

**Reasons for Decisions Related to a  
Joint Proposal for the Management of  
the Kòk'èetì Ekwò  
(Bathurst Caribou) Herd**



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## LIST OF ACRONYMS

BCAC	Bathurst Caribou Advisory Committee
BGCTWG	Barren-ground Caribou Technical Working Group
CARC	Canadian Arctic Resources Committee
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
ENR	Environment & Natural Resources
GN	Government of Nunavut
GNWT	Government of the Northwest Territories
INAC	Indigenous and Northern Affairs Canada
LKDFN	Łutsel K'e Dene First Nation
MCBCCA	Mobile Core Bathurst Caribou Conservation Area
NWMB	Nunavut Wildlife Management Board
TAH	Total Allowable Harvest
TG	Tłıchq Government
TK	Tłıchq Knowledge; traditional knowledge
WRRB	Wek'èezhì Renewable Resources Board

## LIST OF TŁİCHQ TERMS

det'qcho	eagle
dìga	wolf
ʔekwò	barren-ground caribou
ʔk'qò	spiritual power
Kqk'èetì	Contwoyto Lake
Kqk'èetì Ekwò	Bathurst caribou
Mqwhì Gogha Dè Nìtìlèè	traditional area of the Tłìchq, described by Chief Monfwi during the signing of Treaty 11 in 1921
nògha	wolverine
nqʔokè	water crossings
sahcho	grizzly bear
Sahtì Ekwò	Bluenose-East caribou
tataa	corridors between bodies of water; land bridges
Wek'èezhì	management area; within the boundaries of

## 1.0. Executive Summary

The Wek'èezhì Renewable Resources Board (WRRB) is responsible for wildlife management in Wek'èezhì and shares responsibility for managing and monitoring the *Kòk'èetì ekwò* (Bathurst 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 *Kòk'èetì ekwò* herd had continued to decline significantly and that further management actions were required.

In January 2019, the Tłıchǫ Government (TG) and GNWT submitted the *Joint Proposal on Management Actions for the Bathurst Ƴekwò (Barren-ground caribou) Herd 2019-2021* to the Board, outlining proposed management actions for the *Kòk'èetì ekwò* herd in Wek'èezhì. 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 continuing a herd-wide total allowable harvest of zero for the *Kòk'èetì ekwò* herd. Following an initial assessment of the management proposal, the Board determined that a Level 2 review was appropriate, as per its Rule for Management Proposals. Therefore, the Board established a proceeding and an online public registry on February 4, 2019.

The WRRB concluded, based on current evidence and its decision made in 2016, that a serious conservation concern continues to exist for the *Kòk'èetì ekwò* 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 *Ƴekwò* (barren-ground caribou) for Tłıchǫ citizens to thrive – physically, spiritually, and culturally.

The WRRB determined that a TAH of zero shall be continued for all users of the *Kòk'èetì ekwò* herd within Wek'èezhì for the 2019/20 and 2020/21 harvest seasons.

As the Mobile Core Bathurst Caribou Conservation Area (MCBCCA) continues to be utilized to implement the zero TAH, the WRRB recommended that the effectiveness of the zone in achieving *Kòk'èetì ekwò* conservation goals be quantitatively assessed while considering both overlap with adjacent herds and inadvertent harvesting. As monitoring of the *Kòk'èetì ekwò* harvest is crucial for management decisions, the Board recommended that TG hire additional community monitors.

The 2018 calving ground survey report made it clear that emigration has become a significant factor contributing to the decline of the *Kòk'èetì ekwò* herd. This information is new and adds a deeper level of uncertainty to the future of the herd. The WRRB

recommended that TG and GNWT provide a plain language description of their positions regarding the implication of emigration on Kòk'èetì ekwò, and how it will influence adaptive management of the herd.

To improve our understanding of the role of predators on the decline of the Kòk'èetì ekwò herd, the WRRB recommended that TG and GNWT provide the WRRB with information on the sighting rates of predator and the criteria to be used in determining the targeted number of predators to be removed annually. Additionally, the WRRB is to be provided with the criteria for *Dìga* (wolf) removal based on (i) *dìga* sightings during Kòk'èetì ekwò composition surveys and (ii) likely exposure of Kòk'èetì ekwò to *dìga* associated with neighbouring herds during the winter season.

The *Enhanced North Slave Dìga Harvest Incentive Program* is being used as a method of *dìga* removal on the winter range of Kòk'èetì and *Sahti ekwò* (Bluenose-East caribou). To ensure that this program is contributing to conservation efforts of Kòk'èetì ekwò, the Board recommended that the location and number of *dìga* harvested are provided to the Board each year and that criteria are developed to measure the effectiveness of the program, based on scientific and traditional knowledge.

TG runs a *Community-based Harvest Training Program* and the WRRB recommended that the location and number of *dìga* harvested be provided to the Board as well as an assessment of how the training will contribute to future *dìga* harvesting and management. Additionally, the Board recommended that TG and GNWT coordinate the *Enhanced North Slave Dìga Harvest Incentive Program* and the *Community-based Dìga Harvest Training Program* to determine their role in removing the targeted number of *dìga*.

The WRRB is currently working on a *Sahcho* (grizzly bear) biological and management feasibility assessment. In order to improve efficiencies, the Board recommended that *Nògha* (wolverine) be included in this assessment.

The WRRB acknowledged that the range of the Kòk'èetì and *Sahti ekwò* extends beyond Wek'èezhì and the Northwest Territories. However, there has been a lack of progress on the joint management of predators and land management across territorial borders. As such, the Board recommended that GNWT and TG develop a draft agreement and timelines to jointly manage the Kòk'èetì and *Sahti ekwò* in cooperation with other co-managers.

Tłıchq community members as well the general public should be made aware of the status of the Ɂekwò and should be made aware about efforts being made to halt their decline. The WRRB recommended that the successes and challenges of TG's ekwò Nàxoède K'è program be communicated to the Tłıchq communities and schools.

The decline of Kòk'èetì ekwò affects the well-being of Tłıchǵ citizens and the Board recommended that TG and GNWT discuss priorities and solutions for food security. The Board also recommends that TG and GNWT exchange information about Ɂekwò regarding the reasons for the declines and the factors which continue to affect the declines.

Time is now of the essence for the management of Kòk'èetì ekwò and the Board supported the increase of population surveys to every two years but notes that efforts should be made to have them occur concurrently with neighbouring Sahtì ekwò and Beverly/Ahiak herds. The Board also supported the implementation of a pregnancy monitoring program utilizing fecal pellet collection.

The Board recommended the Tłıchǵ Research and Monitoring Program be implemented to ensure that both Ɂekwò and Ɂekwò habitat monitoring and realistic harvesting numbers are recorded in a culturally appropriate manner while feeding into adaptive management. The Board recommended that the Ekwò Nàxoède K'è collect on-the-ground climate change observations to be incorporated into an adaptive management framework.

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.

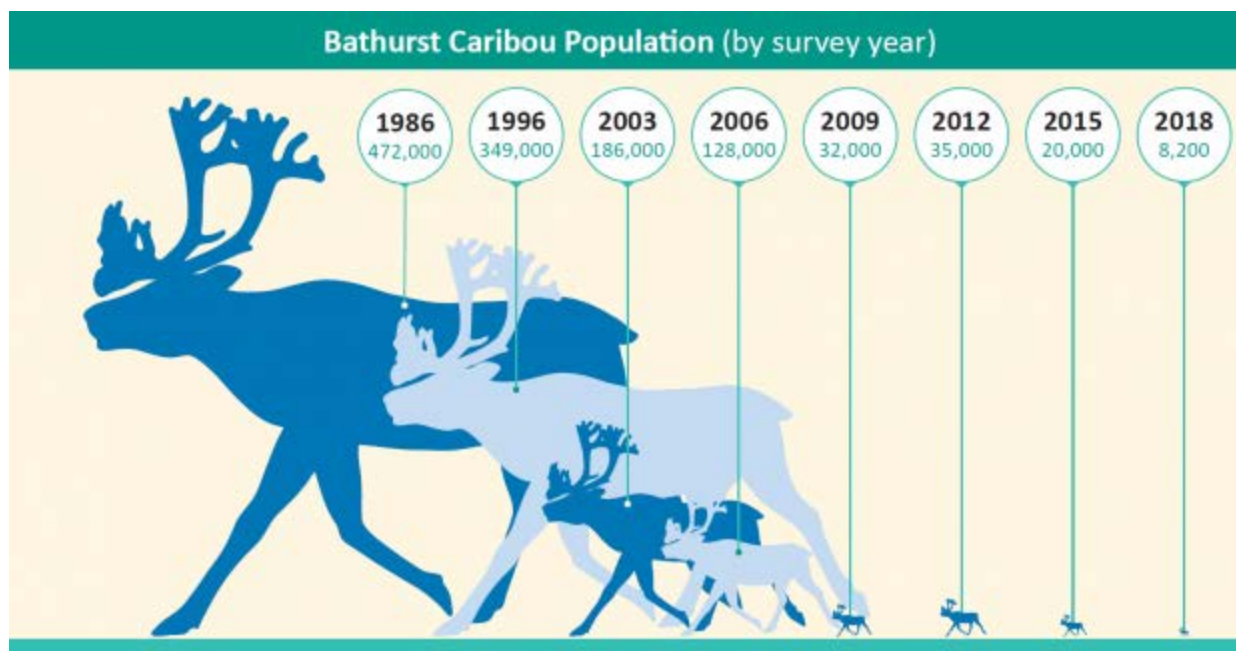
## 2.0. Introduction

By 2018, the Kòk'èetì ekwò herd was at its lowest recorded size, with GNWT and TG stating that *“the current small and declining number of mature caribou in the Bathurst herd is a critical conservation status”*.<sup>1</sup> The herd has declined from approximately 472,000 in 1986 to about 8,200 in 2018, based on the latest calving ground survey in June 2018 (Figure 1). This is an unprecedented decline in herd size, approximately 98% over the last 32 years. While the small herd size is startling, the Board is more alarmed by the accelerated rate of decline of 29% per year since 2015 and what the future holds for the Kòk'èetì ekwò herd.

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<sup>1</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.





**Figure 1. Bathurst Caribou Population (by survey year).<sup>2</sup>**

Despite best efforts to halt it, the decline of the K̓q̓k'èetì ekwò herd has continued. The herd rapidly declined from 2006-2009 and the WRRB made the difficult decision to severely restrict harvests in 2010. The decision seemed to be justified when the herd's numbers stabilized between 2009 and 2012.<sup>3</sup> Unfortunately, the decline again accelerated and, in 2016, the WRRB determined that the total allowable harvest (TAH) should be zero, which caused distress and hardship for harvesters. Despite halting harvest, the decline in the K̓q̓k'èetì ekwò herd continued, which indicated that harvesting was not the only cause of low adult Ɂekwò survival. As such, the WRRB, in 2016, made recommendations to increase Ɂekwò survival and offset natural hardships for Ɂekwò by increasing d̓iga harvesting, conducting a feasibility assessment for d̓iga management, and supporting habitat conservation and monitoring.

In 2019, the Board received evidence that the causes of the decline are now more complicated as some collared cows moved to the neighboring Beverly/Ahiak herd's calving ground in 2018 and 2019, which has added emigration as a cause of the decline in K̓q̓k'èetì ekwò herd size.

The reduced herd size and extent of the decline, as of June 2018, is reported in the 2019 Joint Proposal, entitled *"Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021"* (the "Joint Proposal") (Appendix A).<sup>4</sup>

<sup>2</sup> <https://www.enr.gov.nt.ca/en/services/caribou-de-la-toundra/bathurst-herd>.

<sup>3</sup> Ibid.

<sup>4</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

TG and GNWT submitted the Joint Proposal on January 22, 2019. Since the Board was not required to consider a change in harvest restrictions, i.e. the TAH remained at zero, the WRRB undertook a Level 2 management proposal review, as per its Rule for Management Proposals.<sup>5</sup> The Board implemented review procedures, which included an open public comment period from February 4 to April 5, 2019.

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

The Joint Proposal is clear that the Kqk'èetì ekwò herd is in *"a critical conservation status that requires implementation of an integrated suite of recovery management actions"*.<sup>6</sup> Despite these goals, the Joint Proposal also states that the proposed specific management actions will not halt the decline.<sup>7</sup> This puts the herd in a fragile and perilous position.

This report describes the WRRB's assessment of the evidence on the record and is the basis for the Board's determinations and recommendations.

### 3.0. The Board and Its Authorities

#### 3.1. WRRB Mandate & Authorities

The WRRB is responsible for the wildlife management functions set out in the Tłıchq Agreement in Wek'èezhì <sup>8</sup> and shares responsibility for the management and monitoring of the Kqk'èetì ekwò herd. The WRRB is a co-management tribunal established by the Tłıchq Agreement to exercise advisory and decision-making responsibilities related to wildlife, forest, plant and protected areas management in Wek'èezhì (Figure 2). The Board's legal authorities came into effect at the time the Tłıchq Agreement was ratified by Parliament.<sup>9</sup> Section 12.1.5 of the Agreement requires the Parties<sup>10</sup> to manage wildlife based on the principles of conservation, on an

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<sup>5</sup> <https://www.wrrb.ca/sites/default/files/REV%20FINAL%20Rule%20-%20Management%20Proposals%20-%2016oct18.pdf>.

<sup>6</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

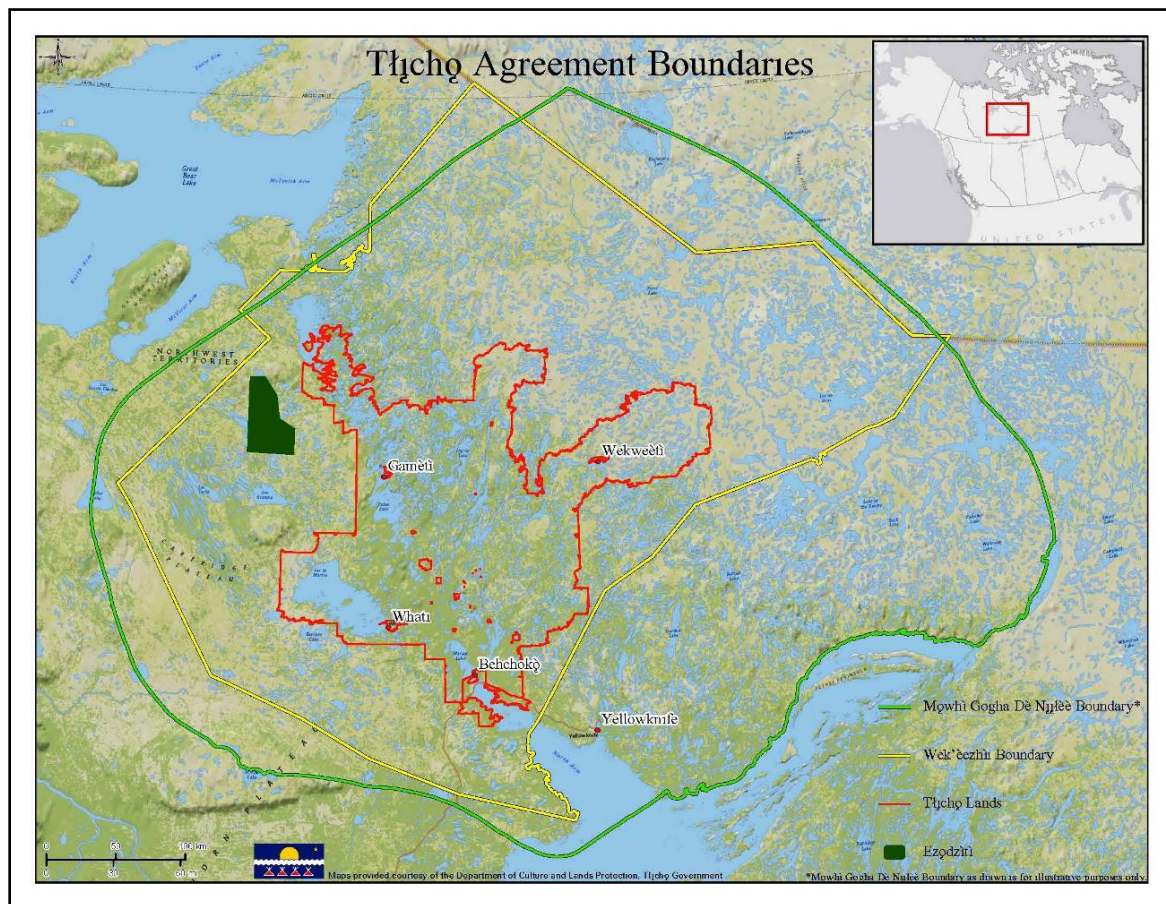
<sup>7</sup> Ibid.

<sup>8</sup> Section 12.1.2 of the Land Claims and Self-Government Agreement Among the Tłıchq and the Government of the Northwest Territories and the Government of Canada, Indian Affairs and Northern Development, Ottawa, 2003 (hereinafter the "Tłıchq Agreement").

<sup>9</sup> Tłıchq Land Claims and Self-Government Act, S.C. 2005, c.1. Royal assent February 15, 2005. See s.12.1.2 of the Tłıchq Agreement.

<sup>10</sup> This includes the Tłıchq Government, the Government of the Northwest Territories and the Government of Canada.

ecosystemic basis and in an adaptive fashion.<sup>11</sup> The WRRB's major authorities and responsibilities in relation to wildlife are further set out in Chapter 12 of the Tłıchq Agreement.<sup>12</sup>



**Figure 2. Wek'èezhìi Management Area.**<sup>13</sup>

As required by Sections 12.5.1 and 12.5.4 of the Tłıchq Agreement, any Party<sup>14</sup> proposing a wildlife management action in Wek'èezhìi must submit a management proposal to the WRRB for review. This includes the establishment or adjustment of a TAH. Prior to making a recommendation, the WRRB must consult with any body that has authority over that wildlife species both inside and outside of Wek'èezhìi. Under Section 12.5.5 of the Agreement, the WRRB has sole responsibility for making a final determination with respect to a TAH for Wek'èezhìi.

<sup>11</sup> See Section 12.1.5 paragraphs (a) and (d) of the Tłıchq Agreement.

<sup>12</sup> See Section 12 of the Tłıchq Agreement.

<sup>13</sup> Department of Culture & Lands Protection, Tłıchq Government. 2014.

<sup>14</sup> As defined in the Tłıchq Agreement, "Parties" mean the Parties to the Agreement, namely the Tłıchq, as represented by the Tłıchq Government, the Government of the Northwest Territories and the Government of Canada.

The WRRB acts in the public interest. It is an institution of public government, which makes its decisions on the basis of consensus. Part 12.1 of the Tłıchq Agreement requires the coordination of the functions of governments (authorities whose responsibilities include wildlife management among other functions).<sup>15</sup> The WRRB works closely with Tłıchq 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 Tłıchq Agreement.<sup>16</sup> The rights of Tłıchq citizens to use wildlife for sustenance, cultural, and spiritual purposes are protected by the Tłıchq Agreement and the Constitution<sup>17</sup>, subject to the management framework set out in Chapter 12.

The WRRB is bound by the Tłıchq Agreement if it is contemplating any limitation to Tłıchq citizens' harvesting, including any limitation to the harvesting of Kqk'èetì ekwò. More specifically, Section 12.6.1 specifies that a TAH level shall be determined for conservation purposes only and only to the extent required for such purposes.<sup>18</sup> The Tłıchq 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 Tłıchq citizens' harvesting rights set out in the Tłıchq Agreement, the WRRB is also bound by the requirements of fairness. Section 12.3.10 gives the Board the authority to order a public 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 Kqk'èetì ekwò herd.

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<sup>15</sup> See Section 12.1.4 of the Tłıchq Agreement.

<sup>16</sup> See Section 12.1.1 of the Tłıchq Agreement.

<sup>17</sup> *Constitution Act*. 1982. Section 35.

<sup>18</sup> See Section 12.6.1 of the Tłıchq Agreement.



### 3.2. Rule for Management Proposals

Under Section 12.3.6, the WRRB has the authority to make rules respecting the procedure for making applications to the Board. The WRRB has developed a Rule for Management Proposals<sup>19</sup> as a guide for making management proposal submissions, including actions taken in the issuance of licences, permits and other authorizations.

Section 12.5.1 of the Tłıchq Agreement is mandatory. Except in an emergency situation as set out in 12.5.14, it requires that a Party, before taking “*any action for management of wildlife in Wek’èezhìi submit its proposals to the WRRB for review under 12.5.4*”. This section of the Agreement is intended to be broadly inclusive of wildlife management initiatives.

The WRRB, depending on the nature, content and context of a management proposal, will undertake one of three levels of review:

- Level 1 – will require Board or Board Staff (as directed by the Board) review but no public consultation;
- Level 2 – will require Board review and Board-led public consultation (no public hearing); or,
- Level 3 – will required Board review and Board-led public consultation with a public hearing.

Except where in the Board’s view the proposal will require the establishment of a TAH as stated in Section 12.3.10 of the Tłıchq Agreement, all submissions are treated initially as a Level 1 review. Following assessment, the Board has the discretion to increase the level of review as it deems appropriate. For Level 2 management proposals, the Board may establish a proceeding and an online public registry. Notification of the proceeding and a request for comments will be made via its website, newspaper, social media and radio advertisements with a reasonable period granted to allow affected stakeholders and the public to provide comment.

Following closure of the public comment period, the WRRB reviews and provides recommendations. Level 2 management proposals may require up to 90 days for consultation, review and response. As per Section 12.5.8 of the Tłıchq Agreement, the Board “*shall give public notice of their recommendations*” by posting them on their website ([www.wrrb.ca](http://www.wrrb.ca)).

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<sup>19</sup> <https://www.wrrb.ca/sites/default/files/REV%20FINAL%20Rule%20-%20Management%20Proposals%20-%2016oct18.pdf>.

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 legislation”*.<sup>20</sup> This framework and these relationships are central to effective wildlife management in Wek’èezhìi.

Following submission of its recommendations to a Party, the Board expects a response within 42 days of receipt of its recommendations for a Level 1 or Level 2 management proposal. Section 12.5.11 of the Tłıchq Agreement states that *“each Party with power under its laws to implement a recommendation of the WRRB made under 12.5.5, 12.5.6, 12.5.7, 13.4.1 or 14.4.1 shall accept, reject or vary such recommendation”*. A Party must tell the Board whether its recommendation has been accepted. If a recommendation is varied, the Party must provide reasons for that decision, and, in addition, provide the change in wording so that the Board and all affected persons are clear about the final outcomes of the Board proceeding and necessary implementation actions. This ensures clarity with respect to the obligations under Section 12.5.12 of the Tłıchq Agreement, that *“each Party shall, to the extent of its power under legislation or Tłıchq laws, establish or otherwise implement a) a determination of the WRRB under 12.5.5 or 12.5.6; and b) any recommendation of the Board as accepted or varied by it”*.

If a recommendation is rejected, the Party must provide specific reasons and an explanation of why the rejection has occurred.

#### **4.0. Previous WRRB ʔekwò Determinations & Recommendations**

The objective of Chapter 12, Wildlife Harvesting Management, of the *Tłıchq Agreement* is to recognize the importance of wildlife and its habitat to the Tłıchq First nation well-being, way of life and land-based economy.<sup>21</sup> The WRRB takes this objective seriously while making its decisions. The Board also acknowledges the tremendous importance that Kòk’èetì ekwò play in the language, culture, and way of life of the Tłıchq people. The Board has kept this in mind over the last 14 years, since receiving the first management proposal for Kòk’èetì ekwò, by making determinations and recommendations using scientific and Tłıchq knowledge. Outlined below are the Board’s determinations and recommendations from the 2007, 2010, and 2016 proceedings to demonstrate the effort the WRRB has put in to halt the decline of Kòk’èetì ekwò.

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<sup>20</sup> See Sections 12.5.11 and 12.5.12 of the Tłıchq Agreement.

<sup>21</sup> See Section 12.1.1 of the Tłıchq Agreement.

#### 4.1. 2007 Proceeding

In June 2006, GNWT conducted a calving ground photographic survey and estimated the Kòk'èetì ekwò herd size was about 128,047 ʔekwò. The WRRB became fully operational in August 2006 and received its first management proposal, entitled *“Bathurst Caribou Herd Harvest Reductions”* from the GNWT on December 14, 2006 to reduce Kòk'èetì ekwò herd harvest levels. The proposed management actions, based on the 2006 calving ground photographic survey results, were intended to limit the harvest to 4% of the 2006 estimated herd size for a total of 5120 Kòk'èetì ekwò. This included eliminating all commercial meat tags held by Tłıchq communities, reducing the number of tags for non-resident and non-resident alien hunters from 2 to 1, and reducing tags for all outfitters from 1559 to a total of 350.

Due to the significance of the management actions proposed, and the fact that the WRRB, as a new organization, had not yet heard from other Parties affected by the Department of Environment and Natural Resources (ENR), GNWT proposal, the Board decided to conduct a public hearing in March 2007 before making any decisions on the proposal. The WRRB held the public hearing on March 13-14, 2007 in Behchokò, NT. Once the evidentiary phase of the proceeding was completed, the Board decided to adjourn the proceeding in order to give ENR and the Tłıchq Government time to initiate a consultation process.

On April 17, 2007, the Minister of ENR advised the Tłıchq Government and the WRRB that the Big Game Hunting Regulations had been amended to reduce the number of tags available for outfitted hunts for ʔekwò in Unit “R” to 750 for the 2007 season. The letter noted that this decision was made under the authority of Section 12.5.14 of the Tłıchq Agreement as ENR considered its action necessary due to an emergency situation regarding declining populations of the ʔekwò.

On May 30, 2007 and June 4, 2007 respectively, the Tłıchq Government and ENR submitted letters to the Board indicating that they were making substantial progress but required an extension to September 28, 2007 in order to develop a new joint ʔekwò management proposal. The WRRB was concerned that any further adjournments could adversely affect the interests of other Parties affected by the proposal. ENR had already taken steps to implement portions of its proposal on the grounds that an emergency situation existed. Further extension of the proceeding to accommodate consultation which, in the Board's view should have taken place before the proposal was advanced, seemed inconsistent with the urgency asserted by ENR. For these reasons, the WRRB decided not to grant a further adjournment of its proceeding.

Based on the WRRB's review of the evidence presented during the proceedings, the Board recommended that ENR's proposal to undertake management actions to reduce

the harvest of the Bathurst Ɂekwò herd not be implemented as submitted. The WRRB strongly encouraged ENR and the Tłıchǵ Government to continue their consultations towards the development of a Joint Proposal for the management of the Bathurst Ɂekwò herd. Additionally, the WRRB indicated that any future management actions that propose to limit any component of the harvest to a particular number, including zero, would be treated as a proposal for the establishment of a TAH.

Additional details of the 2007 proceeding can be found in Appendix B.

#### **4.2. 2010 Proceeding**

In June 2009, GNWT conducted a calving ground photographic survey and estimated the Kòk'èetì ekwò herd size was about 31,900 Ɂekwò. On November 5, 2009, TG and GNWT submitted a *Joint Proposal on Caribou Management Actions in Wek'èezhìi*, which proposed nine management actions and eleven monitoring actions, including harvest limitations, for the Kòk'èetì, Sahtì and Beverly/Ahiak ekwò 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 harvesting. All other proposed actions were addressed through written submissions to the Board. Originally scheduled for January 11-13, 2010, the public hearing on Action 1 to 5 took place March 22-26, 2010 in Behchokò, 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'èezhìi*. This revised proposal changed the original management and monitoring actions and incorporated an adaptive co-management framework and rules-based approach to harvesting levels. 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 Behchokò, 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.<sup>22</sup> Many of the recommendations were related to the Kòk'èetì ekwò herd and relevant management actions vital for herd recovery, including harvest restrictions. The Board also made harvest recommendations for the Sahti ekwò and Beverly/Ahiak ekwò herds.

The Board recommended a harvest target of 300 ( $\pm$  10%) Kòk'èetì ekwò per year for harvest seasons 2010/11, 2011/12, and 2012/13 in Wek'èezhìi. Further, the Board recommended that the ratio of bulls harvested to cows should be 85:15. Although the evidence suggested that even if all harvest of the Kòk'èetì ekwò herd stopped there was no guarantee that the herd would stabilize and begin to grow, the Board concluded that a limited harvest of 270-330 Kòk'èetì ekwò with 60 or fewer cows was an appropriate management option to help Indigenous peoples maintain important cultural linkages with ʔekwò while minimizing the impact of harvest on the herd. Additionally, the WRRB recommended that all commercial, outfitted and resident harvesting of the Sahti ekwò herd in Wek'èezhìi be set to zero.

The WRRB made additional ʔekwò management and monitoring recommendations to TG and GNWT, specifically implementation of detailed scientific and Tł̨chq̨ knowledge (TK) 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 ʔekwò during calving and post-calving, including the consideration of implementing mobile ʔekwò protection measures, and for monitoring landscape changes, including fires, industrial exploration, and development, to assess potential impacts to ʔekwò habitat.

The Board recommended that the harvest of d̨iga should be increased through incentives but that focused d̨iga control not be implemented. The Board understood if TG and GNWT were to plan for focused d̨iga 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 Kòk'èetì, Sahti and Beverly/Ahiak ʔekwò herds; the establishment and allocation of a harvest target for the Kòk'èetì ekwò 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

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<sup>22</sup> PR (BATH 2019): 037 - Report on a Public Hearing Held by the Wek'èezhìi Renewable Resources Board 22-26 March 2010/5-6 August 2010 Behchokq̨, NT.

(BGCTWG); the ongoing discussions with the Government of Nunavut (GN) to identify opportunities for calving ground protection; the collaborative work to meet the obligations of Section 12.11 of the Tłıchq Agreement; the hiring of a TG Wildlife Coordinator to increase capacity to ensure full participation in monitoring and management of Ɂekwò; the removal of GNWT's Emergency Interim Measures following the implementation of recommendations by January 1, 2011; the consultation with Tłıchq 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'èezhì; the negotiation of harvesting overlap agreements with the Sahtú and Nunavut; the implementation of the *Special Project, Using Tłıchq Knowledge to Monitor Barren Ground Caribou* of the overall Tłıchq Research and Monitoring Program; the implementation of TK and scientific Ɂekwò 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'èezhì.

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

#### **4.3. 2016 Proceeding**

In June 2015, GNWT conducted a calving ground photographic survey and estimated the Kòk'èetì ekwò herd had declined to 19,769 Ɂekwò. In December 2015, TG and GNWT submitted the *Joint Proposal on Caribou Management Actions for the Bathurst Herd: 2016-2019* to the Board outlining proposed management actions for the Kòk'èetì ekwò herd in Wek'èezhì, including new restrictions on hunter harvest, predator management, and ongoing monitoring. More specifically, TG and GNWT proposed implementing a herd wide TAH of zero Ɂekwò and conducting a feasibility assessment of a full range of dıga 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 February 23-24, in Yellowknife, NT.

In order to allow careful consideration of all the evidence on the record and to meet deadlines for legislation to implement a Board decision, 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 dıga

feasibility assessment. The second report, Part B, dealt with additional predator management actions, biological and environmental monitoring, and cumulative effects.

On May 26, 2016, the WRRB submitted its final determinations and recommendations and Part A Reasons for Decision Report to TG and GNWT.<sup>23</sup> The WRRB determined that a TAH of zero Ɂekwò should be implemented for all users of the Kòk'èetì ekwò herd within Wek'èezhìi for the 2016/17, 2017/18, 2018/19 harvest seasons.

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 and timely implementation of hunter education programs for all harvesters of the Kòk'èetì ekwò herd.

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 GNWT. The Board continued to support the implementation of the Community-based Dìga Harvesting Project as a training program, subject to several conditions

On September 27, 2016, the WRRB submitted its final recommendations and Part B Reasons for Decision Report to TG and GNWT.<sup>24</sup> The WRRB recommended consultations with Tłıchq communities to determine a path forward for implementation of Tłıchq laws to continue the Tłıchq way of life and maintain their cultural and spiritual connection with Ɂekwò.

In addition, the WRRB recommended several TK research and monitoring programs focusing on dìga, *Sahcho* (grizzly bear), stress and other impacts on Ɂekwò 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 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 Tłıchq Land Use Plan Directives as well as completing a Land Use Plan for the remainder of Wek'èezhìi. In addition, the completion of the Bathurst Caribou Range Plan and the long-term Bathurst Caribou

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<sup>23</sup> PR (BATH 2019): 040 - Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part A.

<sup>24</sup> PR (BATH 2019): 041 - Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part B.

Management Plan were requested with measures to be implemented in the interim to provide guidance to users and managers of the Kòk'èetì ekwò herd range.

The Board also recommended the development of criteria to protect key ʔekwò habitat, including *Nqʔokè* (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 continued refinement of the Inventory of Landscape Change, the integration of Wildlife and Wildlife Habitat Protection Plans and Wildlife Effects Monitoring Programs objectives for monitoring the effects of development on ʔekwò in Wek'èezhìi, and the development of monitoring thresholds for climate indicators

Of the one determination made by the Board and 25 recommendations accepted or varied by TG and GNWT, only the determination and seven recommendations have been fully implemented. Specifically, the establishment of a zero harvest for the Kòk'èetì ekwò herd; the establishment and implementation of the Mobile Core Bathurst Caribou Conservation Area (MCBCCA); the regular provision of updates on aerial and ground-based compliance surveillance of the Kòk'èetì ekwò herd; the implementation of the GNWT's Hunter Education Program; the completion of a collaborative feasibility assessment of options for dīga management; the completion of the Bathurst Caribou Range Plan (BCRP); the update and refinement of the Inventory of Landscape Change; and, the completion and implementation of the Wildlife Management and Monitoring Plan guidelines.

The remaining accepted recommendations appear to the Board to be incomplete, including providing regular harvest updates; conducting TK research on sahcho predation on ʔekwò, and their relationship with ʔekwò, other wildlife and people; conducting a collaborative sahcho biological assessment; conducting TK research about stress and impacts on ʔekwò 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'èezhìi; investigating the potential use of offsets for ʔekwò recovery; conducting a TK monitoring project with elders to document how climate conditions have affected preferred summer forage and impacted ʔekwò fitness; and developing monitoring thresholds for climate indicators.

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

## 5.0. Summary of 2019 Wildlife Management Proposal and Board Process

On January 22, 2019, the TG and GNWT submitted the “*Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021*” to the Board outlining proposed management actions for the Kòk’èetì ekwò herd in Wek’èezhì.<sup>25</sup> 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 GNWT proposed the following:

- Harvest: maintaining a TAH of zero (0) for Kòk’èetì ekwò; continuing use of the MCBCCA; continuing regular aerial and ground-based surveillance of the MCBCCA through the fall and winter seasons; maintaining frequent contact with Government of Nunavut regarding harvest of Kòk’èetì ekwò in Nunavut;
- Predators: submitting a separate TG-GNWT joint management proposal on reduction of *dìga* numbers on the Sahtì and Kòk’èetì ekwò herd ranges; increasing incentives for *dìga* harvesters in an area centered on the collar locations of wintering Kòk’èetì ekwò; continuing to develop a program to train *dìga* harvesters using culturally acceptable methods on the winter range; collaborating with GN about predator management;
- Habitat & Land Use: finalizing, endorsing and implementing the Bathurst Caribou Range Plan (BCRP) by 2019; supporting Indigenous governments and organizations to conduct additional work to identify key landscape features and areas of significance to ʔekwò in order to better conserve and manage ʔekwò habitats;
- Education: increasing education and public awareness to improve knowledge of ʔekwò, promoting respectful hunting practices to reduce wastage and wounding; expanding TG on-the-land programs focused on continued use and maintenance of traditional sites and trails; and,
- Research & Monitoring: increasing biological monitoring of the Kòk’èetì ekwò 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 ʔekwò; supporting the expansion of the Tł̨chq̨ Ekwò Nàxoède K’è (formerly the Boots on the Ground) program; supporting continued research into factors contributing to ʔekwò declines.

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<sup>25</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

The Board initiated its 2019 Bathurst 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 for the Kòk'èetì ekwò herd was provided to potentially interested organizations in and out of Wek'èezhì via email, WRRB website, social media and radio. The WRRB requested parties to provide written comments on the Joint Management Proposal by March 15, 2019.

The Board received a letter from the Minister of ENR on February 26, 2019, which requested parties on the distribution list to provide written comments on the Joint Management Proposal by April 5, 2019. As such, on March 4, 2019, the WRRB gave notice of its revised proceeding schedule, extending its public comment period to April 5, 2019. The Board received public comment from Canadian Arctic Resources Committee (CARC) on January 29, 2019, Alternatives North on February 27, 2019 and the Łutsel K'e Dene First Nation (LKDFN) on April 5, 2019.

On March 14, 2019, a letter was sent to the Nunavut Wildlife Management Board (NWMB) informing them of the WRRB's Kòk'èetì ekwò proceeding. Since the Kòk'èetì ekwò herd is a migratory species that moves between the Northwest Territories and Nunavut, the WRRB is requested that the NWMB identify whether further consultation by the Board was required prior to a final decision on TG and GNWT's joint management proposal. Additionally, the NWMB was requested to update the WRRB on any processes related to the Kòk'èetì ekwò herd that were underway in Nunavut. To date, no response has been received.

The proceeding was conducted in accordance with the WRRB's *Rules of Procedure, June 14, 2017*.<sup>26</sup> The Board requested that GNWT provide a compilation of any comments received through its consultations by April 10, 2019. The GNWT confirmed that no comments were received in response to their consultation letter on April 12, 2019. As such, the public record was closed on April 12, 2019.

Throughout the proceeding, GNWT assured the WRRB that submission of the 2018 Bathurst Caribou Calving Ground Survey Report was imminent. Unfortunately, as of June 7, 2019, the report was not available from the GNWT; therefore the WRRB adjourned the 2019 Bathurst Caribou Herd Proceeding until July 19, 2019 to allow GNWT the time necessary to complete and provide the 2018 Bathurst Caribou Calving Ground Survey Report. The report was provided to the WRRB on July 17, 2019.

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<sup>26</sup> [https://wrrb.ca/sites/default/files/WRRB%20Rules%20of%20Procedure%2014jun2017\\_1.pdf](https://wrrb.ca/sites/default/files/WRRB%20Rules%20of%20Procedure%2014jun2017_1.pdf).

The Board reopened the record in this proceeding to post the 2018 Bathurst Calving Ground Survey Report as well as additional documents to the registry to assist with the completion of the final Reasons for Decision Report.

The public record was closed again on September 3, 2019 and the WRRB's deliberations followed.

## **6.0. Is there a Conservation Concern for the Kòk'èetì Ekwò Herd?**

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

During its 2016 Kòk'èetì ekwò proceeding, the Board repeatedly heard from governments, communities and members of the public of their concerns over the continued decrease of the Kòk'èetì ekwò herd, including recognition of the rapid rate of the decline. Vital rates associated with the herd, including the cow survival rate, calf recruitment, and pregnancy rate, all indicated that the herd would likely continue to decline. Despite the uncertainty, GNWT noted that to facilitate herd recovery and to once again provide harvesting opportunities for traditional users, that *"timely conservation-based management actions are needed"*.<sup>27</sup> Additionally, TG stated that *"in a time of crisis for caribou – closure of Aboriginal harvesting of caribou ... are difficult but necessary actions"*.<sup>28</sup>

Despite all of the management actions taken over the past 12 years, the Kòk'èetì ekwò herd is still declining, and recovery of the herd remains uncertain. Additionally, in 2016, the Committee on the Status of Endangered Wildlife in Canada assessed Ɂekwò as Threatened. The status of Ɂekwò under federal Species at Risk legislation is currently under review. Within the NWT, Ɂekwò 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.<sup>29</sup> A draft Ɂekwò recovery strategy is currently undergoing public review.

The Board also notes that there is no current management or action plan for the Kòk'èetì ekwò herd. The Bathurst Caribou Advisory Committee (BCAC) was established in 2016 to advise on the management of the Kòk'èetì ekwò herd and its habitat,

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<sup>27</sup> PR (BATH 2019): 040 – Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part A.

<sup>28</sup> Ibid.

<sup>29</sup> <https://www.nwt-species-at-risk.ca/species/barren-ground-caribou>.

including addressing and reconciling the various factors affecting the herd, including harvest, predation, environmental conditions, and land disturbance. In May 2019, the BCAC hired a technical writer to prepare a management plan as well as an action plan to implement the actions outlined in the management plan. At this time, a draft is not yet available.

The Kqk'èetì ekwò herd continues to decline at a rapid rate. ʔekwò have been both nationally and territorially assessed as threatened as well as listed as threatened in the Northwest Territories. Currently, there are no recovery documents available nor any management or action plans in place. Therefore, the WRRB continues to believe that there is a serious conservation concern for the Kqk'èetì ekwò herd.

## **7.0. WRRB's Recommendations**

### **7.1. Introduction**

The WRRB is highly concerned about the need for effective and timely actions and this was a substantial consideration in the development of the determinations and recommendations outlined in this report.

Consistent with the requirements of the Tłıchq Agreement, the WRRB is taking a precautionary approach<sup>30</sup> 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 ʔekwò survival rates.

While the WRRB was previously most concerned about harvest and predation reducing Kqk'èetì ekwò survival, the Board is now also concerned with the need for a precautionary approach to management given that the rapid decline has partly been caused by the emigration of cows abandoning their traditional Kqk'èetì ekwò calving ground. The Board also recognizes the importance of a healthy habitat, efficient and effective monitoring that can 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. In particular, the WRRB is concerned that the need to protect calving cows and newborn calves is more essential than ever.

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<sup>30</sup> Section 12.1.5(c) of the Tłıchq Agreement.



## 7.2. Harvest & Harvest Monitoring

### 7.2.1. Introduction

A TAH is defined in the Tłıchq Agreement, “*in relation to a population or stock of wildlife, the total amount of that population or stock that may be harvested annually*”. Section 12.5.5(a)(i) of the Tłıchq Agreement sets out that the WRRB has sole responsibility for making a final determination with respect to a TAH for Wek’èezhì.<sup>31</sup>

In 2016, the Board had determined that the seriousness of the Kqk’èetì ekwò herd’s decline warranted a TAH of zero in Wek’èezhì for the 2016/17, 2017/18, and 2018/19 harvest seasons despite the difficulties this was sure to cause for people. However, the zero TAH has not been accompanied by a halt in the decline and, in 2019, TG and GNWT proposed continuing the zero harvest of Kqk’èetì ekwò. A difficulty in enforcing the harvest restriction is that, in some winters, Ɂekwò from neighboring herds may overlap with the Kqk’èetì ekwò herd. GNWT and TG proposed in 2016 and again in 2019 that a core mobile zone was the most effective way to differentiate between Ɂekwò herds when their winter distribution overlapped.

### 7.2.2. Proponent’s Evidence

The Joint Proposal compared the 2015 and 2018 estimates of herd size based on calving ground aerial photographic surveys to report an accelerated decline in the Kqk’èetì ekwò herd size. The herd has declined by half from 19,769 in 2015 to 8,207 in 2018. Therefore, the rate of decline from 2015 to 2018 is approximately 29% a year.<sup>32</sup> Given the current herd size and rate of decline, TG and GNWT proposed to maintain the zero TAH and to rely on the MCBCCA.

TG and GNWT outlined in the Joint Proposal that currently, adaptive management is used in managing the MCBCCA. Established in 2011, the Barren-ground Caribou Technical Working Group (BGCTWG), which reviews annual biological monitoring information, is composed of representatives from TG, GNWT and the WRRB.<sup>33</sup> The BGCTWG is responsible for managing the MCBCCA, including developing and implementing the “*Rules for Definition of the Mobile Core Bathurst Caribou Conservation Area*” The Rule includes specific thresholds where changes to the MCBCCA are made, and the rule is updated annually. The current rule, revised in November 2018, recommends that 40 or more collars should be placed on the Kqk’èetì

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<sup>31</sup> Section 12.5.5(a)(i) of the Tłıchq Agreement.

<sup>32</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>33</sup> PR (BATH 2019): 037 - Report on a Public Hearing Held by the Wek’èezhì Renewable Resources Board 22-26 March 2010/5-6 August 2010 Behchokò, NT.

ekwò herd to define its distribution for purposes of the mobile zone and that TG and GNWT should jointly evaluate effectiveness of the Mobile Core Area in 2019.<sup>34</sup>

The Joint Proposal states that *“the current small and declining number of mature ʔekwò in the Bathurst herd is a critical conservation status that requires implementation of an integrated suite of recovery management actions that continue and support the Total Allowable Harvest (TAH) of zero (0) established in 2016 (Determination #1-2016 in WRRB 2016a) along with enhanced monitoring.”*<sup>35</sup>

The Joint Proposal lists that the key population processes in the Kòk'èetì ekwò herd that have likely contributed to its continued rapid decline are:

- 1) relatively low rates of survival (i.e. high rates of mortality) in adult female ʔekwò; and
- 2) low and variable rates of productivity that generally reflect a combination of low fecundity and poor calf survival rates (i.e. calf recruitment).<sup>36</sup>

The Joint Proposal also mentions as a third factor the emigration of cows from the Kòk'èetì ekwò calving ground.

TG and GNWT recommend that the TAH for the Kòk'èetì ekwò herd remain at zero in the Northwest Territories, and be reviewed within two years, following completion of the next Kòk'èetì ekwò herd calving ground survey and analyses of available demographic data (as per WRRB Determination #1-2016; WRRB 2016a).

TG and GNWT recommend the continuation of the MCBCCA as the means for managing and implementing the TAH of zero for the Kòk'èetì ekwò herd.

### **7.2.3. Other Parties' Evidence**

Alternatives North stated that they couldn't find evidence that the TAH of the Kòk'èetì ekwò herd is zero.<sup>37</sup> They noted that there is no assessment for the accuracy of reporting numbers in sex and composition of harvested Sahtì ekwò from the overlapping range; as such, it is most likely that Kòk'èetì ekwò are getting harvested as well.<sup>38</sup>

*“Given the state of the Bathurst Herd, we ask the Board to ensure much more clarity and certainty that harvest of these animals is actually zero, or what the*

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<sup>34</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021. Appendix A.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> PR (BATH 2019): 006 - Alternatives North Submission to 2019 Bathurst Caribou Proposal.

<sup>38</sup> Ibid.

*sex, age and size of the unintended harvest is. These numbers should be compiled and publicly reported.”<sup>39</sup>*

CARC believes that reliance upon the untested MCBCCA as a method to control harvest is ineffective. CARC identified the vulnerability to errors due to the proponent’s identification of “few Bathurst or Bluenose-East caribou were taken”.<sup>40</sup>

LKDFN does not believe subsistence harvesting is the cause of the rapid decline, as the harvest restrictions were put in place almost 10 years ago and the decline of the Kòk’èetì ekwò herd is still increasing.<sup>41</sup> LKDFN stated that GNWT does not report the effectiveness of the zero TAH or the MCBCCA.<sup>42</sup> LKDFN requests that this information become available in order to ascertain the effectiveness. Based on information from LKDFN environmental monitor reports from early March 2019, Kòk’èetì ekwò were being killed on the boundary of the MCBCCA and the ice road.<sup>43</sup> This creates issues as the GNWT can’t check carcasses of already deceased animals and cannot stop people from using the ice road. LKDFN would like to see the TAH of zero continue to be enforced for the next two years and carried over across the border into Nunavut as well.<sup>44</sup>

#### **7.2.4. Analysis and Recommendation**

The evidence available to the Board is that the decline of the Kòk’èetì ekwò herd has accelerated since 2015 and that the underlying mechanisms have changed and become more complex. The evidence for the decreasing trend in herd size is from population estimates from aerial photographic and visual surveys over the Kòk’èetì ekwò herd’s calving grounds in 2015 and 2018.<sup>45</sup> The Board finds that the survey methods and analyses for estimated herd size are clear and consistent with previous surveys.

The 2018 calving ground survey report concluded that adult cow survival was low, and that productivity was low and annually variable.<sup>46</sup> However, the 2019 Joint Proposal only used information up to 2015.<sup>47</sup> More recent information and analyses became

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<sup>39</sup> PR (BATH 2019): 006 - Alternatives North Submission to 2019 Bathurst Caribou Proposal.

<sup>40</sup> PR (BATH 2019): 004 - CARC to WRRB Re: Joint Management Proposal for Bathurst Caribou.

<sup>41</sup> PR (BATH 2019): 012 - Łutsel K’e Dene First Nation Submission to 2019 Bathurst Caribou Proposal.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

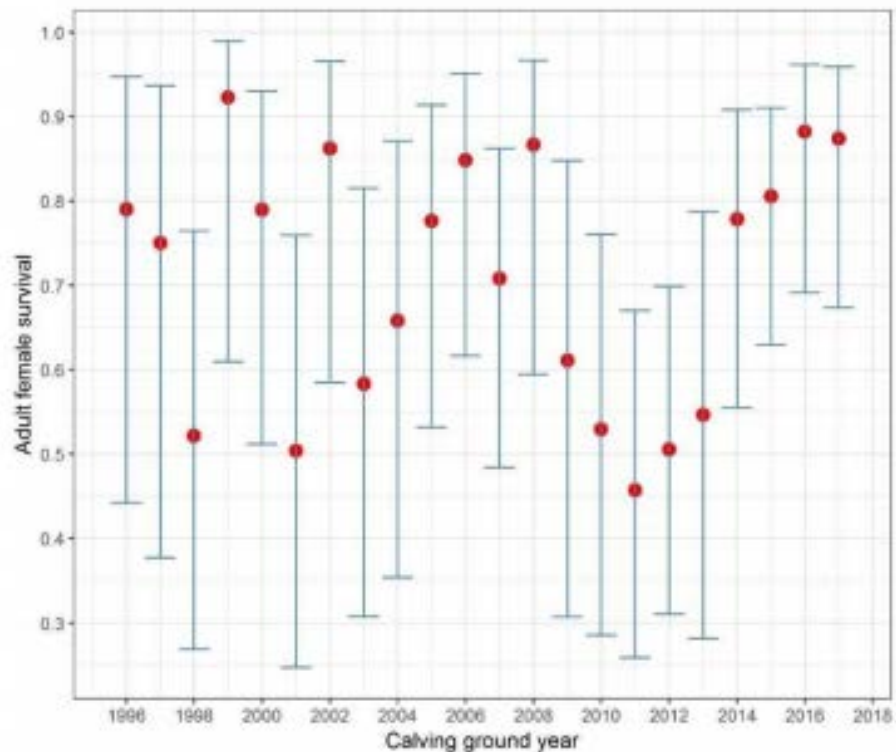
<sup>44</sup> Ibid.

<sup>45</sup> PR (BATH 2019): 020 – An Estimate of Breeding Females and Analyses of Demographics for the Bluenose-East Herd of Barren-ground caribou: 2015 Calving Ground Photographic Survey; and PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>46</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>47</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

available in July 2019 as part of the June 2018 calving ground survey report which showed that survival rates for adult cows have increased since 2015.<sup>48</sup> As illustrated in Figure 3 for 2015-2018, adult cow survival averages 85% a year which is close to the 88% required for a stable herd when productivity (pregnancy rate and calf survival) is 0.31 (the average for 2015-2017).<sup>49</sup> The WRRB notes that adult cow survival has improved since 2015 and the season of mortality has shifted from the summer to the winter (Figure 4).

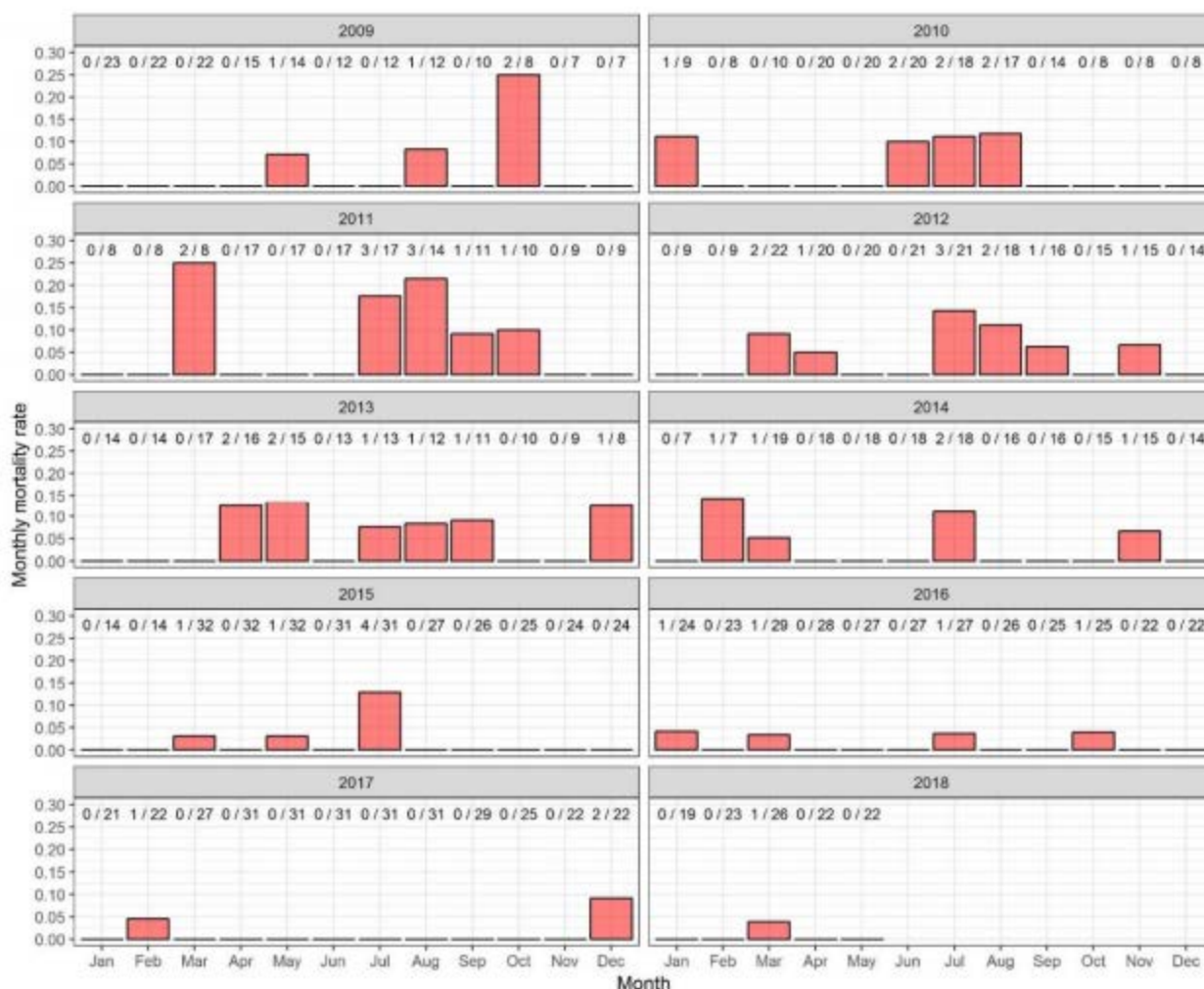


**Figure 3. Annual Survival rate estimates 1996-2018 for Kòk'èetì Ekwò adult females based on collared female ɤekwò.<sup>50</sup>**

<sup>48</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.



**Figure 4. Summary of monthly collared cow mortality data for Kòk'èetì Ekwò 2009-2018.<sup>51</sup>**

In summary, while adult cow survival has increased since 2015, the Joint Proposal indicates that fecundity (percentage of breeding aged cows that calve) and calf survival are still less than that needed for recovery of the herd.<sup>52</sup> In addition, emigration has become a factor in the accelerated decline. Although the Joint Proposal acknowledged a role for emigration, analyses were not included but became available in July 2019.<sup>53</sup>

In June 2018, the Kòk'èetì ekwò calving ground, for the first recorded time since about 1990, had low densities on either side of Bathurst Inlet. 2018 was also the first year that

<sup>51</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>52</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>53</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

3 of the 11 collared cows, identified as Kqk'èetì ekwò cows based on their 2017 calving location, moved to the neighboring Beverly/Ahiak's calving ground.<sup>54</sup> Subsequently, one of these cows died in July and the other two cows stayed with the Beverly/Ahiak herd. In June 2019, three different cows (of 17 cows collared) with previous calving locations on the Kqk'èetì ekwò calving ground moved to and calved on the Beverly/Ahiak herd's calving ground.<sup>55</sup>

GNWT used both computer modelling and field data to report on how the aforementioned emigration may represent almost a third of the breeding cows in 2018 emigrating to the Beverly/Ahiak calving ground.<sup>56</sup> The Board concludes that this emigration is contributing to the rate of decline for the Kqk'èetì ekwò herd. The Board does question however, the harvest levels used in modelling, which are a constant rate for 2010 to 2018 of 5 cows and 70 bulls compared to 5000 cows and 2000 bulls for 2001 to 2009.<sup>57</sup>

The Board acknowledges the encouraging trend for 2015-2017 in increased survival of adult cows but notes that pregnancy and calf survival vary annually. Given the continued decline and very small size of the Kqk'èetì ekwò herd, and despite the uncertainty about under-lying causes and the implications of emigration, the Board has no evidence to revise its 2016 determination for the zero TAH.

<b>Determination #1-2019 (Kqk'èetì Ekwò): Total Allowable Harvest</b>
The Board determines that a TAH of zero for all users of the Kqk'èetì ekwò herd for 2019/20 and 2020/21 harvest seasons. For further clarification, the absolute number of ekwò that can be harvested from the Kqk'èetì ekwò herd in Wek'èezhì is zero.

The TG and GNWT Joint Proposal did not include evidence on the effectiveness of monitoring the zero TAH. While the Joint Proposal did acknowledge that *“few Bathurst or Bluenose-East Caribou were taken (based on the locations of reported kills relative to distributions of collared ?ekwò)”*<sup>58</sup> but no details were provided or referenced. The Joint Proposal did not provide a summary or reference to reports about the effectiveness of community monitors, check stations, patrols or monitoring results for the MCBCCA. The Joint Proposal also did not summarize or refer to evidence about the frequency and extent of overlap in neighboring herd's wintering distribution.

<sup>54</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>55</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021. Appendix A.

The Joint Proposal's lack of evidence for the effectiveness of the harvest monitoring and whether the MCBCCA reduces the risk of inadvertent harvesting creates difficulties for the WRRB. Of particular concern is that the Joint Proposal does not assess or reference assessments of the annual degree of overlap of neighboring herds during the winter, which may increase the risk of inadvertent harvest of Kòk'èetì ekwò. The Board is aware that given the herd's current low numbers and high rate of decline, even a low number of Ɂekwò inadvertently harvested could increase risk to the Kòk'èetì ekwò herd. The Board also notes that LKDFN and CARC questioned the effectiveness of the MCBCCA.<sup>59</sup>

While the Board notes that TG and GNWT propose to evaluate the MCBCCA and to report to WRRB sometime in 2019, the Board needs to be confident that the evaluation will meet the Board's concerns. To be specific, the Board has two concerns:

- I. The annual variation and any trends in the extent and definition of the overlap in the winter distribution of neighboring herds; and,
- II. How the community-based harvest monitoring and check stations are integrated into describing the effectiveness of the MCBCCA.

<p><b>Recommendation #1-2019 (Kòk'èetì Ekwò): Effectiveness of Mobile Zone</b></p> <p>To determine if the MCBCCA is functioning as intended, GNWT and TG will analyze the extent of overlap of neighboring herds during early to late winter in order to complete a quantitative assessment to evaluate the effectiveness of the MCBCCA and the risk of inadvertent harvesting of Kòk'èetì Ekwò and report to the WRRB with this assessment by February 1, 2020.</p>
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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 Ɂekwò are abundant around the community, harvest monitors can be overworked, which can be a safety concern.

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<sup>59</sup> PR (BATH 2019): 012 - Łutsel K'e Dene First Nation Submission to 2019 Bathurst Caribou Proposal; and PR (BATH 2019): 004 - CARC to WRRB Re: Joint Management Proposal for Bathurst Caribou.

<b>Recommendation #2-2019 (Kòk'èetì Ekwò): Community Monitors</b>
To utilize the expertise of harvesters to monitor any inadvertent harvest of Kòk'èetì ekwò, TG will hire up to four community monitors per community to collect and report on harvest data monthly throughout the 2019/20 and 2020/21 harvest seasons.

### 7.3. Predators and Emigration

#### 7.3.1. Introduction

ʔekwò have always been subject to predation, but during a decline, the role of predators can become a contributing factor to the decline. While most of the attention is often focused on dīga as they follow the ʔekwò year round, sahcho are also effective predators, especially on the calving grounds and during the summer. Nògha and golden det'òcho are also predators for ʔekwò but are rarely the focus of wildlife management. Predation of ʔekwò has been a recurring theme in the Board's proceedings since 2010 as elders, managers, and the public have sometimes held divergent views on managing predation.

In addition to the problems posed by predation, emigration of caribou to neighbouring herds is a new and compounding factor. The TG and GNWT Joint Proposal outlines that Kòk'èetì ekwò emigration to neighboring herd's calving grounds started in 2018 after the herds had shared their winter range.<sup>60</sup> Just over a quarter of the collared cows emigrated in 2018, and then again in 2019, which suggests that emigration is a factor in the accelerated rate of decline and also, likely a consequence of the severity of the decline itself.<sup>61</sup> Typically, cows calve together on the traditional calving ground because there is protection from predators by being together; strength in numbers. For the Kòk'èetì ekwò herd, the number of cows on the calving ground is now so reduced that it is feasible to think that some cows are seeking this protection by moving to neighboring herd's calving grounds. It is worth remembering that in 2010 and 2016 hearings, emigration was discussed at length.

In May 2010, TG and GNWT recommended a targeted increase in dīga removal from about 40 dīga to 80-100 a year using a phased approach. This included increased hunting and trapping effort, and a wolf removal program if harvesting did not meet the annual dīga harvest targets and the Kòk'èetì ekwò herd continued to decline.<sup>62</sup> The removal program was to be focused at den sites and on the winter range, and included developing survey and monitoring methodology as well as experimental design for

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<sup>60</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>61</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>62</sup> PR (BATH 2019): 037 - Report on a Public Hearing Held by the Wek'èezhìi Renewable Resources Board 22-26 March 2010/5-6 August 2010 Behchokò, NT.



removal of dīga on the winter range and at den sites by fall 2010.<sup>63</sup> The WRRB recommended the training and incentives for the harvesting but not the targeted removals.

During the 2016 public hearings, the public expressed frustration over the failure to manage predation while harvest was so strictly restricted.<sup>64</sup> The Board supported community-based dīga harvesting as a training program.<sup>65</sup> By November 2017, as a collaborative effort, a technical feasibility assessment for dīga management options was completed and made available to the public through WRRB's web site.<sup>66</sup>

### **7.3.2. Proponent's Evidence**

The Joint Proposal suggests that the accelerated decline of the Kōk'èetì ekwò herd, despite the zero TAH, likely reflects predation reducing calf and adult survival.<sup>67</sup> However, evidence of this in the 2019 Joint Proposal is limited. The trend for Kōk'èetì ekwò numbers is based on calving ground surveys and included the 2018 data. The data for adult and calf survival in the proposal were only up to 2015 and the Board had to wait until July 2019 to see the most recent data and analysis.

The 2019 Joint Proposal lists five proposed management actions for dīga:

- (a) Joint dīga management proposal for Kōk'èetì and Sahtì ekwò ranges;
- (b) Continued TG program to train dīga harvesters;
- (c) Kōk'èetì ekwò dīga management feasibility assessment 2017;
- (d) Increased GNWT incentives for dīga harvesters; and,
- (e) Collaboration between NWT and NU managers about predator management.<sup>68</sup>

Three of these proposed actions, (b), (c) and (d) above, were carried over from 2010 and 2016. An additional proposed action is that TG and GNWT will provide a dīga management proposal in 2019 to recommend increasing the dīga harvest using more intensive dīga management techniques to a level that will influence ʔekwò survival rates.<sup>69</sup> A second additional proposed action is that GNWT and TG are continuing on-

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<sup>63</sup> PR (BATH 2019): 037 - Report on a Public Hearing Held by the Wek'èezhì Renewable Resources Board 22-26 March 2010-5-6 August 2010 Behchokò, NT.

<sup>64</sup> PR (BATH 2019): 040 – Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part A.

<sup>65</sup> Ibid.

<sup>66</sup> PR (BATH 2019): 038 - Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd.

<sup>67</sup> Ibid.

<sup>68</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>69</sup> Ibid.

going discussions with Nunavut over predator management on the Kqk'èetì ekwò range.<sup>70</sup>

The Joint Proposal states that there have been a series of discussions between the GNWT and GN about the potential for collaboration centered on predator reduction on the Nunavut ranges of the Kqk'èetì and Sahtì ekwò herds. As the GNWT, TG, WRRB and other management organizations in the NWT have no management authority in Nunavut, potential predator management would need to consider the rights of Nunavut harvesters and Nunavut wildlife management processes.

### **7.3.3. Other Parties' Evidence**

Alternatives North noted that one of the first considerations for intensive predator control is the assurance that TAH is at zero. The expansive range of the Kqk'èetì ekwò herd makes it very difficult to conduct predator controls. Alternatives North is concerned with predators multiplying if not all of the predators are harvested. They note that previous studies assessing the efficiency of predator control have been conducted on a small scale, while the area proposed to be managed to protect the Kqk'èetì ekwò is very large, which may cause it to be ineffective.<sup>71</sup>

LKDFN stated that based on their TK the dīga are not the cause of the Kqk'èetì ekwò herd's steep and steady decline and that dīga removal may at best slow the decline. LKDFN also requested GNWT report on the effectiveness of the dīga harvest incentive program since 2010.<sup>72</sup>

CARC did not raise concerns about the proposed predator control initiatives as presented in the Joint Proposal.

### **7.3.4. Analysis and Recommendations**

The Joint Proposal stated that the cash incentives to increase dīga harvesting were ineffective.<sup>73</sup> However, no details were included. The role of the Tłıchq training program is not assessed. The Joint Proposal did not include evidence from dīga monitoring, and it was unclear if there was any such monitoring underway. The sighting rate of dīga and other predator observations during ʔekwò surveys were not explained. The Joint Proposal also did not make use of the evidence in the dīga technical feasibility

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<sup>70</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>71</sup> PR (BATH 2019): 006 - Alternatives North Submission to 2019 Bathurst Caribou Proposal.

<sup>72</sup> PR (BATH 2019): 012 - Łutsel K'e Dene First Nation Submission to 2019 Bathurst Caribou Proposal.

<sup>73</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

assessment, which identified a sharp decline in dīga abundance and productivity on the summer ranges.

The Joint Proposal did not provide any evidence beyond that provided in the 2016 hearings where the evidence clearly indicated a long-term trend of more sahcho than dīga sightings on the K̄k'èetì ekwò calving grounds from 2006-2015. In June 2018, the sighting of six sahcho to each dīga seen on the K̄k'èetì ekwò calving ground is consistent with the information presented during the 2016 hearings.<sup>74</sup>

The 2019 Joint Proposal did not suggest management actions for sahcho, but the 2018 calving ground survey report suggested predator studies may be undertaken.<sup>75</sup> In 2016, TG and T̄l̄chq elders referred to sahcho predation on the summer range and the Board recommended further documentation of TK and a collaborative sahcho biological assessment once the dīga technical assessment was completed.<sup>76</sup>

The evidence for emigration of K̄k'èetì ekwò collared cows and how it has added to the decline in herd size is mentioned in the Joint Proposal but was only analysed in the 2018 calving ground survey report. That report also notes that the emigration continued in June 2019.<sup>77</sup> The analyses are clear and thoughtful and include details of how the densities of the cows have sharply declined on the calving grounds. However, neither the Joint Proposal nor the calving ground survey report give thoughts on the implications of the emigration on management of the K̄k'èetì or Beverly/Ahiak ekwò herds other than that emigration may reduce the likelihood of recovery.

Increasingly, K̄k'èetì ekwò may be faced with a changing situation regarding predation; however, not all the required information is available for management actions by governments or the Board. First, there is a gap in understanding what the ̄ekwò decline has meant to the predators and their levels of ̄ekwò predation. It is possible that dīga predation has declined on the summer range, which is reflected by higher adult ̄ekwò survival. The reduced dīga numbers may leave sahcho predation on the calving ground and summer range proportionately more important as a factor in low calf survival.

Secondly, the 2018 calving ground survey report suggests that emigration is a significant part of the 2018 and 2019 decline.<sup>78</sup> This analysis is a new development in

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<sup>74</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey; and PR (BATH 2019): 041 – Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part B.

<sup>75</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>76</sup> PR (BATH 2019): 041 – Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part B.

<sup>77</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>78</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

the story of the Kòk'èetì ekwò and there are implications for management of the Kòk'èetì ekwò herd, as well as the Beverly/Ahiak herd, which has received the immigrant cows. While the 2018 calving ground survey report provides detailed evidence describing the extent of emigration in 2018 and 2019, GNWT and TG did not offer any suggestions in the Joint Proposal on how the effects of emigration could be integrated into an adaptive management process. Given the scale of emigration, the WRRB is concerned especially by the failure of the governments to offer leadership in how to address emigration.

<p><b>Recommendation #3- 2019 (Kòk'èetì Ekwò): Emigration</b></p> <p>By December 1, 2019, in order to provide the WRRB clarity on the status of the Kòk'èetì ekwò, GNWT and TG are to provide, in plain language, their positions regarding the implications of emigration of Kòk'èetì ekwò to other herds, and how this emigration will influence adaptive management.</p>
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In 2014, when GNWT terminated monitoring of dìga at their dens, the monitoring had been showing marked decreases in the number of dens occupied and in pup survival.<sup>79</sup> Between 2006 and 2012, a computer model suggested a 95% decline in dìga on the Kòk'èetì ekwò summer range.<sup>80</sup> The Kòk'èetì ekwò summer range had contracted, and the dìga struggled to find enough ʔekwò. Unfortunately, the 2015 and 2018 calving ground survey reports only listed predators seen on the calving ground. These observations were not provided, as a sighting rate, and thus trends cannot be assessed.<sup>81</sup> The 2019 Joint Proposal did not provide any evidence of dìga population numbers or trends in the dìga sighting rate for late winter during the ʔekwò sex and age surveys.

*“And so, as -- as to how -- if the wildlife -- if we're going to harvest the wolves, we -- we really need to kind of annually know exactly how many numbers that we need to harvest, how many wolves we need to harvest. And if we're harvesting wolves annually, is it -- will it show how well we know that we are helping the caribou?”<sup>82</sup> (Elder Joseph Judas, 2016)*

Besides not having information on trends in dìga numbers as the ʔekwò have declined, the Board also faces uncertainty in trends of the ʔekwò winter distribution. The Joint

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<sup>79</sup> PR (BATH 2019): 041 – Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part B.

<sup>80</sup> Ibid.

<sup>81</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey; and PR (BATH 2019): 020 – An Estimate of Breeding Females and Analyses of Demographics for the Bluenose-East Herd of Barren-ground Caribou: 2015 Calving Ground Photographic Survey.

<sup>82</sup> PR (BATH 2019): 038 - Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd. Note: In 2016, Joseph Judas was a member of the Tłıchǫ Assembly and was not the Chair of the WRRB.

Proposal did not include or reference a report analyzing if there is a trend in overlap in the winter distribution of neighboring herds. If dīga accompany the herds to the overlap area, it is possible that dīga predation rates could increase. Additionally, it is difficult, when herds overlap, to predict how the increased dīga harvest will change adult ʔekwò survival rates.

The trend for the decline based on the calving ground surveys is statistically robust and well- documented. The 2018 calving ground survey report included an updated analysis of adult survival which suggested that it had increased from 2015 to 2018 and had shifted from summer to winter timing of mortalities, although possible causes were not described.<sup>83</sup> Fall calf:cow ratios are not analysed in detail but appear relatively stable while late calf:cow ratios have higher annual variability. It is premature to relate the increase and change in timing of adult survival with a decline of dīga on the summer range, but it is a possibility.

The WRRB works within a broad ecological context and for that reason the Board is concerned about how the role of other predators may have changed as dīga populations have declined in response to the ʔekwò decline. The role of scavengers such as nògha will have changed, and nògha may have become a more significant predator. Det'òcho are effective predators for newborn calves; as are sahcho. TK describes sahcho predation as extending outside of the calving grounds. Nògha, sahcho and det'òcho are all relatively long-lived species and are opportunistic in their diet, which raises the possibility that their numbers could be slower to respond to the decline of the Kòk'èetì ekwò herd. The Board notes that there is a lack of information regarding nògha, sahcho and det'òcho and, where information exists, it has not been compiled and shared. The Board is also conscious that as the herd has reached such low numbers, the herd trend may be more vulnerable to previously minor causes of ʔekwò deaths.

After the Board had received the TG and GNWT Joint Proposal in January 2019, the Board was seriously concerned about the lack of progress on the role of predators relative to the ʔekwò declines. Consequently, in February 2019, the Board reinforced the urgency and the extent of the decline of both the Kòk'èetì and Sahtì ekwò herds, by advancing its recommendations on predators to TG and GNWT. These recommendations and the response from TG and GNWT are included in Table 1 and Appendix G.

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<sup>83</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

**Table 1. WRRB Predator recommendation and TG/GNWT responses**

	WRRB February 2019 predator recommendations	TG/GNWT Response	Variation (if applicable)
1	The WRRB supports continuing the ENR's dīga harvest incentive program and the TG's Community Based Dīga Harvesting Project as an education tool.	Accepted	
2	The WRRB recommends that dīga 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 dīga.	Accepted	
3	The WRRB recommends that dīga management be undertaken in Wek'èezhìl. TG and ENR should review the <i>"Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd"</i> submitted in November 2017 to determine the most effective, humane and cost-efficient methods that would have the least impact and disturbance on the ekwò herds themselves.	Accepted	
4	The WRRB recommends that dīga management should be closely monitored for effectiveness of halting or slowing the decline of the sahtì ekwò and kokètì ekwò herds in order to provide future harvesting opportunities.	Accepted	
5	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 ekwò and kokètì ekwò in Nunavut.	Varied	Replace 'enact' with 'discuss'
6	The WRRB commits to striking a working group to begin work on a <i>sahcho</i> (grizzly bear) biological assessment by June 2019, specifically on the sahtì ekwò and kokètì ekwò herds herd ranges. This working group will include at minimum the GNWT, TG and the Government of Nunavut. WRRB staff recommend that <i>sahcho</i> are monitored in order to determine if pressures are increasing on ekwò.	Varied	Accepted the Working Group Replace 'enact' with 'discuss'
7	WRRB staff recommend that golden det'qcho (golden eagle) are monitored in order to determine if pressures of golden det'qcho are increasing on ekwò. WRRB staff recommends that TG and the GNWT work with the Government of Nunavut to support golden det'qcho monitoring.	Varied	Replace 'work' with 'discuss'

Subsequent to the Board receiving TG and GNWT's responses to the Board's predator recommendations, the Board received further evidence in July 2019 when GNWT released its June 2018 calving ground survey report.<sup>84</sup> Given the way the evidence is presented, the Board remains concerned about the lack of reporting about the decline in dīga on the Kōk'èetì ekwò summer range, whether or how this decline will modify the level of dīga predation on the Kōk'èetì ekwò herd, and how it could affect the harvest of dīga. The importance of monitoring dīga was highlighted in the *"Wolf Tłıchǫ Knowledge and Perspective"* TK study where Tłıchǫ participants agreed it would be helpful to monitor dīga as *"packs of wolves usually follow caribou herds because they are part of the food chain for wolves so we need a good monitoring program for both animals"*.<sup>85</sup> A first step toward integrating the different sets of information (rate of predator sightings, ʔekwò winter distribution, and the two dīga harvest programs) is the basis for the following recommendations additional to the February 2019 recommendations.

#### **Recommendation #4-2019 (Kōk'èetì Ekwò): Predator Monitoring**

To improve the understanding of the role of predators on the decline of the herd and increase adult and calf survival, GNWT and TG will provide the following to the WRRB:

- (1) sighting rates of dīga, sahcho, golden det'qcho, and nògha during Kōk'èetì ekwò composition surveys by December 1 each year, beginning in 2019; and,
- (2) A set of criteria that will determine the numbers of predators to be targeted for annual removal, should the decision be made to do so, by December 1, 2020.

#### **Recommendation #5-2019 (Kōk'èetì Ekwò): Dīga Harvest**

To ensure that harvest of dīga is contributing to the conservation of Kōk'èetì ekwò:

- (1) TG and GNWT should provide to the WRRB the number of dīga to be targeted for removal during the harvest season from the Kōk'èetì ekwò winter range by December 1 each year, beginning in 2019;
- (2) TG and GNWT should determine the number of dīga to be targeted for removal based on (i) dīga sightings during Kōk'èetì ekwò composition surveys and (ii) likely exposure of Kōk'èetì ekwò to dīga associated with neighbouring herds during the winter season; and,
- (3) TG and GNWT will coordinate the *Enhanced North Slave Dīga Harvest Incentive Program* and the *Community-based Dīga Harvest Training Program* to determine their role in removing the targeted number of dīga.

<sup>84</sup> PR (BATH 2019): 015 - Estimates of Breeding Females & Adult Herd Size and Analyses of Demographics for the Bathurst Herd of Barren-Ground Caribou: 2018 Calving Ground Photographic Survey.

<sup>85</sup> PR (BATH 2019): 038 - Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd.

**Recommendation #6-2019 (Kòk'èetì Ekwò): *Enhanced North Slave Dìga Harvest Incentive Program***

To help the Board understand the effectiveness of the GNWT's *Enhanced North Slave Dìga Harvest Incentive Program* on Kòk'èetì ekwò, TG and GNWT will provide a comprehensive report on the program to the WRRB by May 31 each year. The contents of this report will be developed in collaboration with the Board and will include, but not be limited to, the following information:

- (1) provide the location and number of dìga harvested as a part of the Harvest Incentive Program; and,
- (2) provide clear criteria to measure the effectiveness of the Harvest Incentive Program based on both scientific and TK.

**Recommendation #7-2019 (Kòk'èetì Ekwò): *Community-based Dìga Harvest Training Program***

To help the Board understand the effectiveness of the TG's *Community-based Dìga Harvest Training Program*, TG and GNWT will provide a comprehensive report on the program to the WRRB by May 31 each year. The contents of this report will be developed in collaboration with the Board and will include, but not be limited to, the following information:

- (1) provide the location and number of dìga harvested as a part of the Harvest Training Program; and,
- (2) provide an assessment of how the training will contribute to future dìga harvesting and management

While dìga pose significant threats to Kòk'èetì ekwò survival rates, nògha, golden det'qcho, and sahcho are other predators which need to be assessed. 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 Joint Proposal did recommend increased support for predator monitoring as well as for on-the-land traditional monitoring programs like the Tłıchų Ekwò Nàxoède K'è (formerly the Boots on the Ground) program.<sup>86</sup> GNWT's recommendation leads the WRRB to recommend monitoring predators on the calving grounds in collaboration with GN. In an effort to reduce disturbance to ɤekwò, this work should be done on the ground, and not via aircraft.

Nògha can be found where their food is located. Some may consider nògha to be a scavenger however, it is known that nògha also actively hunt for their food. Nògha share the barren-lands with ɤekwò and, therefore, ɤekwò can make up a significant portion of the nògha diet through direct hunting or from carrion left by sahcho or dìga.

<sup>86</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.



As nògha scavenge for ʔekwò, they tend to follow behind the ʔekwò and dìga as they migrate through the barren-lands.<sup>87</sup>

**Recommendation #8-2019 (Kòk'èetì Ekwò): Nògha (wolverines)**

To determine the current abundance, trend and distribution of nògha, GNWT and TG will compile existing TK and scientific information for nògha in the NWT and Nunavut on the Kòk'èetì and Sahtì ekwò ranges by April 1, 2020. The data will be used by the Grizzly Bear Biological and Management Feasibility Working Group to expand the collaborative sahcho biological and management feasibility assessment to include nògha.

The Board is disappointed by the lack of progress among TG, GNWT and GN in relation to management actions on predation and land management for the Kòk'èetì ekwò calving ground and summer ranges within Nunavut. These delays may be affecting the Kòk'èetì ekwò population. The Joint Proposal states that 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 Bluenose-East and Bathurst herds”.<sup>88</sup> While the Board is aware that NWT management authorities have no authority in Nunavut and any actions taken in Nunavut would need to be approved by the NWMB, GNWT and TG committed to pursuing these discussions further to develop and implement coordinated dìga removals across the Sahtì and Kòk'èetì ekwò herds.<sup>89</sup> The 2016 and 2019 Joint Proposals both stated that GNWT will remain in frequent contact with GN on these issues and participate where possible in the NWMB process on harvest issues.<sup>90</sup>

**Recommendation #9-2019 (Kòk'èetì Ekwò): Joint Management Agreement**

The Board recommends GNWT and TG develop a draft agreement and timelines for joint management efforts to manage the Kòk'èetì and Sahtì ekwò and their ranges by February 29, 2020. This draft agreement should be developed in cooperation with the BCAC, the Advisory Committee for Cooperation on Wildlife Management, and discussed with the GN wildlife officials and NWMB as soon as possible.

<sup>87</sup> Species at Risk Committee. 2014. Species Status Report for Wolverine (*Gulo gulo*) in the Northwest Territories. Species at Risk Committee, Yellowknife, NT.

[https://www.nwtspeciesatrisk.ca/sites/default/files/wolverine\\_status\\_report\\_and\\_assessment\\_final\\_dec\\_2014\\_v2.pdf](https://www.nwtspeciesatrisk.ca/sites/default/files/wolverine_status_report_and_assessment_final_dec_2014_v2.pdf).

<sup>88</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>89</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>90</sup> Ibid.

## 7.4. Habitat and Land Use

### 7.4.1. Introduction

The annual range of Kòk'èetì ekwò encompasses land in both the NT and Nunavut, which introduces jurisdictional complexity. Calving and post-calving ranges in Nunavut do not have protection. Key habitats in the NWT also remain unprotected despite the WRRB recommendations in 2010 and 2016. The WRRB has consistently stated that the Kòk'èetì ekwò will require intact habitat for recovery and sustained use.

The WRRB recognizes that habitat is complex as it includes more than vegetation. Habitat also is the landscapes that allow ʔekwò to make choices to reduce risks from predators, parasites and other threats including weather. The elders consider anything linked to ʔekwò as their habitat. This includes things such as ʔk'òò (spiritual power); human behaviour; predators, such as dīga and people; pests, such as mosquitoes and flies; landscapes, such as muskeg, eskers, and smooth bedrock leading to areas to cross water; weather conditions that create particular kinds of snow and ice conditions; water, wind, and temperature; and favoured vegetation.<sup>91</sup> When suitable habitat is limited, pregnancy rates and calf survival can be reduced, which reduces the potential for herd recovery.

### 7.4.2. Proponent's Evidence

The Joint Proposal mentions ʔekwò range contraction but does not provide evidence on changes in seasonal distribution or how changes in distribution may reflect changes in habitat. The 2019 Joint Proposal did identify habitat loss and change as a factor in the herd's decline as they stated that *“other factors including predation, disturbance from mining activities and infrastructure, roads, and climate factors have likely been key to the herd's continued decline since harvest restrictions”*.<sup>92</sup> The joint proposal mentions the need to identify important areas and critical habitat as the steps potentially leading to interim or long term habitat protection.

The Joint Proposal's primary proposed management action is the endorsement and implementation of the Bathurst Caribou Range Plan (BCRP).<sup>93</sup> Implementation actions outlined in the BCRP are to develop and apply effective policies within an adaptive management framework in order to address cumulative effects of range disturbance on the Kòk'èetì ekwò range. TG and GNWT outline the four main objectives of the BCRP are to ensure the integrity of important habitats; ensure connectivity between seasonal

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<sup>91</sup> PR (BATH 2019): 028 - Caribou Migration and the State of their Habitat: Tłıchǝ Knowledge and Perspectives on ekwò (Barrenland Caribou)

<sup>92</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>93</sup> Ibid.

ranges; ensure the amount of human-caused land disturbance is kept below certain levels; and, ensure the development, design and use of roads is managed with consideration of Ɂekwò.<sup>94</sup>

#### **7.4.3. Other Parties' Evidence**

Alternatives North expressed their surprise to see the proponents recommend more work to identify key habitats for Kòk'èetì ekwò. With years of research already conducted, and resource development increasing, Alternatives North question the need for more work to assess the Kòk'èetì ekwò range.<sup>95</sup> It is noted that the BCRP is mentioned in the Joint Proposal; however, there are no actions relating to habitat protections.

CARC also indicated its surprise to see the proponents calling for the identification of critical habitat as there is already critical habitat identified. CARC was happy to see the BCRP endorsed; however, they noted that there is no plan for how the BCRP will be approved and implemented.<sup>96</sup>

LKDFN supported aspects of the BCRP, such as protecting Ɂekwò habitat, the increased connectivity within the Kòk'èetì ekwò range and mitigating resource exploration; however, LKDFN noted that it can not endorse the BCRP because the plan recommends additional disturbance as permissible despite the urgent conservation concerns with the Kòk'èetì ekwò.<sup>97</sup>

#### **7.4.4. Analysis and Recommendations**

The WRRB acknowledges that the BCRP is a comprehensive plan built on the knowledge of many people. However, the Board notes there are no dates for implementation of BCRP policies nor is there any framework or timelines to judge how or when this plan is expected to contribute to Ɂekwò recovery. In this, the Board agrees with Alternatives North and CARC. In order for the BCRP to be implemented, legal protections are required, and the Board is not aware of any advancement towards these requirements. The WRRB also notes that there should be an urgency to the implementation of the BCRP as two of five range assessment areas require enhanced management responses to address increased levels of disturbance.<sup>98</sup> In addition, the Board has previously recommended the need for calving and post-calving ground

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<sup>94</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>95</sup> PR (BATH 2019): 006 - Alternatives North Submission to 2019 Bathurst Caribou Proposal.

<sup>96</sup> PR (BATH 2019): 004 - CARC to WRRB Re: Joint Management Proposal for Bathurst Caribou.

<sup>97</sup> PR (BATH 2019): 012 - Łutsel K'e Dene First Nation Submission to 2019 Bathurst Caribou Proposal.

<sup>98</sup> [https://www.enr.gov.nt.ca/sites/enr/files/resources/bathurst\\_caribou\\_range\\_plan\\_2019\\_-\\_plan\\_pour\\_laيرة\\_de\\_repartition\\_des\\_caribous\\_de\\_bathurst\\_2019.pdf](https://www.enr.gov.nt.ca/sites/enr/files/resources/bathurst_caribou_range_plan_2019_-_plan_pour_laيرة_de_repartition_des_caribous_de_bathurst_2019.pdf).

protection, which depends on Nunavut land managers. The BCRP does acknowledge this but the Joint Proposal indicates clearly to the WRRB that the need for habitat protection is now urgent.<sup>99</sup> In addition, the abandoning of traditional calving grounds may be further evidence of the need for protection and limiting of disturbance.

TG and GNWT's Joint Proposal offered no evidence about the state of the Kòk'èetì ekwò habitat, such as the cumulative winter range modified by fire or the total linear length of roads. As TG and GNWT have identified in the Joint Proposal that they are working on the implementation of the BCRP, the WRRB accepts this and does not, at this time, have any further recommendations on habitat and land use.

## **7.5. Education**

### **7.5.1. Introduction**

Communications with, and the education of, harvesters, Tłıchq citizens, and the public is crucial in the management of Kòk'èetì ekwò. These initiatives aim to increase compliance, improve hunter practices, and reduce wounding and wastage.

### **7.5.2. Proponent's Evidence**

The proposal did include a table listing proposed educational activities including annual and possible meetings, GNWT website updates, posters, and radio interviews.<sup>100</sup> The Joint Proposal emphasized the importance of supporting on-the-land activities, which focus on the continued use and maintenance of traditional sites. TG plans to expand on their current on-the-land programs.<sup>101</sup>

### **7.5.3. Other Parties' Evidence**

LKDFN expressed their belief that public awareness and education, based on the best available traditional and scientific knowledge, are essential to improve the public's understanding of Kòk'èetì ekwò, as well as the management tools that are being used to protect them. LKDFN recommend that the GNWT share the results of the bi-annual population survey and the composition surveys in a meaningful way at in-person meetings in all communities.<sup>102</sup>

Alternatives North and CARC did not raise concerns about the proposed communication and education initiatives as presented in the Joint Proposal.

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<sup>99</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>100</sup> Ibid.

<sup>101</sup> Ibid.

<sup>102</sup> PR (BATH 2019): 012 - Łutsel K'e Dene First Nation Submission to 2019 Bathurst Caribou Proposal.

#### 7.5.4. Analysis and Recommendations

TG and GNWT's Joint Proposal offered no evidence about the frequency and effectiveness of education activities since the 2010 and 2016 proposals. Continuing efforts to increase awareness among Tłıchq communities and the public about the status of NWT Ɂekwò 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 Kqk'èetì ekwò herd.

<b>Recommendation #10-2019 (Kqk'èetì Ekwò): Successes and Challenges of Ekwò Nàxoède K'è</b>
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To increase community understanding of work being done for Kqk'èetì ekwò, TG will report annually on the successes and challenges of Ekwò Nàxoède K'è to Tłıchq communities and schools.
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<b>Recommendation #11-2019 (Kqk'èetì Ekwò): Food Security</b>
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To ensure Tłıchq communities have access to nutritious, safe food that fits their lifestyle and provides a healthy diet throughout the year, and in light of a closed harvest on Kqk'èetì ekwò, TG and GNWT will discuss priorities and solutions for food security issues, such as harvesting alternative country foods and/or implementing meat replacement programs, with each Tłıchq community by March 31, 2020.
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<b>Recommendation #12-2019 (Kqk'èetì Ekwò): Public Consultation</b>
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To increase public understanding of the need for Ɂekwò management actions, starting in January 2020, TG and GNWT will: <ul style="list-style-type: none"><li>(1) exchange information about Kqk'èetì and Sahti ekwò with Tłıchq communities, via focus groups and community meetings; and,</li><li>(2) produce and distribute educational materials, via radio, television, social media and workshops, to the general public about the reasons for the Kqk'èetì and Sahti ekwò population declines and the factors affecting the declines, including emigration.</li></ul>
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#### 7.6. Research and Monitoring

##### 7.6.1. Introduction

Ongoing research and monitoring actions are required to make informed and timely management decisions for the Kqk'èetì ekwò, including the proposed implementation of the Tłıchq Research and Monitoring Program. Adaptive management is the mechanism whereby monitoring results are used to inform management decisions as well as to determine the effectiveness of management actions. 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. The WRRB is aware that as the Kòk'èetì ekwò herd continues to decline, the urgency of effective management increases.

### **7.6.2. Proponent's Evidence**

TG and GNWT's Joint Proposal describes (a) biological monitoring; (b) an expansion of TG's Ekwò Nàxoède K'è program; (c) support for research on the drivers of changes in ʔekwò abundance; and, (d) an adaptive management framework under the Bathurst Caribou Range Plan.<sup>103</sup> More specifically, the proposed actions are:

(a) The biological monitoring included a change to calving ground surveys taking place every two years rather than every three years; an increase in the number of collars to 70; an increase to annual monitoring of calf survival; harvest compliance monitoring; dropping the calving ground reconnaissance surveys and the addition of pregnancy monitoring.<sup>104</sup>

(b) TG is proposing to expand the Ekwò Nàxoède K'è program to span the entire ice-free period on the lakes.<sup>105</sup>

(c) TG and GNWT recognize the need for research into the complexity of factors driving the declines of ʔekwò herds using both TK and science as well as university partners.<sup>106</sup>

(d) Implementation actions outlined in the BCRP should be initiated in 2019 to develop and apply effective policies and practices within an adaptive management framework and 5-year review interval, which will help address potential cumulative effects of range (habitat) disturbance and land use on Kòk'èetì ekwò.<sup>107</sup>

### **7.6.3. Other Parties' Evidence**

Alternatives North is concerned that with the increasing impacts related to climate change that the herd is facing, any harvest of the herd at all will increase their vulnerability significantly.<sup>108</sup>

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<sup>103</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>104</sup> Ibid.

<sup>105</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>106</sup> Ibid.

<sup>107</sup> Ibid.

<sup>108</sup> PR (BATH 2019): 006 - Alternatives North Submission to 2019 Bathurst Caribou Proposal.

CARC noted that with a greater than 50% decline of Kòk'èetì ekwò between the last two surveys and an overall decrease of 95% from peak levels, it indicates the “*desperately inadequate management over the past 10 years plus and the need for critical review*”.<sup>109</sup>

LKDFN supports biological monitoring; however, they would like to see other Indigenous governments and organizations engaged in the harvest compliance monitoring. Additionally, LKDFN believes that Indigenous monitors should be trained in fecal sample collections. LKDFN supports the expansion of the Ekwò Nàxoède K'è (Boots on the Ground) program and would like to see the GNWT support the LKDFN's Caribou Stewardship Plan. They support collaborative research partnerships; however, LKDFN notes that the time needed to conduct routine studies is too long for Kòk'èetì ekwò.<sup>110</sup>

#### **7.6.4. Analysis and Recommendations**

The WRRB's approach to making monitoring and research recommendations was developed in response to three requirements. First, delays in government implementation of management actions do not slow the decline in ʔekwò numbers. 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 TK and community experience is used in monitoring and adaptive management. Third, there is the requirement to balance the perspective of respecting and leaving the ʔekwò alone against the need for monitoring information for management.

The Board is put in a difficult position trying to balance the apparent need for more monitoring of ʔekwò and the elders who say we should leave the ʔekwò alone. Evidence from Tłıchq elders during the 2007 TG workshop, suggest a willingness to restrict harvest, and leave the ʔekwò alone.<sup>111</sup> Leaving ʔekwò alone, to the elders, includes all activities that stress or bother those remaining. As Elder Romie Wetrade summarizes:

*“White people raise animals. So they are always thinking about what to do with them. Tłıchq do not raise animals. Caribou migrate all over the land. Because of white people we are now talking negatively about caribou. For me that is not right. Talking all the time about how we will fix it. How will they migrate back to us? What will happen to the young? We should leave them alone and let them be.”*<sup>112</sup>

The Board also notes the difficulty of reconciling views over collaring ʔekwò. However, the Board acknowledges that increasing the number of collars on cows provides more

<sup>109</sup> PR (BATH 2019): 004 - CARC to WRRB Re: Joint Management Proposal for Bathurst Caribou.

<sup>110</sup> PR (BATH 2019): 012 - Łutsel K'e Dene First Nation Submission to 2019 Bathurst Caribou. Proposal.

<sup>111</sup> PR (BATH 2019): 039 - WRRB Reasons for Decision Final Report w/ Corrected Appendix – Sahtì Ekwò (Bluenose-East Caribou) Herd.

<sup>112</sup> PR (BATH 2019): 029 - Monitoring the Relationship between People and Caribou.

reliable annual estimates of cow survival rates, as well as determining the effectiveness of the MCBCCA and overlap in winter distribution, assigning harvest to herds reliably, and providing evidence for emigration. The BGCTWG has stated that an effective MCBCCA requires, at minimum, 40 collars and biological monitoring will need a total of 70 collars on cows and bulls.

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 digra management implementation.<sup>113</sup> 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. Thus, the WRRB agreed with the management action proposed by GNWT and TG.

<p><b>Recommendation #13-2019 (Kòk'èetì Ekwò): Population Surveys</b></p> <p>To ensure timely adaptive management, GNWT will conduct population surveys for Kòk'èetì ekwò every two years at the same time as Sahti ekwò and Beverly/Ahiak surveys. Therefore, the next population surveys will take place in June 2020.</p>
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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.<sup>114</sup> Hence, the need for WRRB's agreement that pregnancy rates should be monitored through fecal pellet sampling. Dene harvesters are comfortable with the collection of fecal pellets to determine genetic material as well as monitoring pregnancy.<sup>115</sup> This is especially relevant when Dene experts' knowledge of ʔekwò histories, movements and identities is respected. When knowledges are heard, respected and used, individuals are more likely to accept the results of others.<sup>116</sup> In the not so distant past, fecal pellets were examined in conjunction with examining vegetation in the months and stomachs of ʔekwò.<sup>117</sup> 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 Ekwò Nàxoède K'è program.

<sup>113</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>114</sup> PR (BATH 2019): 039 - WRRB Reasons for Decision Final Report w/ Corrected Appendix – Sahti Ekwò (Bluenose-East Caribou) Herd.

<sup>115</sup> PR (BATH 2019): 028 - Caribou Migration and the State of their Habitat: Tłıchų Knowledge and Perspectives on ekwò (Barrenland Caribou).

<sup>116</sup> PR (BATH 2019): 31 - Łeghágots'enetę (learning together): the importance of indigenous perspectives in the identification of biological variation

<sup>117</sup> PR (BATH 2019): 028 - Caribou Migration and the State of their Habitat: Tłıchų Knowledge and Perspectives on ekwò (Barrenland Caribou).



**Recommendation #14-2019 (Kòk'èetì Ekwò): Pregnancy Monitoring**

To better monitor the pregnancy rates of the Kòk'èetì ekwò herd, GNWT and TG should implement Kòk'èetì ekwò pregnancy monitoring through fecal pellet collection in the winter months, every year starting January 2020. Community members should have the opportunity to participate in the collection of fecal pellets on the Kòk'èetì ekwò winter range.

Indigenous people across Canada emphasize they monitor the land by living with it. In other words, using the natural resources it offers on a regular basis and, in doing so, watch everything on the land.<sup>118</sup> The elders' stories tell of change in the past. Harvesters must have ongoing, daily experiences and spiritual relations with all that is part of the ecosystem so they can watch for and see inconsistencies and change – whether rapid or slow.<sup>119</sup> This is maintained through walking and watching ʔekwò habitat and harvesting in culturally appropriate ways.

Tłıchq participants in the “*Wolf Knowledge and Perspective*” TK study questioned the effectiveness of using GNWT's techniques, “*wolves are not going to wait to be monitored; they are very smart and fast*”.<sup>120</sup> In contrast to periodic scientific monitoring, monitoring based on Tłıchq experiential knowledge – observing, experiencing and sharing stories – is done on a regular and consistent basis by harvesters who know the land.<sup>121</sup>

By putting the Tłıchq Research and Monitoring Program in place, harvesters and elders will once again be in their intellectual and spiritual role to watch and experience the land so they can share what they observe and ensure people can respond quickly to occurrences that will impact their lives.

<sup>118</sup> PR (BATH 2019): 023 - “These Trees Have Stories to Tell” Linking Denésgliné Knowledge and Dendroecology in the Monitoring of Barren-ground Caribou Movements in the Northwest Territories, Canada; PR (BATH 2019): 027 - Tłıchq Knowledge of Environmental Changes: Implications for Caribou Hunting; PR (BATH 2019): 028 - Caribou Migration and the State of their Habitat: Tłıchq Knowledge and Perspectives on ekwò (Barrenland Caribou); PR (BATH 2019): 029 - Monitoring the Relationship between People and Caribou; PR (BATH 2019): 030 - Renewing our traditional laws through joint ekwò (caribou) management; 031 - Łeghágots'enetę (learning together): the importance of indigenous perspectives in the identification of biological variation; PR (BATH 2019): 033 - Boots on the Ground Caribou Monitoring Program 2017 Results; PR (BATH 2019): 034 - Boots on the Ground Caribou Monitoring Program - Monitoring Results 2016; PR (BATH 2019): 035 - “We Watch Everything” A Methodology for Boots on the Ground Caribou Monitoring; and PR (BATH 2019): 036 - Ekwò zò gha dzò nats'édè “We Live Here For Caribou” Cumulative Impacts Study on the Bathurst Caribou.

<sup>119</sup> PR (BATH 2019): 029 - Monitoring the Relationship between People and Caribou; PR (BATH 2019): 030 - Renewing our traditional laws through joint ekwò (caribou) management; PR (BATH 2019): 032 - “We monitor by living here”: Developing monitoring methods based in Indigenous knowledge; PR (BATH 2019): 033 - Boots on the Ground Caribou Monitoring Program 2017 Results; PR (BATH 2019): 034 - Boots on the Ground Caribou Monitoring Program - Monitoring Results 2016; and PR (BATH 2019): 035 - “We Watch Everything” A Methodology for Boots on the Ground Caribou Monitoring.

<sup>120</sup> PR (BATH 2019): 038 - Wolf Technical Feasibility Assessment: Options for Managing Wolves on the Range of the Bathurst Barren-ground Caribou Herd.

<sup>121</sup> Ibid.

*“We find our voices in the land where we have something to say, where we can contribute something.”<sup>122</sup> (Dr. John B. Zoe, 2019)*

**Recommendation #15-2019 (Kqk’èetì Ekwò): Tłìchq Research and Monitoring Program**

To ensure that both Ɂekwò and Ɂekwò habitat monitoring, and realistic harvesting numbers are recorded in a culturally appropriate manner, and to contribute adaptive management, TG will implement the Tłìchq Research and Monitoring Program, starting in January 2020 (See Appendix H).

The WRRB is aware that the effects of climate change are already being felt and that the changes on the Ɂekwò ranges are measurable. The question now is what can be done about the effects of climate change on Ɂekwò, and their ecological relationships, including people. The WRRB sees this as best answered by having more observers on the ground<sup>123</sup> and then ensuring that their observations are integrated into adaptive management for the herd. 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.

Tłìchq harvesters’ and elders’ holistic knowledge of the environment allows them to place the behaviour of humans into the ecosystem, which is why they can understand the reality of climate change.<sup>124</sup> Tłìchq harvesters and elders know that Ɂekwò will not migrate to places where there is no food. For example, dry conditions (high temperatures and low precipitation), wildfires, and lack of vegetation are indicators of climate change that harvesters can see on the land.

**Recommendation #16-2019 (Kqk’èetì Ekwò): Climate Change**

To better understand the effects of climate change on Ɂekwò, TG will systematically collect on-the-ground climate change observations including but not limited to (i) dry conditions, (ii) wildfires, and (iii) lack of vegetation, during the Ekwò Nàxoède K’è program and the Tłìchq Research and Monitoring Program. Results of the monitoring programs should be designed to contribute an adaptive management framework and be reported to the WRRB and GNWT annually.

The Joint Proposal’s Table 4 summarises the biological monitoring indicators, frequency, rationale, and options for management actions.<sup>125</sup> In the context of adaptive management, the WRRB finds that only four of the nine biological indicators in Table 4

<sup>122</sup> PR (BATH 2019): 039 - WRRB Reasons for Decision Final Report w/ Corrected Appendix – Sahtì Ekwò (Bluenose-East Caribou) Herd.

<sup>123</sup> PR (BATH 2019): 033 - Boots on the Ground Caribou Monitoring Program 2017 Results.

<sup>124</sup> PR (BATH 2019): 027 - Tłìchq Knowledge of Environmental Changes: Implications for Caribou Hunting).

<sup>125</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

have corresponding adaptive monitoring options and even those four are generalized rather than specific actions. The table is similar to that proposed for the Sahti ekwò in the 2019 Joint Proposal. When asked during the public hearing about the possibility of expanding and revising the table to make it more detailed and responsive for that herd, GNWT stated that they would need to discuss with their senior level management and pointed to the *Taking Care of Caribou Management Plan*.<sup>126</sup>

Given the 29% annual rate of decline for the Kòk'èetì ekwò herd, there is an urgent need to increase the speed in which managers react to changes in the herd and implement management actions. The WRRB is concerned about delays in implementation of management actions and the failure to implement the majority of the WRRB's recommendations. TG and GNWT acknowledged the need to speed up management responses. In the Joint Proposal, they propose increasing reviews of management actions from every three years to annually.<sup>127</sup> However, no mechanism is proposed. 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 12.5.1 of the Tłıchǝ Agreement.<sup>128</sup> Such an approach provides for pre-identified management actions based on thresholds agreed to by management authorities, which then can be implemented in a timelier matter.

Adaptive management is now a standard part of management although in practice, it has sometimes struggled in the implementation phase.<sup>129</sup> 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.<sup>130</sup>

The Joint Proposal refers to an “*integrated suite of recovery management actions*” but does not supply a mechanism for integration.<sup>131</sup> There is no evidence which describes how the individual management actions will be integrated, which is problematic as there will be trade-offs between them depending on monitoring results. The WRRB suggests that the integration of management actions should be achieved through an adaptive management framework. The framework should also identify how to integrate on-the-ground observations and climate change into management activities. The strength of an

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<sup>126</sup> PR (BATH 2019): 039 - WRRB Reasons for Decision Final Report w/ Corrected Appendix – Sahti Ekwò (Bluenose-East Caribou) Herd.

<sup>127</sup> Ibid.

<sup>128</sup> See Section 12.5.1 of the Tłıchǝ Agreement.

<sup>129</sup> PR (BATH 2019): 039 - WRRB Reasons for Decision Final Report w/ Corrected Appendix – Sahti Ekwò (Bluenose-East Caribou) Herd.

<sup>130</sup> PR (BATH 2019): 001 - Joint Proposal on Management Actions for the Bathurst Ekwò (Barren-ground caribou) Herd: 2019 – 2021.

<sup>131</sup> Ibid.

adaptive management framework is to build it collaboratively, which is the basis of the WRRB recommendation.

<b>Recommendation #17-2019 (Kqk'èetì Ekwò): Adaptive Management Framework</b>
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To ensure timelier implementation of management and monitoring actions, WRRB, TG and GNWT will collaborate to develop a herd-specific adaptive management framework with the thresholds linked to specific management actions by January 2020, with the WRRB taking a lead role for herds in Wek'èezhì. The framework will take into consideration Tłıchq and scientific knowledge, existing management plans, and decisions and recommendations from Boards and governments.
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## 7.7. Implementation of Recommendations from 2010, 2016 and 2019

The WRRB is troubled by the time it has taken governments to implement approved Board recommendations given that the Kqk'èetì ekwò herd has been declining by 19 to 29% every 3 years since 2012.

Based on the Board's previous proceedings, 60 recommendations were submitted in 2010 to TG and GNWT.<sup>132</sup> In 2016, the WRRB submitted 26 recommendations and one determination to the two governments.<sup>133</sup> The Board notes that, to date, only the determination and 25 of the 82 recommendations accepted or varied by TG and GNWT have been fully implemented (Appendix D and F). Consequently, the WRRB is of the view that perhaps a different approach will be more effective. The Board believes that a more intensive application of an adaptive management framework is needed to capitalize on the Board's and government's collective efforts. Given the urgency of decisive management action for the Kqk'èetì ekwò herd, it is the Board's opinion that an adaptive management framework would lead to more timely and effective management actions, which are essential to address the herd's decline.

<b>Recommendation #18-2019 (Kqk'èetì Ekwò): Implementation</b>
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To track the progress of implementation of the Board's recommendations, TG and GNWT will provide to the WRRB the following: (1) an implementation plan for the 2019 recommendations by January 31, 2020; (2) a summary report, within one year of the acceptance or variance of the Board's 2019 recommendations, on proposed management actions, including an evaluation of the success of implementation of management actions; and,
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<sup>132</sup> PR (BATH 2019): 037 - Report on a Public Hearing Held by the Wek'èezhì Renewable Resources Board 22-26 March 2010-6 August 2010 Behchokò, NT.

<sup>133</sup> PR (BATH 2019): 040 - Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part A; and PR (BATH 2019): 041 - Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst ekwò (Barren-ground caribou) Herd - Part B.

(3) an updated implementation plan for the 2010 and 2016 recommendations and an evaluation of all outstanding recommendations by January 31, 2020.
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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'èezhì have appropriate information to make balanced decisions.

## 8.0. Conclusion

With the Kòk'èetì ekwò herd in a critical state, there is an urgent need to implement effective management actions to halt the decline as soon as possible. The Board's decisions in this report have been structured to have the least impact on ʔekwò users and the greatest benefit to ʔekwò that we can provide at this time.

*“... a way of life, in relation to the caribou is described in the Tłıchq 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 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”.<sup>134</sup> (Dr. John B. Zoe, 2019)*

Users, managers and governments must act now, in whatever way possible, to protect the herd and its habitat so that future recovery may be possible. The need is urgent. The Kòk'èetì ekwò herd has declined to the point where some cows, possibly to have the best chance to raise their calves, have emigrated to a neighboring herd's calving ground. These changes increase uncertainty for co-managers and governments. A collaborative and adaptive management is essential to ensure a future for Kòk'èetì ekwò.

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<sup>134</sup> PR (BATH 2019): 039 - WRRB Reasons for Decision Final Report w/ Corrected Appendix – Sahti Ekwò (Bluenose-East Caribou) Herd

## **APPENDIX A      2019 Joint Proposal**

## **APPENDIX B      Review of 2007 Proceeding & Decisions**

### **B.1. Receipt of 2006 Joint Proposal**

In December 2006, ENR submitted a management proposal recommending management actions to reduce harvest levels in a manner consistent with the Tłıchq Agreement and the Bathurst Caribou Management Plan for the WRRB's consideration. The proposed management actions were intended to limit the harvest to 4% of the 2006 herd size for a total of 5120 ʔekwò, including eliminate all commercial meat tags held by Tłıchq communities, reduce number of tags for non-resident hunters and non-resident alien hunters from 2 to 1, and reduce tags for all non-Hunters' & Trappers' Association (HTA) and HTA outfitters from 1559 to a total of 350.

Due to the significance of the management actions proposed, and the fact that the WRRB, as a new organization, had not yet heard from other Parties affected by the ENR proposal, the Board decided to conduct a public hearing before making any decisions on the proposal. The WRRB held the public hearing on March 13-14, 2007 in Behchokò, NT.

During the course of the hearing, ENR officials admitted that the Minister and Department had not consulted the Tłıchq Government about their proposal, as required in the Tłıchq Agreement, before it was submitted to the Board. Once the evidentiary phase of the proceeding was completed, the Board decided to adjourn the proceeding in order to give ENR and the Tłıchq Government time to initiate a consultation process. Specifically, ENR and the Tłıchq Government were directed to report to the WRRB on the outcome of their consultations by April 23, 2007.

On April 20, 2007 and April 23, 2007 respectively, the Tłıchq Government and ENR filed letters with the WRRB indicating that the consultation process had not been concluded, thereby requiring an additional 90 days to finish the consultations. The WRRB advised ENR and the Tłıchq Government, in early May 2007, that it had decided to extend the period of adjournment in the proceeding by 30 days to permit the Parties to conclude the consultations by June 1, 2007. The Board indicated that if the consultation efforts were not producing substantial progress, it would bring the proceeding to a close and prepare its Recommendations Report for submission to the Minister of ENR and the Tłıchq Government.

### **B.2. Emergency Measure**

On April 17, 2007, the Minister of ENR advised the Tłıchq Government and the WRRB that the Big Game Hunting Regulations had been amended to reduce the number of tags available for outfitted hunts for ʔekwò in Unit "R" to 750 for the 2007 season. The

letter noted that this decision was made under the authority of Section 12.5.14 of the Tłıchq Agreement as ENR considered its action necessary due to an emergency situation regarding declining populations of the Ɂekwò.

### **B.3. 2007 Board Decision**

On May 30, 2007 and June 4, 2007 respectively, the Tłıchq Government and ENR submitted letters to the Board indicating that they were making substantial progress but required an extension to September 28, 2007 in order to develop a new joint Ɂekwò management proposal. The WRRB was concerned that any further adjournments could adversely affect the interests of other Parties affected by the proposal. ENR had already taken steps to implement portions of its proposal on the grounds that an emergency situation existed. Further extension of the proceeding to accommodate consultation which, in the Board's view should have taken place before the proposal was advanced, seemed inconsistent with the urgency asserted by ENR. For these reasons, the WRRB decided not to grant a further adjournment of its proceeding.

Based on the WRRB's review of the evidence presented during the proceedings, the Board recommended that ENR's proposal to undertake management actions to reduce the harvest of the Bathurst Ɂekwò herd not be implemented as submitted. The WRRB strongly encouraged ENR and the Tłıchq Government to continue their consultations towards the development of a Joint Proposal for the management of the Bathurst Ɂekwò herd. Additionally, the WRRB indicated that any future management actions that propose to limit any component of the harvest to a particular number, including zero, would be treated as a proposal for the establishment of a total allowable harvest.

### **B.4. Barren-ground Outfitter's Association Tag Request**

In October 2007, the Barren-ground Caribou Outfitter's Association requested that the tag quota for Ɂekwò outfitters be restored to 1260 for the non-HTA outfitters and 396 for the HTA outfitters due to financial hardships experienced by the outfitters and supporting businesses. The Board did not recommend the tag increase to the GWNT as the WRRB is not mandated to address issues of economic viability. Further, the WRRB considered any requests for changes to tag quotas to be premature prior to the submission of a Joint Proposal regarding the management of Ɂekwò in Wek'èezhìı by ENR and Tłıchq Government.



## APPENDIX C      Review of 2010 Proceeding & Decisions

### C.1. Receipt of 2009 Joint Proposal

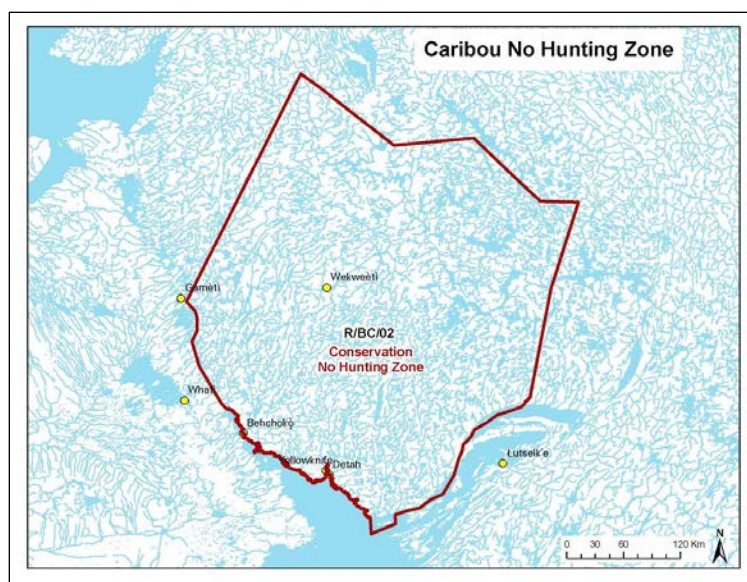
On November 5, 2009, TG and GNWT submitted the *Joint Proposal on Caribou Management Actions in Wek'èezhìi*, which proposed nine management actions and eleven monitoring actions, including harvest limitations, for the Bathurst, Bluenose-East and Ahiak Ɂekwò herds. While there was agreement on the majority 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 Ɂekwò commercial, outfitted,<sup>135</sup> 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 Tłıchq Agreement. The Board was informed of the Minister's decisions on December 17, 2009.

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<sup>135</sup> 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 C-1. No-Hunting Conservation Zone, R/BC/02, January 1, 2010 to December 8, 2010.<sup>136</sup>**

Originally scheduled for January 11-13, 2010, the public hearing took place March 22-26, 2010 in Behchokò, 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 Ɂekwò herds.

On May 31, 2010, TG and GNWT submitted the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhìl*. 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 Behchokò, NT, where final presentations, questions and closing arguments were made.

## **C.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

<sup>136</sup> GNWT-GNWT 2010. [http://www.GNWT.gov.nt.ca/\\_live/documents/content/No-Hunting\\_Conervation\\_Zone\\_Map.pdf](http://www.GNWT.gov.nt.ca/_live/documents/content/No-Hunting_Conervation_Zone_Map.pdf)

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

The Board recommended a harvest target of 2800 ( $\pm$  10%) Bluenose-East Ɂekwò per year for harvest seasons 2010/11, 2011/12, and 2012/13 in Wek'èezhìi. 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 Ɂekwò 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 Ɂekwò herd in Wek'èezhìi be set to zero. The Board also made harvest recommendations for the Ahiak Ɂekwò herd.

The WRRB made additional Ɂekwò management and monitoring recommendations to TG and GNWT, specifically implementation of detailed scientific and Tłıchǫ 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 Ɂekwò during calving and post-calving, including the consideration of implementing mobile Ɂekwò protection measures, and for monitoring landscape changes, including fires and industrial exploration and development, to assess potential impacts to Ɂekwò habitat.

The Board recommended that the harvest of dıga should be increased through incentives but that focused dıga control not be implemented. The Board understood if TG and GNWT were to plan for focused dıga 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 Ɂekwò management in Wek'èezhìi 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 D      Review of 2010 WRRB Recommendations

<b>Review of 2010 WRRB Recommendations</b>				
<b>No.</b>	<b>WRRB Recommendation</b>	<b>TG/GNWT Response</b>	<b>Management Objective</b>	<b>Status</b>
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'èezhì 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'èezhì 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'èezhì.	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'èezhì 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'èezhì. 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'èezhìi 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 Tłıchq Citizens (225) and members of an Aboriginal people with rights to hunt in Mqwhì Gogha Dè Nııttèè (75)	Varied - As per prior agreement with TG to share a limited harvest of Bathurst caribou equally (150 animals for Tłıchq citizens and 150 caribou outside of Wek'èezhìi)	Establish a sharing of harvest between the Tłıchq 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 <u>or will in the near future</u> 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 <u>or will or in the near future</u> 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 <u>fall</u> 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 <u>winter</u> 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'èezhì 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 Tłıchq.	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 Tłıchq 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 <u>or will in the near future</u> 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 <u>or will or in the near future</u> 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 <u>fall</u> 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 <u>winter</u> 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'èezhì be set to zero in order to prevent incidental harvest of Bathurst caribou for 2010-2013.	Accepted	Reduce harvest of the Ahiak caribou herd and set priority to Aboriginal harvest. Reduce incidental harvest of Bathurst caribou herd.	Completed
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 <u>fall</u> 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 <u>winter</u> 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 Tłıchq 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 Tłıchq 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 Tłıchq cultures of sharing information and building knowledge.	Incomplete; not implemented

<p>PREAMBLE: (#29-39) - The Tłıchq Government agrees with the recommendations 28-42 of the Recommendation Report related to the Revised Joint Proposal on Caribou Management Actions in Wek'èezhì. We are committed to documenting and reporting on observations and trends observed by caribou harvesters and elders. Implementation of the Tłıchq Knowledge Research and Monitoring Program: Special Project, Using Tłıchq 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 Tłıchq researchers, offices, and equipment, all of which requires a realistic annual budget and extensive fundraising with those who will also benefit from Tłıchq knowledge research and monitoring.</p>				
29	TG and GNWT implement the <i>spring calf survival</i> monitoring action as identified for TK and SK.	<p>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.</p> <p>TK – See Preamble</p>	<p>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.</p>	<p>TK - Incomplete; Special Project not implemented SK - Completed</p>

30	TG and GNWT implement the <i>health and condition</i> 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 <i>birth rate</i> 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 <i>adult sex ratio and fall calf survival</i> monitoring action as identified for TK and SK.	<p>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.</p> <p>TK – See Preamble</p>	<p>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.</p>	<p>TK - Incomplete; Special Project not implemented SK - Incomplete; survey not conducted annually</p>
33	TG and GNWT implement the <i>estimate of herd size</i> monitoring action as identified for TK and SK.	<p>Scientific: Accepted - GNWT will work with all partners to undertake the:</p> <ul style="list-style-type: none"> <li>• Bathurst calving ground photo survey in June 2012.</li> <li>• Ahiak calving ground photo survey in 2011.</li> <li>• Bluenose-East post calving ground survey in 2012 or 2013.</li> </ul> <p>TK – See Preamble</p>	<p>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.</p>	<p>TK - Incomplete; Special Project not implemented SK - Completed</p>

34	TG and GNWT implement the <i>wolf abundance (den occupancy)</i> 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 <i>wolf condition and reproduction</i> 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 <i>wolf harvest</i> 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 <i>state of habitat</i> 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 <i>pregnancy rate</i> 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 <i>density of cows on calving ground</i> 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 <i>caribou harvest</i> 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 Tłıchq 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 Tłıchq 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 Tłıchq have for caribou.	Accepted - TG has developed a Tłıchq 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 Tłıchq 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'èezhì and with other Aboriginal groups outside of Wek'èezhì. 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 Tłıchq 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	Completed: Barren-ground Caribou Technical Working Group created

			and make revisions if necessary.	
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 consideration of implementing mobile caribou protection measures.	Varied - This can be tied into the long-term management plan. Discussion will be needed to take place with INAC and Nunavut.	Ensure development on calving and post-calving ranges of the Bathurst, Bluenose-East and Ahiak herds does not unduly affect the sustainability of these herds.	Incomplete; not implemented
49	TG work towards development and implementation of a land use plan for Wek'èezhì, including the consideration of thresholds for industrial land use.	Rejected - As per chapter 22.5 of the Tłıchq Agreement, it is the responsibility of Canada or GNWT to develop and implement a land use plan for Wek'èezhì.	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; Tłıchq 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'èezhì 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 for Wood Bison in Wek'èezhì. Draft plan will be provided to WRRB for approval. In December 2010, GNWT completed a regulation change to extend the season to September 1st.	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

55	TG and GNWT work collaboratively to meet the obligations of Section 12.11 of the Tłıchq 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 Tłıchq 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 Tłıchq 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 Tłıchq 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 Tłıchq 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 E      Review of 2016 Proceeding & Decisions

### E.1 Receipt of 2015 Joint Proposal

On December 15, 2015, the TG and ENR submitted the “*Joint Proposal on Caribou Management Actions for the Bathurst Ɂekwò herd in Wek’èezhì*” to the WRRB outlining proposed management actions for the Bathurst Ɂekwò herd in Wek’èezhì, including new restrictions on hunter harvest, predator management to reduce diga populations on the winter range of the Bathurst Ɂekwò herd and ongoing monitoring. More specifically, TG and ENR proposed the closure of all harvesting of the Bathurst Ɂekwò herd and the development of mobile diga-hunter camps. The WRRB considered the proposed restriction of harvest as the establishment of a TAH and, therefore, was required to hold a public hearing.

The Board initiated its 2016 Bathurst Caribou Herd Proceeding on January 18, 2016 and established an online public registry: <http://www.wrrb.ca/public-information/public-registry>. The public hearing took place February 23-24, 2016 in Yellowknife, NT. Final written arguments were submitted by registered intervenors on March 8, 2016, and by TG and ENR on March 11, 2016. The public record was closed on March 18, 2016 and the WRRB’s deliberations followed.

### E.2. 2016 Board Decision

The WRRB concluded, based on all available Aboriginal and scientific evidence, that a serious conservation concern exists for the Bathurst Ɂekwò herd and that additional management actions are vital for herd recovery. However, in order to allow careful consideration of all of 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 diga feasibility assessment. The second report, Part B, dealt with additional predator management actions, biological and environmental monitoring, and cumulative effects.

On May 27, 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 total allowable harvest of zero shall be implemented for all users of the Bathurst Ɂekwò herd within Wek’èezhì for the 2016/17, 2017/18, 2018/19 harvest seasons. As monitoring of the Ɂekwò wildlife management units and Bathurst Ɂekwò harvest are intricately linked to the implementation of a TAH, the Board recommended that TG and

ENR 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 timely implementation of hunter education programs in all Tłıchq communities.

The Community-based Dìga Harvesting Project, proposed by TG and ENR as a pilot training program, was to train Tłıchq harvesters, in a culturally appropriate manner, to hunt and trap dìga on the Bathurst herd range. The Board continued to support the Project as a training program, with recommendations related to implementation and assessment.

The WRRB also recommended that the dìga feasibility assessment set out in the proposal be led by the Board with input and support from TG and ENR. The feasibility assessment would primarily be an examination of all options for dìga management, including costs, practicality and effectiveness.

On September 27, 2016, the WRRB submitted its final recommendations and Part B Reasons for Decision Report to TG and GNWT. The WRRB recommended consultations with Tłıchq communities to determine a path forward for implementation of Tłıchq laws to continue the Tłıchq way of life and maintain their cultural and spiritual connection with Ɂekwò.

In addition, the WRRB recommended several Tłıchq Knowledge (TK) research and monitoring programs focusing on dìga, sahcho, stress and other impacts on Ɂekwò 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 Tłıchq Land Use Plan Directives as well as completing a Land Use Plan for the remainder of Wek'èezhìi. In addition, the completion of the Bathurst Caribou Range Plan and the long-term Bathurst Caribou Management Plan are requested with measures to be implemented in the interim to provide guidance to users and managers of the Bathurst Ɂekwò herd range.

The Board recommended the development of criteria to protect key Ɂekwò habitat, including 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 continued refinement of the Inventory of Landscape Change (ILC), the integration of Wildlife and Wildlife Habitat Protection Plans (WWHPP) and Wildlife Effects Monitoring Programs (WEMP) objectives for monitoring the effects of development on Ɂekwò in Wek'èezhì, and the development of monitoring thresholds for climate indicators.

## APPENDIX F      Review of 2016 WRRB Determinations and Recommendations

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
Determination #1-2016	A total allowable harvest of zero for all users of the Bathurst Ɂekwò herd within Wek'èezhìi be implemented for the 2016/17, 2017/18, 2018/19 harvest seasons. For further clarification, the absolute number of caribou that can be harvested from the Bathurst herd is zero.	Accepted	♦ Completed
Recommendation #1-2016:	The Board recommends that TG and ENR come to an agreement on whether the MCBCMZ or Wildlife Management Units Subzones is the most effective way to differentiate between Ɂekwò herds, and then implement the approach with criteria for managing any overlaps between herds, for the 2016/17, 2017/18, and 2018/19 harvest seasons.	Accepted	♦ Completed
Recommendation #2-2016	The Board recommends that TG and ENR provide weekly updates to the WRRB and the general public on aerial and ground-based surveillance of the Bathurst Ɂekwò herd throughout the fall and winter harvest seasons for the 2016/17, 2017/18, and 2018/19.	Accepted	♦ Completed
Recommendation #3-2016	The Board recommends that TG and ENR increase public education efforts and implement ENR's recently developed Hunter Education program in all Tłıchų communities.	♦ Accepted	♦ Completed
Recommendation #4-2016	<p>The WRRB continues to support the implementation of the Community-based Diga Harvesting Project, as a training program only, subject to the following conditions:</p> <p>a) If the Project is to be expanded to other Tłıchų communities, a management proposal must be submitted to the WRRB for review and approval.</p> <p>b) If the Project is to be expanded in scope, prior to the submission of a management proposal to the</p>	<p>a) Accepted</p> <p>b) Accepted</p>	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	<p>WRRB, an index of changing wolf abundance must be available and research on habitat quality and quantity on the Bathurst Ɂekwò herd range must be conducted;</p> <p>c) TG and ENR must inform the WRRB of the following prior to the start of the Project:</p> <p>i. How aerial and/or ground-based to disturbance to Bathurst Ɂekwò will be prevented or minimized? How will this potential disturbance be measured, assessed, and mitigated?;</p> <p>ii. How will unintentional or accidental harvest of Bathurst Ɂekwò, by the Tłıchq díga harvesters, be prevented? If a Bathurst Ɂekwò is harvested, how will TG and ENR report to the WRRB?; and,</p> <p>iii. How will the facilitation of wolf movements through the wolves' use of skidoo trails be prevented or minimized?;</p> <p>d) TG and ENR must communicate regularly about the Project with Tłıchq communities and the WRRB. Specifically, the Board requests an update prior to start up of the Project in December 2016 and a follow-up on the success of the Project in May 2017. As well, TG and ENR must report monthly on the Project, including numbers, age, sex and pregnancy rates of wolves harvested and location of wolf harvest, to the WRRB;</p> <p>e) The Project must be curtailed or stopped should negative impacts to the Bathurst Ɂekwò occur; and,</p> <p>f) TG and ENR must establish a threshold or criteria to evaluate</p>	<p>c) Accepted</p> <p>d) Accepted</p> <p>e) Accepted</p> <p>f) Accepted</p>	

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	the success of the program, i.e. the effectiveness of training a core set of wolf harvesters, the acceptance of the Project by Tłıchq communities, continued program implementation and reaching the target number of diga harvested.		
Recommendation #5-2016	The WRRB recommends TG and ENR support a collaborative feasibility assessment of options for diga management, led by the Board.	♦ Varied	♦ Completed
Recommendation #1B-2016	The WRRB recommends that TG consult with Tłıchq communities, by March 2017, to ensure Tłıchq laws are implemented with respect to ɁekwɁ harvesting practices to maintain the Tłıchq way of life and their relationship with ɁekwɁ.	♦ Varied – remove implementation piece	♦ Incomplete
Recommendation #2B-2016	WRRB recommends that TG conduct TK research to define, from the Tłıchq perspective, types of diga, their behavior and their annual range, and their relationship with ɁekwɁ and people by March 2017.	♦ Varied – combined 2B, 3B, 5B, 19B, and 20B into one comprehensive study	♦ Incomplete
Recommendation #3B-2016	The WRRB recommends that TG conduct TK research on sahcho predation on ɁekwɁ, and their relationship with ɁekwɁ, other wildlife and people by June 2017.	♦ Varied – combined 2B, 3B, 5B, 19B, and 20B into one comprehensive study	♦ Incomplete
Recommendation #4B-2016	The WRRB recommends that TG and ENR conduct a collaborative sahcho biological assessment, following the completion of the ongoing diga feasibility assessment. The assessment should include summarizing available information on sahcho abundance, movement and diet for the Bathurst ɁekwɁ herd's seasonal ranges as well as including TK collected in Recommendation #3B-2016.	♦ Varied – Will complete SARC report and engage with GN to discuss current information available in Nunavut	♦ Incomplete - Ongoing
Recommendation #5B-2016	The WRRB recommends that TG conduct TK research about stress and impacts on ɁekwɁ and people related to collars and aircraft over-flights by	♦ Varied – combined 2B, 3B, 5B, 19B, and 20B into one	♦ Incomplete



Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	September 2017, which should be considered in determining number of collars deployed in 2018 and beyond.	comprehensive study	
Recommendation #6B-2016	The WRRB recommends that ENR 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.	♦ Varied- BGCTWG will review the value. BCAC should review survey methods once formed.	♦ Incomplete; no longer required as eliminated per 2019 proposed action
Recommendation #7B-2016	The WRRB recommends that TG and ENR provide a summary of scientific and TK monitoring data, including harvest and collar mortalities, as soon as available each year, to the BGCTWG.	♦ Accepted	♦ Incomplete – inconsistent reporting
Recommendation #8B-2016	The WRRB recommends that the BGCTWG prioritize biological monitoring indicators in order of need for effective management and develop thresholds under which management actions can be taken and evaluated. Implementation of this recommendation should be completed by no later than the end of March 2017.	♦ Varied – BGCTWG to review biological indicators to assess priorities for monitoring, particularly under budget constraints.	♦ Incomplete - to be addressed as part of the adaptive management framework.
Recommendation #9B-2016	The WRRB recommends that TG refine and implement Tłıchǫ Land Use Plan Directives, under Chapter 6 related to Ɂekwǫ, land use and cumulative effects by March 2018.	♦ Accepted  ♦ TG acknowledges suggestion and advises the Board that it intends to refine and implement the Tłıchǫ LUP directives related to caribou. TG notes that land use planning in Wek'èezhì is beyond the jurisdiction of the Board.	♦ Incomplete
Recommendation #10B-2016	The WRRB recommends that TG and ENR initiate, develop and implement	♦ Rejected	♦ n/a - rejected

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	a land use plan for Wek'èezhì by March 2019.	<ul style="list-style-type: none"> <li>♦ 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 government-led approach to land use planning for public lands in Wek'èezhì. GNWT notes that this suggestion goes beyond the authority of the Board (should be a suggestion, not a recommendation).</li> <li>♦ TG agrees in substance with GNWT.</li> </ul>	
Recommendation #11B-2016	The WRRB recommends ENR complete the Bathurst Caribou Range Plan, with an implementation strategy, by March 2018. In the interim, the Board recommends that ENR develop interim thresholds for developments and other human activities within the range of the Bathurst ʔekwò herd by March 2017.	<ul style="list-style-type: none"> <li>♦ Varied – draft thresholds will be provided by March 2017, and final draft by March 2018</li> </ul>	♦ Completed
Recommendation #12B-2016	The WRRB recommends that TG and ENR complete and implement a long-term Bathurst Caribou Management Plan, with associate Action Plan, by March 2018.	<ul style="list-style-type: none"> <li>♦ Varied – will include other parties with lead from the Bathurst Caribou Herd Cooperative Advisory Committee</li> </ul>	♦ Incomplete - Ongoing
Recommendation #13B-2016	The WRRB recommends TG and ENR develop criteria under which the Conservation Area approach in the NWT's <i>Wildlife Act</i> will be used to	<ul style="list-style-type: none"> <li>♦ Varied –Bathurst caribou range planning process to determine when</li> </ul>	♦ Incomplete; conservation areas noted as tool in

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	protect key Ɂekwɔ̄ habitat by March 2018.	to protect key habitat by March 2018.	Bathurst Caribou Range Plan
Recommendation #14B-2016	The WRRB recommends that TG and ENR develop criteria to protect Ɂekwɔ̄ water crossings and tataa from exploration and development activities in the NWT. The criteria should be developed by March 2018 and included in the Bathurst Caribou Range Plan and Tłıchq Land Use Plan.	♦ Accepted	♦ Incomplete; conservation areas noted as tool in Bathurst Caribou Range Plan
Recommendation #15B-2016	The WRRB recommends TG and ENR investigate and report to the WRRB and other stakeholders on the potential use of offsets for Ɂekwɔ̄ recovery to compensate for losses caused by exploration and development activities by March 2018. A set of criteria should be developed to assess the effectiveness of each type of offset as it is investigated.	♦ Accepted	♦ Incomplete
Recommendation #16B-2016	The WRRB recommends that ENR continue to refine and update the Inventory of Landscape Change to ensure a comprehensive and standardized database of human and natural disturbance in the NWT.	♦ Accepted	♦ Completed
Recommendation #17B-2016	The WRRB recommends that TG and ENR integrate WEMP and WWHPP objectives and standardize approaches for monitoring the effects of development on Ɂekwɔ̄ in Wek'èezhìl	♦ Accepted	♦ Completed
Recommendation #18B-2016	The WRRB recommends that TG and ENR complete and implement a fire management plan with criteria identifying under which the key Ɂekwɔ̄ habitat is defined as a value-at-risk by March 2018.	♦ Varied – involve community members in identifying important caribou habitat. Caribou habitat lower priority for habitat protection than property	♦ Incomplete
Recommendation #19B-2016	The WRRB recommends TG conduct a TK monitoring project with elders to	♦ Varied – combined 2B, 3B,	♦ Incomplete

Recommendation #	WRRB Recommendations	TG/GNWT Responses	Status
	document how climate conditions have affected preferred summer forage and impacted ʔekwò fitness by September 2018.	5B, 19B, and 20B into one comprehensive study	
Recommendation #20B-2016	The WRRB recommends that TG conduct TK monitoring to assess the quality and quantity of winter forage by September 2018.	♦ Varied – combined 2B, 3B, 5B, 19B, and 20B into one comprehensive study	♦ Incomplete
Recommendation #21B-2016	The WRRB recommends that the BGCTWG develop monitoring thresholds for climate indicators by March 2017.	♦ Varied – Need clarity on what is meant by climate indicators but agrees the research is necessary	♦ Incomplete – to be addressed as part of the adaptive management framework.

## **APPENDIX G      WRRB Predator Management Recommendations and Government Response**

## **APPENDIX H      Tłıchq Research and Monitoring Program**