate-Pasquayak

August 30, 2010

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Tłı̨chǫ Philosophy

Grand Chief Jimmy Bruneau directed the Tłı̨chǫ people to know both Western and Tłı̨chǫ knowledge so each Tłı̨chǫ citizen would be strong like two people. Bruneau's philosophy and direction was not new to the Tłı̨chǫ people, who have always been interested in the ways and knowledge of others. This philosophy has been noted in both their oral narratives and the journals of the trading post factors. Each tells of Tłı̨chǫ leaders learning the knowledge and negotiating techniques of trading post factors to ensure the best return for their people's furs. This philosophy is also evident - in oral narratives telling of activities leading up to discussions with the Federal Commissioner in 1921 when Möwhì signed Treaty 11. The stories explain that Tłı̨chǫ were aware of the European perspective based on information they acquired from the Slavey and Chipewyan further south. Upon learning from the experience of their southern neighbours they were better prepared to deal with the Treaty Party.

Tłı̨chǫ oral narratives stress the importance of understanding a problem, finding a solution and taking action. This approach to learning, knowing and taking action is evident in most Tłı̨chǫ oral narratives, as well as the manner in which past research projects were approached. The Tłı̨chǫ have rarely allowed others to do research to address a problem they wish to know about themselves. They insist that they take an active part in research and monitoring. Specifically the Tłı̨chǫ:

- Explained to the managers of Rayrock Mine (1950s) that their observations were indicators of serious problems in the environment. They identified problems that they observed with plants and wildlife –such as beaver, marten and fish. These problems were particularly evident to those Tłı̨chǫ who either used the area frequently or worked at the mine.
- Insist research focus on their needs and priorities – take for example the priorities set by the Dogrib Renewable Resources Committee during the early 1990s: where caribou, habitat, water and heritage were of greatest concern.
- Insist on adequate funding to ensure Tłı̨chǫ researchers were employed as permanent, full time employees for the life of research projects – take for example the Traditional Justice and Traditional Medicine project in Whatì (1987-92); the Traditional Governance project in Gametì (1993-1996); and the caribou and place names projects in all the Tłı̨chǫ communities (1996-2001).
- Use the participatory action research (PAR) method that includes researcher training; an elders – both male and female elders – committees; rigorous research methods carried out by Tłı̨chǫ researchers and overseen by the elders' committee; and verification of shared information. The PAR process ensures accurate understanding of the traditional knowledge that is documented and ensures it leads to positive actions based on the recommendations.

Today, it is vital that the Tłı̨chǫ lead by undertaking their own harvesting and monitoring studies as the impacts of development on Tłı̨chǫ lands and the environment are becoming ever more evident. The Tłı̨chǫ Government and co-management boards have been given the authority to

manage the land in the Tłı̨chǫ Agreement, but to do this effectively requires a system of Tłı̨chǫ knowledge (TK) research and monitoring that will feed into management decisions.

The *Special Project: Using Tłı̨chǫ Knowledge to Monitor Barren Ground Caribou* described below is based on Tłı̨chǫ philosophy and is part of the Tłı̨chǫ Knowledge Research and Monitoring Program. The description of this project follows the following format: first, the current issues, for which the TK program was designed to solve, are discussed. Second, the program structure, on which the caribou monitoring and collection of harvest information is a part, is described.

It should be noted that evaluation is done to ensure the best possible TK is being documented for future monitoring, education and understanding of the Tłı̨chǫ perspective. The purpose is not to pass judgment but to provide tools to fine tune the program to ensure TK is documented and used.

Current Issue

The Tłı̨chǫ Agreement directs co-management boards, government agencies and the Tłı̨chǫ Government to i) use traditional knowledge, ii) promote cultural perspectives, and iii) select Board members that have knowledge of Tłı̨chǫ way of life. Yet the current systems – most of which are based on Western perspectives and the British legal system – make it difficult for Tłı̨chǫ knowledge (TK) to be used in a manner that is consistent within the Tłı̨chǫ cultural perspective and way of life.

The Wek'èezhìi Renewable Resources Board in collaboration with the Tłı̨chǫ Government decided to develop and implement a program that would be a positive step towards using Tłı̨chǫ knowledge in manner that considers Tłı̨chǫ perspectives.

The Agreement states that:

Section 12.1.6

> *In exercising their powers under this chapter, the Parties and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.*

Section 13.1.5

> *In exercising their powers in relation to forest management, the Government of the Northwest Territories, the Tłı̨chǫ Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.*

Section 14.1.4

> *In exercising their powers in relation to the management of plants, the Government of the Northwest Territories, the Tłı̨chǫ Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.*

Section 22.1.7

> *In exercising their powers, the Mackenzie Valley Environmental Impact Review Board and the Wek'èezhìi Land and Water Board shall consider traditional knowledge as well as other scientific information where such knowledge or information is made available to the Boards.*

Furthermore, Section 12.5.5 of the Tłı̨chǫ Land Claim and Self-government Agreement (the Agreement) states that the Wek'èezhìi Renewable Resources Board (WRRB) shall:

> *(a) Make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal*
>
> *i. Regarding a total allowable harvest level for Wek'èezhìi, except for fish,*

ii. Regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìi to groups of persons or for specified purposes, or

iii. Submitted under 12.11.1 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìi;

The Tłı̨chǫ Agreement authorizes the WRRB the responsibility for total allowable harvest (TAH) for wildlife, forests and plants and authorizes the Minister of Fisheries and Oceans (DFO) responsibility for fish conservation and the establishment of TAH for fish stocks. Both WRRB and DFO have an obligation under terms of the Agreement to determine TAH through assessment studies and other research.

For WRRB and DFO to have information necessary for sustainable management it is imperative that the Tłı̨chǫ undertaken their own monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If allocations are to be made among users of the resource it will be necessary to determine basic needs levels of the beneficiaries of the claim. Allocations of fisheries and wildlife resources will be difficult without this basic harvest information from the harvesters themselves.

For the Agreement to be honoured three activities need to occur:

1. Baseline information must be gathered from elders on known trends as harvest, wildlife and vegetation distribution.

2. Information gathered through Tłı̨chǫ traditional methods of monitoring needs to be documented on an on-going basis.

3. Realistic harvest studies need to be ongoing.

4. All collected information must be stored in such a way as to respect the provider of the knowledge.

5. Reports to co-management boards will be sent several times per year to insure it will inform their management decisions.

Although scientific information is readily available, most TK is in the minds of the elders and harvesters. For this reason, a program is needed so Tłı̨chǫ researchers can work with elders and harvesters to document their knowledge in a manner that does not lose the Tłı̨chǫ perspective. This is usually detailed knowledge of past conditions that they share with their descendants while sharing their current observations of wildlife and wildlife habitat. And, as is the traditional mode of sharing, numbers of species observed and harvested, are shared with others in the community along with other information such as behaviour of wildlife and the people harvesting. All information available is used to make management decisions.

One of the important features of Tłı̨chǫ knowledge is that it is acquired, enhanced and communicated on the land while people are engaged in land-based activities. It is also communicated after harvesters return to the community through oral narratives.

Modern harvest studies often ask harvesters to fill out survey forms in English, or to provide limited information that can be taken out of context. These studies may fail because they are not compatible with how Tłı̨chǫ knowledge, including information about harvest, is transmitted through oral narratives.

This project was designed to ensure that both monitoring and realistic harvesting numbers can be recorded in a culturally appropriate manner. This will help alleviate the problem that many respondents choose not to answer correctly the harvest study questions posed by non-community members.

Program Structure

The Tłı̨chǫ Knowledge Research and Monitoring Program is designed to capture knowledge in a manner that is compatible with the Tłı̨chǫ cultural perspective. It is also designed to acknowledge the continued importance of oral narratives as the medium with which to share information and the importance of Tłı̨chǫ land based activities in learning and being able to apply and promote Tłı̨chǫ knowledge.

Program Goals

A Tłı̨chǫ Knowledge Research and Monitoring Program will support goals that assist the Tłı̨chǫ Government, and the boards and agencies under the Tłı̨chǫ Agreement, to fulfill their mandate within the co-management regimes. It will also provide direction to industry and non- Tłı̨chǫ researchers on expectations and costs. The caribou monitoring and harvest study portion of this program will support the following program outcomes:

1. Tłı̨chǫ knowledge and perspectives are utilized in management and decision-making.
2. The Tłı̨chǫ Government and co-management boards have the information they need to play a strong role in co-managing the environment, and to support programs such as education.
3. The Tłı̨chǫ Government has its own information and reports to provide boards and government and information it needs to play a strong role in managing caribou and other wildlife, plants and forests.
4. Harvesting maintains its role as a respected and important economic and social endeavour.
5. Tłı̨chǫ knowledge, perspective and language are strengthened through oral narratives and land-based activities.
6. Integrated knowledge transfer is occurring across generations.
7. Tłı̨chǫ place names are documented accurately to express bio-geographical information, some of which are associated with caribou harvesting.

Social Impacts

If the program successfully achieving the above goals, it will help to support broader social impacts such as the following:

- Tłı̨chǫ citizens will fulfil their traditional responsibilities to care for the land.
- TK is transmitted in a manner that is compatible with Tłı̨chǫ culture and social structure.
- Tłı̨chǫ language is strong and used in daily conversations.
- Tłı̨chǫ citizens are emotionally and spiritually healthy.
- There is a structured process for Tłı̨chǫ youth to learn land-based skills and knowledge.
- Tłı̨chǫ place names become official.

Program Design and Implementation

The establishment of a fully developed, effective Tłı̨chǫ Knowledge Research and Monitoring Program is a necessary but ambitious undertaking. It will require substantial resources, careful planning and a long term commitment to allow it to be successful. It will also require investment in training and in information technology.

Using Tłı̨chǫ Knowledge to Monitor Barren Ground Caribou and document caribou harvest is a constructive first step towards the development of the program.

There are several activities that need immediate attention if the program is going to provide on-going information for caribou monitoring and management.

To ensure harvesters' and elders' observations, knowledge and harvest are documented and used, the following activities will be undertaken immediately when initiated in November 2010:

1. Establish a comprehensive database to support the organization and storage of Tłı̨chǫ monitoring and harvest data in a manner that is consistent with oral narrative and protocol;
2. Digitize and enter existing information into the database;
3. Establish operating procedures for the program, including human resource policies and procedures, compensation policies, and development of research methods;
4. Establish training programs for researchers and data entry clerks;
5. Hire and train staff;
6. Undertake promotion and outreach to ensure that communities understand and support the program, and that harvesters participate;
7. Establish community TK Elders' Committees;
8. Finalize the Tłı̨chǫ Knowledge Policy initiated through the Wek'eezhii forum for approval by the Tłı̨chǫ Government.

Tłı̨chǫ Knowledge Research and Monitoring Program
Summary Table of Proposed Structure

SOCIAL IMPACTS

- Tłı̨chǫ citizens will fulfil their traditional stewardship responsibilities to care for the land.
- Tłı̨chǫ knowledge is transmitted in a manner that is compatible with Tłı̨chǫ culture and social structure.
- Tłı̨chǫ language is strong and used in daily conversations.
- Tłı̨chǫ citizens are emotionally and spiritually healthy.
- There is a structured process for Tłı̨chǫ to youth learn land-based skills and knowledge.
- Tłı̨chǫ place names become official

GOALS

- Tłı̨chǫ knowledge and perspectives are utilized in management and decision-making.
- The boards and agencies mandated under the Tłı̨chǫ Agreement have the information they need to play a strong role in co-managing the environment and to support programs such as education.
- The Tłı̨chǫ Government has the information it needs to play a strong role in managing caribou and other wildlife, plants, forests and protected areas; and has its own information and reports to support bargaining and negotiations.
- Harvesting maintains its role as a respected and important economic and social endeavour.
- Tåîchô knowledge, perspective and language are strengthened through oral narratives and land-based activities.
- Integrated knowledge transfer is occurring across generations.
- Tåîchô place names are documented accurately to express bio-geographical information, and to support the process of acquiring official place name status.

ACTIVITIES

- Establish a comprehensive database to support the organization and storage of Tłı̨chǫ monitoring and harvest data in a manner that is consistent with oral narrative and protocol.
- Digitize and enter existing information into the database.
- Establish operating procedures for the program, including human resource policies and procedures, compensation policies, and development of research methods.
- Hire and train staff – research, data entry, etc.
- Undertake promotion and outreach to ensure that communities understand and support the program, and that harvesters participate.
- Establish an Elders' Committees to guide the programme.
- Develop a Tłı̨chǫ Knowledge Policy for approval by the Tłı̨chǫ Government.
- Evaluate the program to make sure it is achieving the goals.
- Implement culturally appropriate research and monitoring activities.

Caribou Monitoring and Harvest Study[1]

Section 12.5.5 of the Tłı̨chǫ Land Claim and Self-government Agreement (the Agreement) states that the Wek'èezhìi Renewable Resources Board (WRRB) shall:

(a) Make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal

i. Regarding a total allowable harvest level for Wek'èezhìi, except for fish,

ii. Regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìi to groups of persons or for specified purposes, or

iii. Submitted under 12.11.1 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìi;

Tłı̨chǫ oral narratives tell of the annual cycles in which caribou and fish are key resources. For example, spring camp sites were and continue to be located along known caribou migration routes, good fishing locations and places known to have birch trees. Tłı̨chǫ waited for the caribou during spring migration back to the barrens but if caribou choose a different route, the people had fish while building canoes that were used to travel trails that led to the barrens making them ready to harvest caribou when they once again crossed paths. Even on the barren grounds Tłı̨chǫ camps continue to be located near good fishing locations that are known to be on caribou migration paths. Like traditional harvesting camps, current communities are located on or near fisheries and areas caribou are known to travel <u>if</u> they are in the area. Both resources continue to be important to the well-being of Tłı̨chǫ – psychologically as well as physically.

Tłı̨chǫ elders and harvesters who participated in the West Kitikmeot Slave Study (WKSS) research entitled, '*Caribou Migration and the State of their Habitat'*, (2001) and who originally participated in the design of the TK Monitoring Program in 1999-2000, think it is long past time to monitor barren ground caribou. The oldest Tłı̨chǫ elders know the WKSS researchers – Georgina Chocolate and Bobby Gon - focused on oral narratives from the past that provided baseline information.

They emphasize the importance of continuing to collect the most senior elders' knowledge (baseline) given the hiatus of 10 years (2001-2010). In addition they want the caribou monitoring program to:

1. Document current observations of the harvesters.
2. Research and data input and report writing to be done by adults that use both Tłı̨chǫ and English, and
3. Participation of young people through their school, during the summer and during other school or university breaks.

Elders, harvesters and other members of households – whether young or old – continue to want the Tłı̨chǫ people and their government to maintain their responsibility to watch and care for (monitor and manage) the land, water and resources they use, observe and enjoy. They want

[1] The Caribou Monitoring and Harvest Study Project is a special project within the TK Research and Monitoring Program.

Tłı̨chǫ citizens to use traditional values and rule associated with caribou to manage their resources.

The Tłı̨chǫ Agreement authorizes the WRRB's the responsibility for total allowable harvest (TAH) for wildlife, forests and plants. WRRB has an obligation under terms of the Agreement to determine TAH through assessment studies and other research for caribou. WRRB is recommending caribou harvesting targets rather than a TAH. The success of this approach is dependent on having the information necessary for sustainable management. It is, therefore, imperative that the Tłı̨chǫ undertaken their own monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If the Chiefs use the TK Research and Monitoring Program to oversee the documentation of caribou harvesting among their citizens during this time of low caribou populations it will easier for the Land Protection Department, Tłı̨chǫ Government to maintain the target within a reasonable range and to allocate caribou resources to those in need, and for WRRB to receive reliable up to date information and to evaluate the success of the target approach. Furthermore, when caribou population numbers are higher, and allocations of this resource are more widespread, it will be necessary to determine basic needs levels of the beneficiaries of the claim.

For the Agreement to be honoured five activities need to occur:

1. Baseline information must be gathered from elders on known trends as harvest, wildlife and vegetation distribution. This information should be documented so it can be used to determine trends as well as indicators of change.
2. Information gathered through Tłı̨chǫ traditional methods of monitoring needs to be documented on an on-going basis.
3. Realistic harvest studies need to be ongoing.
4. All collected information must be stored in such a way as to respect the provider of the knowledge.
5. Reports must be provided to co-management boards to insure informed decisions can be made.

Most Tłı̨chǫ knowledge is in the minds of the elders and harvesters. For this reason, a program is needed so Tłı̨chǫ researchers can work with elders and harvesters to document their knowledge in a manner that does not lose the Tłı̨chǫ perspective. The process would include a detailed knowledge of past conditions that are compared to current observations of caribou behaviour, fitness and interactions with predators and pests as well as landscape and vegetation use. And, as is the traditional mode of sharing information, numbers of species observed and harvested, are incorporated into oral narratives that are told in the community. All information available is used to make management decisions and determine the number of caribou to be harvested in the near future.

One of the important features of Tłı̨chǫ knowledge is that it is acquired, enhanced and communicated on the land while people are engaged in land-based activities. It is also communicated after harvesters return to the community through oral narratives.

Modern harvest studies often ask harvesters to fill out survey forms in English, or to provide limited information that can be taken out of context. These studies may fail because they are not compatible with how Tłı̨chǫ knowledge, including information about harvest, is transmitted through oral narratives.

This project was designed to ensure that both monitoring and realistic harvesting numbers can be recorded in a culturally appropriate manner. This will help alleviate the problem that many respondents choose not to answer harvest study questions posed by non-community members.

Finding a Solution

In 1999-2000, the Tłı̨chǫ Regional Elders' Committee – under the direction of *K'àowo*[2] Jimmy Martin – requested Dogrib Treaty 11 staff who were working with the elders to bring male and female harvesters from each community to discuss a Tłı̨chǫ monitoring program. Funding for this meeting was secured from Cumulative Impacts and Monitoring Program, Environment Canada. The elders and harvesters directed staff to initiate monitoring around the diamond mines – with research/hunting camps located in strategic locations around the mines that would enable harvesters to observe the behaviour of caribou in relation to the mines. They also suggested a camp be located at Gots'ôkàtì and Deèzhàatì so caribou behaviour could be compared with non-mining areas.

In September 2008, the Wek'èezhìi Renewable Resources Board (WRRB) and the Tłı̨chǫ Government initiated work towards implementing a Tłı̨chǫ knowledge monitoring program that the Land Protection Department of the Tłı̨chǫ Government and co-management boards mandated under the Tłı̨chǫ Agreement could use in their decision making.

The TK program design with associated policy guidelines were developed based on discussions held during the household visits made by the Project Team between April 2009 and December 31, 2009. All households in the three fly-in communities of Gametì, Wekweetì and Whatì were contacted. Behchokö has a significant population therefore only those households with active harvesters and elders were contacted. During these visits Tłı̨chǫ researchers, under the direction of Allice Legat, explained the importance of Tłı̨chǫ knowledge in the Tłı̨chǫ Agreement and the possibility of establishing a monitoring program as originally laid out by the elders and harvesters in 1999. Two Tłı̨chǫ researchers – Camilla Nitsiza and Madelaine Chocolate - did conducted the household visits, although Mary Adele Wetrade did assist Madelaine Chocolate in Gametì. Household visits took longer than anticipated because i) individuals wished to express their views after hearing the role of the WRRB as it is mandated in the Tłı̨chǫ Agreement; and ii) individuals were delighted to expound on the potential for harvesters and elders working together with Tłı̨chǫ researchers to monitor the land as first set out by the elders in 1999-2000. Their excitement at building on their traditional management practices was clear.

After completing household visits and analyzing Tłı̨chǫ responses, it became clear that it would be culturally appropriate to develop interview guidelines that allowed harvesters to share information in a manner similar to how they normally explain their harvest and observations to

[2] Translated as 'boss'. The role is significantly different than the Western concept for 'chair'.

one another and to their elders. The Tłı̨chǫ researchers found harvesters would prefer to discuss their activities – both observations (monitoring) and harvesting – in either a home or office setting, but at their own convenience. Finally, they found that harvesters thought if Tłı̨chǫ were doing the documenting and report writing they could then be assured: i) individual harvest numbers would remain confidential; ii) their information would be documented realistically; and iii) their observations would remain in the context within which their observations were made.

Following the household visits a Regional TK Elders/Harvesters Working Group (TK Regional Working Group) was established to complete the work.[3] Gametì Committee members thought that it would be better if Tłı̨chǫ from all four communities worked together from the start so they could address all issues together. Six (6) members on the TK Regional Working Group had been active on the TK Regional Elders Committee from 1996-2002 while the remaining ten (10) harvesters and elders were named by the Tłı̨chǫ WRRB members or Chiefs in consultation with elders. The Working Group meetings were held between January and March 31, 2010: three in Gametì, [4] one in Wek'weetì, and one in Behchokö.

The following is a summary of how discussions at the household level and at the TK Regional Working Group meetings have informed key components of the TK caribou monitoring and harvest study approach.

Species Important to Local Harvesters

Caribou and fish are always cited as key species. Nevertheless, all Tłı̨chǫ elders and harvesters explain – as is consistent with members of hunting and gathering societies – that all species are important, including human. They also explained that if one is to understand trends and impacts within Wek'èezhìi, human behaviour should be monitored noting what is being harvested by both male and female harvesters and whether or not all is used. [5]

Tłı̨chǫ Harvesting information to be Documented

During conversations at the household level, it became apparent that many younger people felt they did not know enough about the environment to speak with their local researchers, but did think that they could report what they had harvested and observed as long as older, more experienced elders and harvesters were present to help them to understand their observations. Specifically younger people thought that if elders and harvesters were present they would gain a

[3] Members of the Regional Working Group are Romie Wetrade, Laiza Mantla, Louis Zoe and Mary Adele Wetrade (with Fred Mantla attending in place of Mary Adele Wetrade) from Gametì; Pierre Beaverhoe, Dora Nitsiza, Robert MacKenzie Sophia Williah, and Francis Simpson from Whatì; and Elizabeth Michel, Robert MacKenzie, Harry Mantla and Eddy Weyellan from Behchokǫ̀; and Jimmy Kodzin, Elizabeth Whane, Rosa P'ea, Elizabeth Arrowmaker. The Working Group members decided that since the working group was short term if someone missed a meeting – for any reason – they would not continue.

[4] Under the direction of John B. Zoe, TEO, a TK Office has been established in Gametì. However office furniture and computers have yet to be purchased and staff has yet to be hired.

[5] Although not discussed during the household visits or during the meetings, most elders and active harvesters suggest that human activities associated with industrial development and exploration should be monitored by stewards of the land.

better understanding of how their observations were similar or different than the past and how their own knowledge and behaviour impacts wildlife, particularly caribou.

Most of the elders and harvesters participating in the TK Regional Working Group thought leaders should tell harvesters to report their observations of caribou (and other wildlife) behaviour, fitness, number of young, etc as well as the number they harvested.

Discussion outside the formal structure of the TK Regional Working Group, the researchers discussed the importance of continuous 'watching caribou', and teaching the young about caribou behaviour and rules governing their behaviour around caribou; and, that caribou should be observed whether hunting is taking place or not.

Sharing Information

Throughout all discussions it became clear that community members would be more open about sharing their harvesting information as well as their observations if they understood that their oral narratives and their observations - 'raw data' - would remain with and be safeguarded by the Tłı̨chǫ Government, and kept in the Tłı̨chǫ communities.

Several individuals expressed that they feel they are being "checked-up on" when non- Tłı̨chǫ ask questions and are worried that it can be used against them.

Schedule of Interviews

Based on the manner in which Dene pass information, it was made abundantly clear during household visits and during the TK Regional Working Group meetings, that oral narratives are the process for sharing detailed information. (see also Basso, Cruikshank, Goulet, and Sharp on the importance of oral narratives among all Dene). For this reason the researchers will be trained to use an interview guide while documenting information shared by harvesters.

Researchers thought the oral narratives of the harvest and associated observations should be documented within two days of the harvester returning to the community.

Expectations of Harvesters and Elders

All Tłı̨chǫ citizens with whom the researchers spoke liked the idea that monitoring skills and harvesting information would be given back to the community every few months – by the Tłı̨chǫ researchers. They thought the communities could benefit from hearing this information and verifying the researchers' interpretations so misunderstandings could be clarified.

The TK Regional Working Group thinks that reporting back to the community at public meetings is extremely important. If the researchers share a summary of what they have heard with the community, then harvesters will be more likely to provide their observations and harvest numbers. They reasoned that the harvesters would know they were being heard and that their knowledge and information was being documented accurately. For example,

1. Their observations of the environment – health of caribou, state of the landscape and vegetation caribou use – are being heard and understood.
2. Harvesters will feel secure that harvesting data is correct, and their elders and leaders can use the information for management discussions with WRRB and the GNWT.

Compensation for Harvesters

This has not been discussed with harvesters during the household visits or at the elders and harvesters meetings. During past discussions with elders, it was thought that harvesters should report on a volunteer basis, but should be compensated when attending the verification and sharing meetings when more information on their observations can be noted. Only those harvesters who participated on a volunteer basis would be compensated at the verification and working group meetings.

It is proposed that this is a decision for the Tłı̨chǫ leadership after being discussed at a Tłı̨chǫ Assembly, recognizing that availability of resources may be a constraint.

Reporting

Since using Tłı̨chǫ knowledge in caribou management is important to Tłı̨chǫ, it is recommended that after the researchers hold verification meetings with elders and harvesters, reports be written for the WRRB as well as for the Chief Executive Council and the Territorial governments.

Reports will be sent to Boards, Governments and Land Protection Department at least three times per year.

Duration of Harvest Study within Monitoring Program

During the household visits and the TK Regional Working Group meetings, the vast majority (young people did not speak to this topic) of Tłı̨chǫ citizens thought the caribou harvest study within the TK monitoring program should be on-going. They also thought reporting on harvest should be on-going.

Activities Specific to Caribou Monitoring and Caribou Harvest Study

Basically the steps to traditional monitoring and documenting information on caribou are as follows:

- Harvesters have been taught since the time they were young to observe all that is around them and to consider their observations in relation to what they are harvesting, and in relation to all other aspects of their environment. It is these observations as well as information about their harvest that the researchers will document through digital recording and by entering key information into the data base.
- As researchers listen to harvesting accounts of the harvester, they will have an interview guide that they will use to mentally check off information, and as they enter key information into the data base. If necessary the researcher will ask the harvester for additional information, but only after they have shared their observations through a narration of their experience.
- Through hunting and through use of the caribou harvested both male and female harvesters will note the behaviour of caribou in various situations and note texture, smell and taste of meat and characteristics of hides, bones, etc. Researchers are responsible for acquiring and documenting all information of caribou.
- Researchers will mark the location of the harvester's observations and their harvest.
- Researchers will note number of caribou harvested, locations, age, sex, fitness, etc.
- Researchers will note information on wolf numbers associated with caribou as well as numbers harvested and fitness levels.
- Researchers will listen to the digital recording of the account and enter relevant information into the data base. They will also note additional questions for future reference, and, if necessary, they will visit the harvester for clarification.
- Researchers will search the data base for additional caribou information from that location, and begin developing a compilation of the information contained in the oral narratives.
- Harvesters will note and share through their oral narrative the condition of the environment, including landscape, vegetation, moist, snow depth, etc.
- If appropriate will compare their observations with reports available from the YK Dene, Kugluktuk and Lutselk'è who traditionally hunted in the region. Comparisons will be done by academic researcher in conjunction with community researchers.
- Since very few harvesters will be hunting caribou over the next several years the following activities are examples of information documented by researchers:

Autumn Migration

- Active male and female harvesters will travel to known water crossings
  - monitor caribou as they cross,
  - note number of calves, cows and bulls,
  - note direction of migration,
  - note number of wolves and other predators.
- Tłı̨chǫ citizens – elders, harvesters, researchers and youth – travel to Gotsak'atì to observe caribou
- Active male and female harvesters will travel to Æek'atì (Lac de Gras) area and observe caribou after leaving the Diavik and BHP claim blocks, around Æots'ik'è, Æek'atìtata

Wintering Areas

- Elders will select places to observe caribou behaviour in those areas, and to note additional aspects of fitness if harvesting caribou.
- Harvesters will also observe the state of the winter habitat

Spring Migration

- Active male and female harvesters will travel to places where caribou fences were located to observe the number of caribou (and gender and age) that travel through the area. In addition the harvesters will note fitness level. If caribou are taken, contents of their stomach and vegetation in mouths and in stools will be noted, as well as texture and smell of meat and state of hides, bones, and hair.
- Harvesters will do a visual appraisal for pregnancy and report pregnancy from the cow harvest.
- Harvesters will note number of wolves associated with the herds.
- Harvesters will note behaviour associated with pests.
- Active male and female harvesters should also travel to Gostak'atì, Dezaahtì to observe caribou at that stage of their migration.

Summer: Post Calving Area

- Elders will advise on where active male and female harvesters should travel to observe bull, cows and calf behaviour in their summer habitat assessing abundance at key locations.
- Harvesters also observe predators, insect levels, and other factors impacting caribou distribution, fitness and migration.

Project Structure: Activities and Products

	SPECIAL PROJECT ACTIVITIES ***(What needs to be done)***	***PRODUCTS*** ***(What we hope to achieve)***
Data Base	Researchers enter harvest information into database the same day they hear and document it Maintain and update database regularly after each interview Produce reports regularly and review at community meetings and with Elders' Committee Produce reports in response to requests	• Database is up to date and capable of creating reports upon demand • Baseline information is available for environmental assessments, and environmental management • The collections of Tłı̨chǫ knowledge is expanded as new information is entered into the database • Realistic and current Tłı̨chǫ information on caribou and their habitat • Understand annual resource use -when low numbers of caribou • Ability to compare current caribou information with past: -is there a trend? -are caribou being impacted – if so what from what?
Training	On-going training for program staff to ensure they are effective researchers and cultural interpreters	• Trained TK community researchers are available to work with harvester and elders. • Database administrator is trained to maintain the database. • Staff have the skills to: o Efficiently document interviews. o Use interview guidelines. o Maintain archives. o Produce reports. o Identify similarities and differences between the Tłı̨chǫ and western management concepts and terms.

	SPECIAL PROJECT ACTIVITIES ***(What needs to be done)***	***PRODUCTS*** ***(What we hope to achieve)***
TK Elders' Committee/s	Tłı̨chǫ elders provide on-going guidance to the program	• Elders' Committee is functioning effectively • Elders play a meaningful role in all phases of program operations • Elders work with Tłı̨chǫ citizens to reinstate their traditional roles and responsibilities
Culturally Appropriate Research and Monitoring Methodology	**Interview and community meeting guidelines** -specific to caribou monitoring , caribou harvest and caribou habitat and loss of habitat due to fires and development Monitoring by harvesters • While harvesting • Specific to water crossings, caribou fence area, visit fire areas • If not harvesting caribou, then a form of compensation. Training specific to project • Caribou terminology • Laws and rules • Caribou management plan Hold caribou meeting once every two months	• Realistic and current Tłı̨chǫ information on caribou and their habitat. • Ensure trends are well documented, not hearsay • Detailed current Tłı̨chǫ information on caribou and their habitat that can be discussed – in Tłı̨chǫ – between elders and harvesters with researchers documenting. • Ability to work efficiently • Realistic and current Tłı̨chǫ information on caribou and their habitat • Information available to write report on caribou observations

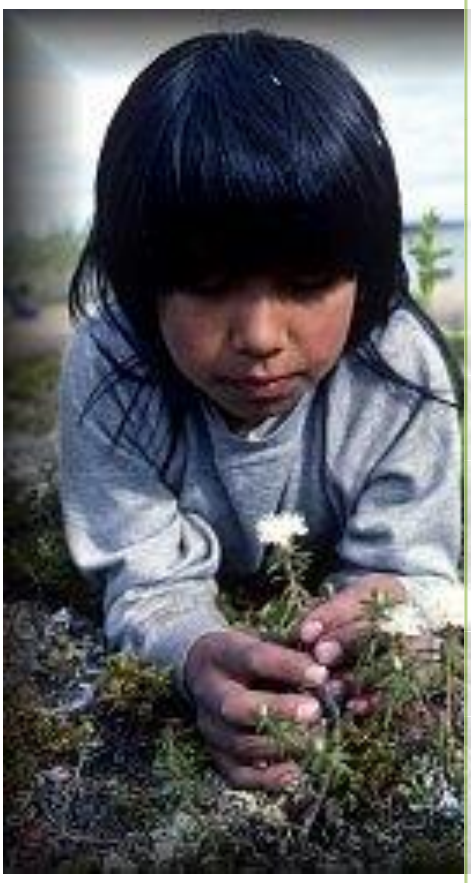
	SPECIAL PROJECT ACTIVITIES ***(What needs to be done)***	***PRODUCTS*** ***(What we hope to achieve)***
Promotion and Outreach	Elders visit households and explain what can be used in lieu of caribou	• Traditional use of resources due to ebb and flow of environment • Traditional sharing of information • More likely harvesters will visit and report harvest and observations
	Chiefs sit with Tłı̨chǫ Knowledge Research and Monitoring Elders' Committees to go over restriction on and allocations of caribou harvest	• Elders Committee supports Chiefs' allocation on caribou harvest and their decision to monitor using elders and harvesters
	Project Directors explains monitoring process to chiefs and council with elders present Academic paper for journal and presented at appropriate conference	• Unique methodology and process is shared • Researchers experience discussions on what they are doing outside their communities

	SPECIAL PROJECT ACTIVITIES *(What needs to be done)*	*PRODUCTS* *(What we hope to achieve)*
Program Administration	**Budget for this project** **Fundraising** **Protocol for sharing reports with WRRB etc,** **Guidelines for verifying information in reports** **Hire researchers**	• **Ability to carry out realistic fundraising** • **Sufficient money to monitor caribou and harvesting** • **Ensure research is rigorous** • • **Ensure results are not hearsay but based on Tłı̨chǫ knowledge and perspective** • **Special project will enhance long term goals of TK programme** • **Ensure use of information from Caribou migration and state of habitat project** • **Ensure data is collected and available to be used**

Appendix IV:

2011

Draft Tłı̨chǫ Knowledge Policy



Tłı̨chǫ Government

12/18/2011

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Tłı̨chǫ Government
Tłı̨chǫ Knowledge Policy

Preamble

To 'know something' implies knowing its origin as well as experiencing and observing. The body of Tłı̨chǫ knowledge has been acquired through thriving in a world of constant change. Tłı̨chǫ knowledge is constantly expanding, as the elders of each generation add their observations, experience, their wisdom and insights to what is already known. Tłı̨chǫ knowledge has been, and continues to be, preserved and shared with others through oral narratives.

The Tłı̨chǫ respect, honor and value living within Tłı̨chǫ neek'e – the place where Tłı̨chǫ belong –referred to in the Tłı̨chǫ Agreement as Mǫwhì Gogha Dè Nı̨tłèè in honor of Mǫwhì who valued Tłı̨chǫ knowledge and traveled Tłı̨chǫ nèèk'è observing all that was taking place and sharing with those who went on to negotiate the Tłı̨chǫ Land Claims and Self-Government Agreement.

Honoring brings with it a responsibility to learn and remember the knowledge that has been passed down while observing and experiencing all that is part of Mǫwhì Gogha Dè Nı̨tłèè so current and past oral narrative can be shared with other Tłı̨chǫ who will continue to care for the place where they belong.

Statement of Intent

Tłı̨chǫ Knowledge represents the collective intellect of the Tłı̨chǫ, and forms the foundation upon which all Tłı̨chǫ Government programs, services and activities are built. The knowledge and values of our ancestors should inform and influence all aspects of Tłı̨chǫ Government operations.

The Tłı̨chǫ Government will encourage and promote the continued acquisition, use and distribution of Tłı̨chǫ knowledge, and will work to ensure that Tłı̨chǫ knowledge is protected and safeguarded for future generations, in a manner that respects those who have shared their knowledge and to whom the knowledge belongs.

In accordance with the Tłı̨chǫ Agreement, the Tłı̨chǫ Government will encourage Government departments, boards and agencies, and the prıvate sector to take steps to acquire and use Tłı̨chǫ knowledge in exercising their powers in relation to the *dè*, including management of human activities, land and water management, wildlife management, forest management, and management of plants; as well as during the environmental impact and review process.

Principles

Tłı̨chǫ Knowledge and values represent the cumulative and collective experience of the Tłı̨chǫ, and their acquisition and expression cannot be separated from the practice of traditional Tłı̨chǫ activities and practices associated with the *dè*.

Tłı̨chǫ communities and harvesters are responsible for the use and preservation of Tłı̨chǫ Knowledge, in a manner that preserves the context, spirit and intent of oral narratives.

Tłı̨chǫ Knowledge belongs to the people who share their oral narratives, and all Tłı̨chǫ Knowledge that is documented will be safeguarded within Tłı̨chǫ communities.

Tłı̨chǫ elders are the experts about Tłı̨chǫ knowledge and values and are best qualified to understand what needs to be acquired, documented, interpreted, and how best to apply this knowledge; they will play a lead role in any initiatives dealing with Tłı̨chǫ knowledge.

Tłı̨chǫ Knowledge and values are necessary for management processes dealing effectively with protected areas, land, water, habitat and wildlife.

Tłı̨chǫ Knowledge and values should be preserved for future generations, and as the foundation for the continued accumulation of knowledge.

Tłı̨chǫ place names are indicators of valuable information and should be documented and used as an aspect of Tłı̨chǫ Knowledge.

Documentation of Tłı̨chǫ Knowledge should not replace the telling of oral narrative and experiencing Tłı̨chǫ *nèèk'è – Mǫwhì Gogha Dè Nı̨ı̨tłèè* where knowledge is passed on in culturally appropriate manners.

Tłı̨chǫ Knowledge and values are best expressed in the Tłı̨chǫ language, and language enhancement and preservation is a critical component of Tłı̨chǫ Knowledge initiatives.

Holders of Tłı̨chǫ Knowledge have a critical role to play in monitoring the cumulative impacts and on-going health and integrity of the Tłı̨chǫ nèèk'è - *Mǫwhì Gogha Dè Nı̨ı̨tłèè*.

Definitions

Dè – Often translated as 'land' but includes the understanding that all of Creation has spirit.

External Institution – Institutions, agencies and boards both mandated and not mandated under the Tłı̨chǫ Agreement. This includes but is not restricted to Governments, industry, universities and other educational facilities.

Harvester – Any Tłı̨chǫ individual who participates in harvesting activities.

Harvesting activities – refers to all activities in which the Tłı̨chǫ have traditionally participated, including but not limited to: hunting; trapping; fishing; cutting and gathering wood or branches; collecting snow and ice; gathering plants and berries for medicine and food.

Informed consent - a statement of oral agreement that may be recorded in audio or video formats or in writing between a researcher and a Tłı̨chǫ knowledge holder that explains the nature of the research, and the manner in which the information the knowledge holder is giving, and how it can be used and accessed.

Tłı̨chǫ Agreement, The Agreement, or the Red Book - refers to the Tłı̨chǫ Land Claims and Self-Government Agreement among the Tłı̨chǫ First Nation, the Government of the Northwest Territories and the Government of Canada.

Mǫwhì Gogha Dè Nı̨ıtłèè is the traditional area of the Tłı̨chǫ described by Chief Mǫwhì during the signing of Treaty 11 in 1921.

Wek'èezhii is the management area of the Agreement.

Tłı̨chǫ Lands are lands owned by the Tłı̨chǫ Government under the Agreement.

Tłı̨chǫ knowledge holders – Individuals recognized by elders as possessing either or both specialized or general knowledge that has been passed on from previous generations who have the ability to integrate their own learning and share this knowledge with others.

Elder – An older person who is at least 75 years of age who follows the Tłı̨chǫ traditional system and is recognized by their peers as having expertise and are qualified to advise leaders and others.

Tłı̨chǫ knowledge - knowledge that elders and other community members hold from past intergenerational experience and is passed down to the Tłı̨chǫ through the generations. It continues to grow and is brought forward through experience, and given to descendants through oral narratives. Tłı̨chǫ knowledge is not just from the past, but includes knowledge based on present experiences as it intertwines with knowledge of the past.

Scope

This policy applies to all departments and agencies of the Tłı̨chǫ Government and their staff and representatives. The guidelines attached to this policy provides direction to industry, co-management boards, other governments and agencies conducting operations on Tłı̨chǫ lands, and within the Wek'èezhìi and Môwhì Gogha Dè Nîîtåèè areas where the Tłı̨chǫ Agreement provides legislated mandates.

Implementation

It is imperative to have a meaningful role for Tłı̨chǫ elders in the implementation of this policy. A regional committee will provide broad advice on policy and programming while the community committees will oversee any local projects and staff. There will be an TK elders committee in each community whether the community has TK staff or not. The following sets out in general their roles and responsibilities, detailed Terms of Reference are set out in Appendix I.

Regional Tłı̨chǫ Knowledge Elders' Committee

- Reviews research and monitoring requests and applications. May make recommendations for modifications or conditions to the Chiefs Executive Council.
- Establishes traditional knowledge research and program priorities, and makes recommendations to Chief Executive Council for approval.
- Responsible for overseeing a regional monitoring program and interpreting information collected to identify cumulative impacts and research needs.
- Provides oversight to Tłı̨chǫ knowledge research.
- Proposes and/or reviews proposed revisions to the Policy.
- Assists with solving problems associated with implementing this policy

Community Tłı̨chǫ Knowledge Elders Committee

- Oversees staff in community offices
- Informs community of Tłı̨chǫ Knowledge activities in their areas – by visiting homes and reporting to community meetings
- Updates Chiefs and Council on activities.
- Oversees research and monitoring conducted on traditional lands
- Assists with solving problems associated with implementing this policy

Authority and Accountability

Chief's Executive Council

- Reviews policy recommendations from the Regional Tłı̨chǫ Knowledge Elders' Committee
- Reviews and recommends to Assembly revisions to the Policy.
- Monitors implementation of the Policy.
- Approves priorities for research and monitoring.

Tłı̨chǫ Assembly

- Approves policy
- Approves amendments to policy
- Formally appoints committee members recommended by elders

Grand Chief

- Responsible for overall implementation of the policy.
- The Grand Chief will meet at minimum of twice per year with the Tłı̨chǫ Knowledge Regıonal Elders Commıttee to report on decisions of the Tłı̨chǫ Government in relation to Tłı̨chǫ Knowledge.

Tłı̨chǫ Knowledge Research & Monitoring

The Tåîchô Agreement directs Boards, Agencies and the Tåîchô Government to i)use traditional knowledge, ii) promote cultural perspectives, and iii) select Board members that have knowledge of Tåîchô way of life. Yet the current systems – most of which are based on Western perspectives and the British legal system – make it difficult for Tåîchô knowledge (TK) to be used in a manner that is consistent within the Tåîchô cultural perspective and way of life.

The Agreement states that:

Section 12.1.6

> In exercising their powers under this chapter, the Parties and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.

Section 13.1.5

> In exercising their powers in relation to forest management, the Government of the Northwest Territories, the Tåîchô Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.

Section 14.1.4

> In exercising their powers in relation to the management of plants, the Government of the Northwest Territories, the Tåîchô Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.

Section 22.1.7

> In exercising their powers, the Mackenzie Valley Environmental Impact Review Board and the Wek'èezhìi Land and Water Board shall consider traditional knowledge as well as other scientific information where such knowledge or information is made available to the Boards.

Furthermore, Section 12.5.5 of the Tåîchô Land Claim and Self-government Agreement (the Agreement) states that the Wek'èezhìi Renewable Resources Board (WRRB) shall:

> (a) Make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal
>
> i. Regarding a total allowable harvest level for Wek'èezhìi, except for fish,
>
> ii. Regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìi to groups of persons or for specified purposes, or
>
> iii. Submitted under 12.11.1 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìi;

The Tåîchô Agreement authorizes the WRRB responsibility for total allowable harvest (TAH) for wildlife, forests and plants and authorizes the Minister of Fisheries and Oceans (DFO) responsibility for fish conservation and the establishment of TAH for fish stocks. Both WRRB and DFO have an obligation under terms of the Agreement to determine TAH through assessment studies and other research.

For WRRB and DFO to have information necessary for sustainable management it is imperative that the Tåîchô undertake their own research and monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If allocations are to be made among users of the resource it will be necessary to determine basic needs levels of the beneficiaries of the claim. Allocations of fisheries and wildlife resources will be difficult without this basic harvest information from the harvesters themselves.

For the Agreement to be honoured three activities need to occur:

> 1. Baseline Tłı̨chǫ information must be gathered from elders on known trends on harvest, wildlife and vegetation distribution.
>
> 2. Information gathered, through Tåîchô traditional methods of monitoring, needs to be documented on an on-going basis.
>
> 3. Culturally appropriate harvest studies need to be ongoing.

Although scientific information is readily available, most Tåîchô knowledge is in the minds of the elders and harvesters. For this reason, a program is needed so Tåîchô researchers can

work with elders and harvesters to document their knowledge in a manner that does not lose the Tåîchô perspective. This is usually detailed knowledge of past conditions that they share with their descendants while sharing their current observations of wildlife and wildlife habitat. And, as is the traditional mode of sharing, numbers of species observed and harvested, are shared with others in the community along with other information such as behaviour of wildlife and the people harvesting. One of the important features of Tåîchô knowledge is that it is acquired, enhanced and communicated on the land while people are engaged in land-based activities. It is also communicated after harvesters return to the community through oral narratives.

Modern harvest studies often ask harvesters to fill out survey forms in English, or to provide limited information that can be taken out of context. These studies may fail because they are not compatible with how Tåîchô knowledge, including information about harvest, is transmitted through oral narratives.

A program must be designed to ensure that research will acquire realistic harvesting numbers can be recorded in a culturally appropriate manner. This will help alleviate the problem that many respondents choose not to answer correctly, harvest study questions posed by non-community members.

The Tłı̨chǫ Government will conduct all of its own research under the guidance of the Tłı̨chǫ Knowledge Regional Elders Committee and through the establishment of a Tłı̨chǫ Knowledge Department. All outside researchers interested in conducting research in the Tłı̨chǫ settlement area are encouraged to contact this department to explore collaboration opportunities. Further guidance is provided in the Appended Guidelines.

Tłı̨chǫ Knowledge Department

A department of Tłı̨chǫ Knowledge will be established to facilitate the implementation of this policy and program. The head offices will be located in Gamètì. A Regional Director of Tłı̨chǫ Knowledge will oversee the program and implementation of the policy. A Research Director will oversee all research and research staff. A Data Base Manager will develop and maintain a data base in both Tłı̨chǫ and English . Each community will have a staff team of a minimum of two members who will carry out research and data collection and input.

Researchers will work with the Land Protection Department to present research results in a format for ease of use to the Tłı̨chǫ Government and within the regulatory framework.

Researchers will verify monitoring information with those who provided information – elders and harvesters - at public community meeting prior to making the report public.

In addition to conducting traditional knowledge research, the staff will work with active harvesters and the TK Community Elders' Committees to monitor trends and occurrences on the land. They will employ traditional monitoring practices and good documentation practices that include individual reporting of observations followed by group discussion and analysis.

Ownership and Confidentiality

Tłı̨chǫ Knowledge belongs to Tłı̨chǫ collectively. Original documents should be turned over to the Tłı̨chǫ government for archival management in the TK head office in Gamètì. High quality copies and wıll also be stored ın storage systems wıth one ın the NWT Archıves untıl an archıves ıs buıld ın Gamètì. Written permission must be obtained from informants and from local TK elders committee for the publication of Tłı̨chǫ *Knowledge.* In addition, researchers will record statements of purpose and permission in audio or video format at the beginning of each interview. See attached guidelines for more information.

Elders want their oral narratives to stay in their own language, and if others wish to listen to the stories of their experience then they should use those middle-aged persons who understand Tłı̨chǫ to tell them the story (after lıstenıng to the dıgıtal recordıng) – rather than translating the recording.

Provisions

- The Department of Tłı̨chǫ Knowledge will establish methodology and research procedures to guide the acquisition of Tłı̨chǫ oral narratives and knowledge.
- The Tłı̨chǫ Knowledge Department will take the lead and work with the Wek'eezhii Forum to establish procedures to guide the use of Tłı̨chǫ knowledge in each of their programs and services. Tłı̨chǫ researchers will work under the collective guidance of Tłı̨chǫ elders through the Regional and Community Committee in the design of research projects and writing reports.
- The Tłı̨chǫ Government will work in collaboration with the Wek'eezhii Land and Water Board and the Wek'èezhìi Renewable Resources Board to ensure that they have access to information about Tłı̨chǫ knowledge that is required to implement their mandates as specified in the Tłı̨chǫ Agreement.
- The Tłı̨chǫ Government will encourage the Wek'eezhii Land and Water Board and the Wek'eezhii Renewable Resources Board to work with the Department of Tłı̨chǫ Knowledge to establish procedures and guidelines for the use and incorporation of traditional knowledge in regulatory and management processes within their mandates.
- External institutions - including other governments, industry, and academia – who wish to conduct research on Tłı̨chǫ Knowledge will be encouraged to do so in accordance with the provisions of this policy and associated guidelines and protocols.
- The Tłı̨chǫ Government will develop regulations to guide the ownership and use of Tłı̨chǫ knowledge , including provisions for ensuring confidentiality when knowledge holders have requested it; recognition of Tłı̨chǫ knowledge holders when appropriate; the storage of Tłı̨chǫ *Knowledge* ; provisions for access; and publication and distribution. These regulations will complement existing research protocols established by the Government of the Northwest Territories, e.g.

requirements under the NWT *Scientists Act* to acquire research licenses and the attached Guidelines.

- Tłı̨chǫ Knowledge brought forward for consideration in the regulatory processes administered by the WLWB and WRRB must be compiled in accordance with the provisions of this policy and associated directives.

The following Appendices form part of this Policy:

Appendix I:	Terms of Reference - Elders' TK Community and Regional Committees
Appendix II:	Guidelines for Developers
Appendix III:	Sample Protocol Agreement
Appendix IV:	Guıdelınes for Researchers
Appendix V:	Guidelines for Authors and Illustrators

Appendix I
Tłı̨chǫ Knowledge Regional and Community Elders' Committees

Terms of Reference

Community Tłı̨chǫ Knowledge Elders Committee

- Each community will have an elders' committee overseeing their Tłı̨chǫ knowledge research and monitoring activities and providing advice to staff and researchers. These committees will be known as the Tłı̨chǫ Knowledge Communıty Elders' Committee.
- Informs community of Tłı̨chǫ Knowledge activities in their areas – by vısıtıng homes and reporting to community meetings
- Updates Chiefs and Councıl on activities.
- Oversees research and monitoring conducted on traditional lands
- Assists with solving problems associated with implementing this policy

The community of Wekweètì will have two members on their local committee, Gameti and Whati will have four elders, two female and two male elders representatives, and Behchokǫ̀ wıll have six members to reflect the size of each community. Where possible, one male and one female wıll be the oldest members of the communıty and two wıll be younger, who are chosen by the older elders. In Behchokǫ̀ two male and two females wıll be among the oldest elders , and two males and two females wıll be younger. Representative should be persons known to value Tłı̨chǫ knowledge and persons who know which individuals in their community has knowledge of specific places, events and wildlife, plants, forests and fish.

Tłı̨chǫ Knowledge Regıonal Elders Commıttee

- Reviews research and monitoring requests and applications. May make recommendations for modifications or conditions to the Chiefs Executive Council.
- Establishes traditional knowledge research and program priorities, and makes recommendations to Chief Executive Council for approval.
- Responsible for overseeing a regional monitoring program and interpreting information collected to identify cumulative impacts and research needs.
- Provides oversight to Tłı̨chǫ knowledge research.
- Proposes and/or reviews proposed revisions to the Policy.

- Assists with solving problems associated with implementing this policy

The Tłı̨chǫ Knowledge Regional Elders' Committee will consist of two of the oldest males and females from each community committee.

The elders' committees are participatory action committees who represent the collective interests of the elders and harvesters who continue to use the land and the resources from the land.

The elders on the committee will be chosen by the current committee elders based on skills and land-based knowledge.

Purpose of Committee

The primary purpose of the Elders Committees is to provide Tłı̨chǫ elders with the opportunity to offer the wealth of knowledge and wisdom they have accumulated for the benefit of the current and future generations in the management of the land they know and love.

Elders will be responsible to walk around and visit other members of the community to inform them of their activities and to identify individuals that should be interviewed on specific topics.

During community meetings and at the annual assembly the Committee Members will be responsible for demonstrating the value of their work by working with staff to make presentations relevant to the topics at hand.

Elders will ensure that time will be taken to do the research to their standards and will carry out activities that are aimed at solving problems and addressing challenges important to the communities and region.

To demonstrate the economic, social and cultural values of traditional land use.

Role of Members

a. Participate in local and regional Elders Committees as a way to help formulate, document and pass on traditional cultural knowledge for future generations.
b. Help make explicit and incorporate locally appropriate cultural values in all aspects of life in the community, while recognizing the diversity of opinion that may exist.
c. Make a point to utilize traditional ways of knowing, teaching, listening and learning in passing on cultural knowledge to others in the community.
d. Seek out information on ways to protect knowledge and retain copyright authority over all local knowledge that is being shared with others for documentation purposes.
e. Verify through translators of cultural information that has been written down to insure accuracy.
f. Follow appropriate traditional protocols as much as possible in the interpretation and utilization of cultural knowledge.

g. Assist willing members of the community to acquire the knowledge and skills needed to assume the role of Elder for future generations.
h. To develop a vision statement that will enable all to understand the future that they wish to foster. To develop a mission statement to guide the work of the Tłı̨chǫ Knowledge Department

Payment to Elders

Since elders on these committees will act more as advisors the older elders (including the k'àowo) will be paid a consulting fee of $350/day, whereas the younger elders who are continuing to learn from the older elders will be paid $250/day.

Meeting Attendance

If a members misses meetings the k'àowo will speak to the individual and determine the cause, if two meetings are missed they will be replaced by an individual chosen by elders in their community.

If a person has been drinking they will be asked to leave and will not be paid their per diem or their honorarium.

Decision Making

Following Tłı̨chǫ traditional governance practices only one topic will be discussed until a direction of action is reached. Eldest members will be invited to speak first and last on the topic under discussion.

Members will strive to reach consensus on all matters before them. Every effort will be made to hear and clearly understand any dissenting views.

Staff Support

Decisions of the committee will be recorded by staff. Researchers will support Committee members by insuring that reports are written that reflect traditional information gathered. These reports will support the elders desire to influence decisions that are respectful and caring of all Tłı̨chǫ citizens, the land and the resources.

Researches will carry out rigorous verification procedures with the Committee and information providers to ensure the integrity of the Tłı̨chǫ knowledge gathered and analysed.

Appendix II

Guidelines for Developers

The Tłı̨chǫ government encourages developers to work with us, and to work to understand ınformatıon that comes from our traditional knowledge.

The Tłı̨chǫ Agreement states WLWB shall consider traditional knowledge, the Agreement does not specify how this will occur. This policy clarifies the way in which Tłı̨chǫ knowledge will be considered within the Wek'èezhìi area.

Consıder thıs policy as early as possible in the project planning cycle to avoid problems and conflicts before projects enter the formal regulatory process. This will also provide the Tłı̨chǫ with the opportunity to make positive contributions and build constructive relationships.

We concur with the following statements set out in the Mackenzie Valley Environmental Impact Review Board Guidelines for incorporating Traditional Knowledge:

- Traditional knowledge shared specifically about the environment and the use and management of the environment is important for establishing baseline conditions, predicting possible impacts and determining appropriate mitigation and monitoring methods. This is particularly beneficial where there is no land use plan, where there are social or cultural concerns or when scientific data is inadequate.
- Early dialogue and relationships between the developer and traditional knowledge holders may result in a sharing of knowledge about environmental phenomena unavailable elsewhere. Such information may allow for necessary project design changes to take place even before the Environmental Impact Assessment (EIA process begins.
- Traditional knowledge can add to the understanding of the critical requirements of and potential threats to valued components.
- Traditional knowledge can assist a preliminary screener in deciding whether a proposed development might have a significant adverse impact or might be a cause for public concern and
- Traditional knowledge is critical in the early stages of the process to help identify issues as part of the EIA scoping and later on at community and formal hearings (if any) to assist the Review Board in determining the significance of potential impacts.

The Tłı̨chǫ Land Claim and Self-government Agreement (Tłı̨chǫ Agreement) clause 22.1.7 gives the Mackenzie Valley Environmental Impact Review Board and the Wek'eezhii Land and Water Board their mandate within Wek*'èezhìı:*

> In exercising their powers, the Mackenzie Valley Environmental Impact Review Board and the Wek*'èezhìı* Land and Water Board shall consider traditional knowledge as well as other scientific information where such knowledge or information is made available to the Boards.

Tłı̨chǫ traditional knowledge is useful when considering how future development will impact on the environment and the people. Furthermore it can provide a more relevant and meaningful baseline to insure that the environmental effects of any project can be understood in the future. If Tłı̨chǫ knowledge research is done in a rigorous and methodological manner during the initial stages of a development planning, then it is more likely a development project will have minimal impact on the environmental and communities, especıally ıf socıal ıssues and concerns are also consıdered.

General Principles

No two projects are the same; therefore, a one-size-fits-all approach to considering Tłı̨chǫ knowledge is not possible. Nevertheless a number of general principles have been identified with respect to the extent to which knowledge should be collected in relation to development proposals. These are presented below.

Where possible, the Tłı̨chǫ Knowledge Department (TKD) will conduct all traditional knowledge research and provide the proponent with a report. Expectations regarding the extent of the research and type of research varies with the type of development applications, interested parties will identify their needs and explore with TKD staff, the time and budget required to meet these needs.

Prior to research the Tłı̨chǫ government and the research team will be provided with clear and accurate information about the project proposal and the stage that it is at. If the proposal has already entered the EIA process, the Developer will be asked to share copies of such applications to ensure that the Tłı̨chǫ government can accurately assess the scope of Tłı̨chǫ Knowledge required and how it may be incorporated into the EIA process;

Following a review of the information provided by the Developer the Tłı̨chǫ government will outline a proposal for carrying out traditional knowledge research and ask the Developer to enter into a Protocol Agreement that would enable such research to proceed. A sample of such an agreement is set out in Appendix IV.

Sample Protocol Agreement

Between: (the Proponent, Developer, Federal and Territorial Government Agencies) herein referred to as _____

and

The Tłı̨chǫ Government

(hereinafter the "Parties")

WHEREAS the Tłı̨chǫ Government are the caretakers of Tłı̨chǫ knowledge that has been and will be documented within Mǫwhì Gogha Dè Nı̨ı̨tłèè, Wek'èezhii and Tłı̨chǫ Lands; and

WHEREAS the Tłı̨chǫ Government wishes to protect Tłı̨chǫ knowledge from misuse; and

WHEREAS most of this knowledge is woven within the tapestry of the Tłı̨chǫ oral narratives; and

WHEREAS the Parties wish to respect the wishes of the Tłı̨chǫ elders, who have shared and will continue to share their knowledge through oral narratives and to ensure that all information taken from the oral narratives remains with Tłı̨chǫ; and

WHEREAS the Parties would like to ensure Tłı̨chǫ knowledge is used in manner consistent with section 12.1.6 of the Tłı̨chǫ Agreement:

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

A. INTRODUCTION

The Tłı̨chǫ oral narratives and traditional knowledge is first, and foremost, for the Tłı̨chǫ citizens, therefore it should be:

a. Tłı̨chǫ citizens who carry out research on what Tłı̨chǫ knowledge about any given topic; and

b. Tłı̨chǫ elders and active harvesters who will assist with the design of Tłı̨chǫ knowledge projects, and in the research and in the writing of reports.

c. With respect for the Tłı̨chǫ Regional Elders' Committee request that their stories not be translated to ensure that:

1. Tłı̨chǫ citizens continue listening to and learning from the oral narratives that came from their ancestors in their own language;
2. Individuals – whether Tłı̨chǫ or non-Tłı̨chǫ – should work with a Tłı̨chǫ speaker, who has spent considerable time listening and experiencing with elders and harvesters the knowledge shared;
3. Their descendents, and those who work with them, understand the knowledge within the context of an occurrence (as it was told and brought to the present), and from the perspective of the Tłı̨chǫ;
4. Non - Tłı̨chǫ who work with Tłı̨chǫ speakers to understand the relevance of the oral narrative, and the knowledge it encompasses, within the context all other variables being discussed by the storytellers;
5. Tłı̨chǫ youth learn the oral narratives as well as to learn how to use these narratives to think with, and use that ability to write related reports.

B. COMMITMENTS OF THE PARTIES:

The Tłı̨chǫ Government Commits To:

1. Decide how, why and when Tłı̨chǫ the information is used.

2. Indicate what information is confidential and what is public.

3. Ensure that the requester of information has the information required to participate effectively in the Regulatory process.

(Proponent. Developer, Government Agency)_____
Commits To:

Assist with the costs of research and of entering relevant information into the data base so the oral narratives and information can be managed, and used with Tłı̨chǫ Government GIS system as follows:

(enter budget info)

C. INTERPRETATION AND IMPLEMENTATION:

Entire Agreement

This Agreement constitutes the entire Agreement between Parties with respect to the subject matters set forth herein. There are no other collateral agreements or undertakings related to the subject matter hereof.

Further Acts

The Parties shall do all acts and execute and deliver all such documents as may from time to time be necessary in order to achieve the purpose and intent of this Agreement.

Applicable Laws

This Agreement shall be governed by and interpreted in accordance with Tłı̨chǫ laws, the laws of Canada, the Northwest Territories as applicable.

Notices

Any notices or communications required or permitted to be given pursuant to this Agreement shall be in writing and shall be delivered to, or sent by prepaid registered or certified mail, or confirmed facsimile, addressed as follows:

(a) in the case of a notice or communication to the **Proponent, Developer or Government Agency**:

_____

Tel:

Fax:

(b) in the case of a notice or communication to the **Tłı̨chǫ Government**:

The Executive Officer

Tłı̨chǫ Government

_____

Tel: (867) _____

Fax: (867) _____

or to such other address as either Party may notify the other in accordance with this section.

Assignment

The rights and privileges granted under this Agreement may not be assigned.

Amendment

This Agreement may be amended from time to time by consent of the Parties hereto by an instrument in writing.

Term

This Agreement shall come into effect on the date it is signed.

This Agreement shall be for an initial term of one year and may be renewed by mutual consent of the Parties.

Termination

This Agreement can be terminated upon 30 days notice in writing by either of the Parties.

Dispute Resolution

In the event that a dispute arises, the Parties will exercise all reasonable effort to resolve it amicably.

The Parties may resolve a dispute by mutual agreement at any time, and all such agreements shall be recorded in writing and signed by authorized representatives of the Parties.

Where there is a dispute that cannot be resolved amicably, either Party may give notice of termination of the Agreement.

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed in their respective names by their duly authorized representatives.

Proponent or Developer	**Tłı̨chǫ Government**
per _____	**per _____**

Dated: _____, 20____

Appendix IV

Guidelines for Researchers

Researchers are ethically responsible for obtaining informed consent, accurately representing the Tłı̨chǫ *perspective and protecting the cultural integrity and rights of all participants in a research endeavor.*

Researchers may increase their cultural responsiveness through the following actions:

a. Enter into a Protocol Agreement with the Tłı̨chǫ Government
b. Effectively identify and utilize the expertise in participating communities to enhance the quality of information gathering as well as the information itself, and use caution in applying external frames of reference in its analysis and interpretation.
c. Explore ways in which to contribute to building local research capacity; all researchers whether the principle investigator or the local researchers should make a commitment to train those researchers with less skill.
d. Insure controlled access for sensitive cultural information that has not been explicitly authorized for general distribution, as determined by members of the local community.
e. Submit research plans as well as results for review by a Community or Regional Elders Committees and abide by its recommendations to the maximum extent possible.
f. Provide full disclosure of funding sources, sponsors, institutional affiliations and reviewers.
g. Include explicit recognition of all research contributors in the final report.

Guidelines for Authors and Illustrators

Authors and illustrators should take all steps necessary to insure that any representation of cultural content is accurate, contextually appropriate and explicitly acknowledged.

Authors and illustrators may increase their cultural responsiveness through the following actions:

a. Enter into a Protocol Agreement with the Tłı̨chǫ Government
b. Make it a practice to insure that all cultural content has been acquired under informed consent and has been reviewed for accuracy and appropriateness by knowledgeable local people representative of the culture in question.
c. Arrange for copyright authority and royalties to be retained or shared by the person or community from whom the cultural information originated, and follow local protocols for its approval and distribution.
d. Insure controlled access for sensitive cultural information that has not been explicitly authorized for general distribution.
e. Be explicit in describing how all cultural knowledge and material has been acquired, authenticated and utilized, and present any significant differing points of view that may exist.
f. Make explicit the audience(s) for which a cultural document is intended, as well as the point of view of the person(s) preparing the document.
g. Make every effort to utilize traditional names for people, places, and items where applicable, adhering to local conventions for spelling and pronunciation.
h. Identify all primary contributors and secondary sources for a particular document, and share the authorship whenever possible.
i. Acquire extensive first-hand experience in a new cultural context before writing about it.
j. Carefully explain the intent and use when obtaining permission to take photographs or videos, and make it clear in publication whether they have been staged as a re-enactment or represent actual events.
k. When documenting oral narratives, recognize and consider the power of the written word and the implications of putting oral tradition with all its non-verbal connotations down on paper, always striving to convey the original meaning and context as much as possible.