WRRB Information Request

IR Number: 1.1

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

What consultation and with whom took place during the development of management actions related to the Bluenose East and Ahaik herds?

Response

Representatives from the Nunavut government, the community of Deline (which hunts Bluenose East caribou), the community of Lutsel K'e, and the Sahtu Renewable Resources Board participated in workshops on the Bathurst herd's decline held by ENR in early October in Yellowknife. The Nunavut Wildlife Management Board was also invited to participate but did not send a representative to the workshops.

The community of Kugluktuk will be visited by ENR staff the week of December 7, 2009, to provide info on the joint proposal.

IR Number: 1.2

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

What are the proposed geographic boundaries for Management Actions 1 to 5?

Response

- The geographic boundaries are wildlife management units R and U. For a description of these units please see the *Wildlife Management Barren-Ground Caribou Areas Regulations.*

IR Number: 1.3

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

How do various harvest levels (ranging from 0 to level of current harvest) influence recovery time (i.e. time when numbers start to stabilize and/or increase) of the Bathurst herd?

Response

As described in the Bathurst technical report and Bathurst workshop report, the Bathurst herd at current rates of mortality, recruitment and fecundity cannot recover. All simulations (Caribou Calculator, OLS modeling, and stochastic modeling) project a continued decline. The Caribou Calculator suggests that the herd would either be extinct or at very low levels within 4-5 years. If all harvest is closed for the next 5 years, the Caribou Calculator projects a trend of stabilization and, under conditions of high fecundity, high calf survival and high cow survival, a modest increase.

Projecting the Bathurst herd's likely trend for more than 5 years at this point has little value. If the harvest continues at present levels, the herd will be a remnant population by that point. Predator-prey relations might then be fundamentally different. If the harvest is reduced or the sex ratio of the harvest changes, then the herd's dynamics will change substantially. There remain many factors affecting the caribou herd outside human control. In 1991 Mount Pinatubo erupted in the Philippines and spewed a huge amount of ash into the atmosphere; spring in 1992 was late, and the summer very short, in northern Canada, "negatively affecting the demography of the George River herd and other herds across the Arctic" (Bergerud et al. 2008). Global warming will affect weather at northern latitudes in unpredictable ways. A return to the conditions resulting in low calf survival in the Bathurst herd (and apparently in other NWT herds) between 2000 and 2005 would likely mean a continuing declining trend, regardless of harvest.

The fastest documented growth of a barren-ground caribou herd was the growth of the George River herd from an estimated 2,000-3,500 in about 1950 to about 600,000 in 1984 (Bergerud et al. 2008). This would have required natural adult mortality of 5-7%/year, recruitment greater than 20%, a minimal hunter kill (<200/year), and a near-absence of wolves. This would be a population growth rate (lambda) of 1.16-1.18. The Bathurst herd is unlikely to have these near-perfect conditions.

IR Number: 1.4

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

How does the sex ratio of the harvest (ranging from an all bull to an all cow harvest) affect recovery time of the Bathurst herd?

Response

As noted in the Bathurst technical report, the current cow harvest (estimated at around 5,000/year), with the herd's breeding cows estimated at 16,600, is the most serious harvest-related impact on the herd. As the best scenario for Bathurst recovery is stabilization over the next 5 years with a possible slight increase, any level of cow harvest would likely result in a continued decline.

The Model also predicts that even a small harvest will result in continued decline. There are also cultural views on the importance of bulls snd currently this herd has the lowest bull / cow ratio in the NWT A prolonged heavy bull harvest can affect the herd's genetic health.

IR Number: 1.5

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

Based on the population model developed by consultants to ENR, what has been the estimated hunter harvest from 2006 to 2009?

Response

As reported in the technical report, the model work by J. Boulanger included assessing the likely cow harvest that would be consistent with the current cow survival rate of 67-68%, assuming a natural survival rate of 86%. A cow harvest of 5,000 was a good fit in this simulation. Modeling by C. Nicolson supports this likely estimated harvest. The model work did not attempt to estimate bull harvest but, as noted in the technical report, the estimated bull harvest has likely been about 2,000/year.

IR Number: 1.6

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

What are the current management actions for the Bluenose East herd?

Response

In 2007, all resident and non-resident harvest in the Sahtu region was eliminated. The SRRB also recommended a voluntary maximum 4% harvest rate with 80% bulls for the Bluenose East herd.

In the Wek'èezhìi, no management activities for the Bluenose East have been undertaken.

IR Number: 1.7

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

What are the current management actions for the Ahiak herd?

Response

There are currently no management actions for the Ahiak herd. In view of the apparent decline of numbers of cows on this herd's calving grounds, monitoring of the herd's trend should be continued. Few Nunavut or NWT communities other than Lutsel K'e hunt this herd. Most of the harvest on this herd is likely from communities in northern Saskatchewan.

IR Number: 1.8

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

Given the Bluenose East herd is in decline, how do harvest levels affect the recovery of the herd? What is the risk to herd recovery of maintaining harvest of this herd?

Response

ENR attempted a population survey of this herd in July 2009, which was unsuccessful due to weather. ENR is planning a population survey for this herd in 2010, and the SRRB has indicated support for this survey. Without a recent population estimate for this herd and with incomplete harvest information, a precise assessment of the effects of harvest is not possible. However, in view of the herd's steep decline from 2000 to 2006, the precautionary principle would require that harvest be limited and primarily focused on bulls. ENR suggests that the Sahtu Renewable Resources Board recommendation of a voluntary 4% harvest and 80% bulls only be considered until a new herd estimate is obtained. It must be remembered that many factors affect population trend of these herds, and recovery of any herd cannot be assumed. We can only take actions that will give the herd an opportunity to recover.

IR Number: 1.9

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

How does ENR determine appropriate harvest levels for declining caribou populations?

Response

There is by definition no sustainable harvest from a declining population. Some level of harvest may be proposed for a population depending on management priorities. Determining management goals, including harvest strategy, for a caribou herd is in the NWT a shared responsibility among co-management boards, aboriginal governments and groups, and the territorial government. A harvest management strategy should follow after overall goals have been determined. Determining an appropriate harvest level for a caribou herd should take into account both population size and trend, and of these two, trend is more important than simple numbers. A rapidly declining population at low numbers (e.g. the Bathurst herd) should have the highest urgency in terms of harvest limitation, especially on breeding cows. A herd of limited size but with an increasing trend could sustain a limited harvest.

IR Number: 1.10

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

What would be the population size of Ahiak and Bluenose East that would result in a recommendation of no female harvest?

Response

As noted above, determining harvest strategies and overall management goals for a caribou herd is in the NWT a shared responsibility among co-management boards, aboriginal governments and groups, and the territorial government. A harvest management strategy should follow after overall goals have been determined. The highest priority for no female harvest should go to herds that are declining and have reached low numbers. The Porcupine Caribou Management Board's draft Harvest Management Plan sets a threshold of 45,000 caribou below which all harvest is to be closed. In herds declining from natural regulation, harvest of breeding cows can only increase the rate of decline.

IR Number: 1.11

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 1-5

Request

What are the options under consideration for providing funding to Tlicho hunters to access other herds?

Response

ENR is working with ITI to address hardships. Assistance will depend on management action taken.

IR Number: 1.12

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 7

Request

What are the legislative options for establishing a no-hunting zone on either side of the winter road?

Response

Legislative options are a no-hunting zone created through the *Big Game Hunting Regulations* and the *Wildlife Management, Barren-Ground Caribou Areas Regulations.*

IR Number: 1.13

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 7

Request

How might the effectiveness of the winter road check stations be improved on?

Response

Mandatory stopping for all traffic at check stations.

IR Number: 1.14

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix A: Proposed Management Actions 8

Request

Please provide a summary of status of discussions with Government of Nunavut with respect to protection of calving grounds.

Response

It is ENRs understanding that there has been correspondence and meetings between Ministers where issues have been raised. Currently no land use permits have been issued during the calving season on calving grounds in Nunavut.

IR Number: 1.15

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix B: Proposed Actions to Monitor

Request

Please provide a clear examination of how each of the monitoring actions 1-11 is linked to assessing the efficacy if the management actions and how management actions will be adjusted to the results of such monitoring.

Response

Barren-ground caribou monitoring actions are described in the Bathurst Caribou Management Plan. The Bathurst Caribou Management Plan provides guidelines and rationales for each of the recovery options, based on herd status (high and stable, declining or low).

IR Number: 1.16

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix B: Proposed Actions to Monitor

Request

Please provide a justification for the sampling frequency for health and condition parameters (e.g. both spring and fall)

Response

Suggested frequency for health and condition sampling is proposed to take advantage of existing fall and spring community hunts already part of our aboriginal harvesting monitoring practices.

Fall sampling allows for an assessment of health and condition of animals returning from the summer migration and provide of measure of their energetic condition prior the mating season.

Spring sampling provides a way to directly assess pregnancy rate of females and overall conditions of caribou at the outset of spring migration.

IR Number: 1.17

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix B: Proposed Actions to Monitor

Request

a) How often will birth rate be determined?

b) What is the rationale for this sampling frequency?

Response

a) Ideally every year, however given the level of monitoring required with other herds at the time of calving, this may end up occurring only every 2-3 years.

b) The sampling frequency provides a measure of productivity. When used in conjunction with the results of the fall and spring calf: cow ratio, allows for better monitoring of spatial and temporal calf mortality.

IR Number: 1.18

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix B: Proposed Actions to Monitor

Request

a) What does ENR consider a "healthy" sex ratio in barren ground caribou herds?

b) How is this used to manage caribou herds in other jurisdictions?

Response

a) A sex ratio to 45-50 bulls:100 cows or higher is generally considered to be associated to a stable herd.

b) Other jurisdictions are reluctant to let the sex ratio get below 30 bulls per 100 before considering management actions.

IR Number: 1.19

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix B: Proposed Actions to Monitor

Request

Please provide statistical rationale (e.g. power analysis) for justifying an increase in number of collars from 20 to 50 on the Bathurst herd.

Response

A power analysis for the number of collars to be deployed on Bathurst caribou females has not been conducted by an ENR statistician, however work on this is planed for this winter. The reference of 50 collars has been suggested by our statistician to obtain a more precise estimate of cow survival, as well as a better understanding of seasonal the movement and the distribution of females.

IR Number: 1.20

Source: Wek'èezhìi Renewable Resources Board

To: Government of the Northwest Territories

Reference

Appendix B: Proposed Actions to Monitor

Request

Please provide a proposed number of collars to be placed on bulls and the statistical rationale for this number.

Response

The number of collars to be deployed on males has not been determined yet and will depend on further analysis conducted by the ENR statistician.

The main purpose for deployment of collars on bulls is to provide better monitoring of movement and distribution as well as survival.