



SUBMISSION TO THE
NUNAVUT WILDLIFE MANAGEMENT BOARD

FOR

Information: X

Decision:

Issue: The Beverly Mainland Migratory Barren-Ground Caribou Subpopulation Status.

Background:

The mid 1900's through the late 1980's saw an increase in demographic studies of barren-ground caribou herds on Canada's western mainland. In his status report, Calef (1979) discussed eight major barren-ground caribou herds within the Northwest Territories (NWT), estimated to number in excess of 600,000 animals. The herds described included the Melville Peninsula, Wager Bay and Bluenose herds, thought to be increasing, the Bathurst, Beverly and Porcupine herds, thought to be stable, and the Qamanirjuaq and Baffin herds thought to be declining. During this same period, our understanding of the Beverly caribou herd benefited from a similar acceleration in demographic studies specific to the herd. In 1994, a photographic survey of the Beverly caribou subpopulation within its Beverly/Garry Lakes annual concentrated calving area estimated 120,000 +/- 43,100 (SE) breeding females from which a total subpopulation estimate of 276,000 +/- 106,600 (SE) adults and yearling caribou was extrapolated using fall composition study results. From 1994 through to 2002 less monitoring and attention was given to the Beverly subpopulation.

During the late 1990's to early 2000, community and government representatives raised concerns over the paucity of information on the Beverly sub-population status. Subsistence harvesters from Northern Saskatchewan expressed the greatest concern owing to their greater dependence on Beverly caribou (during the winter season) compared to that of neighbouring jurisdictions (InterGroup Consultants Ltd., 2008). Additional concerns were raised by BQCMB members regarding an observed increased harvest of caribou in Northern Saskatchewan as a result of increased access to the winter range resulting from the construction of all season and winter roads to service mining companies in the area. In response to these concerns and in the absence of data, the NWT Government coordinated a reconnaissance survey of the Beverly caribou sub-population within its southern annual concentrated calving area in June 2002 in Nunavut. The reconnaissance survey made a number of findings: 1) the area of calving was the smallest recorded since 1979 and approximately 500 km² smaller than observed in June 1994. 2) The relative densities of adult caribou on the calving ground were lower than most other survey years (except the 1987 and 1988 survey years) (Johnson and Mulders, 2002).

The cause of the observed decline in the Beverly sub-population has recently been shown to be related to a 200 to 300 km shift in their calving ground north from their traditional calving grounds in the vicinity of Beverly Lake. The reasons for this shift are unknown: possible contributing factors are 1) range wide disturbance, 2) predation by wolves and grizzlies, and 3) possible high harvest rates in Saskatchewan. Potential management actions, including consideration of reducing commercial allocations to zero, will need to be discussed with communities as soon as possible.

Commercial allocations for the Beverly sub-population should be reduced to zero. Further actions may require consultation and discussion.

Anthropogenic (human caused) disturbance/activities on calving and post-calving grounds of the Beverly sub-population represent long term conservation risks to this sub-population and highlight the need to mitigate these impacts for the purposes of conservation. Greater attempts must be made by all jurisdictions to monitor anthropogenic activities/disturbance in order to determine its role on the population levels. Saskatchewan is the main harvester of Beverly caribou followed by the NWT, and then Nunavut. Discussion concerning the conservation of this population across its range for the purposes of promoting recovery to its previous calving ground and population status needs to occur between Saskatchewan, NWT, Nunavut, NWMB and the BQCMB.

Total estimated cash value of the harvest to subsistence harvesters (money in the pocket) of both the Beverly and Qamanirjuaq populations is in excess of \$15 million dollars annually.

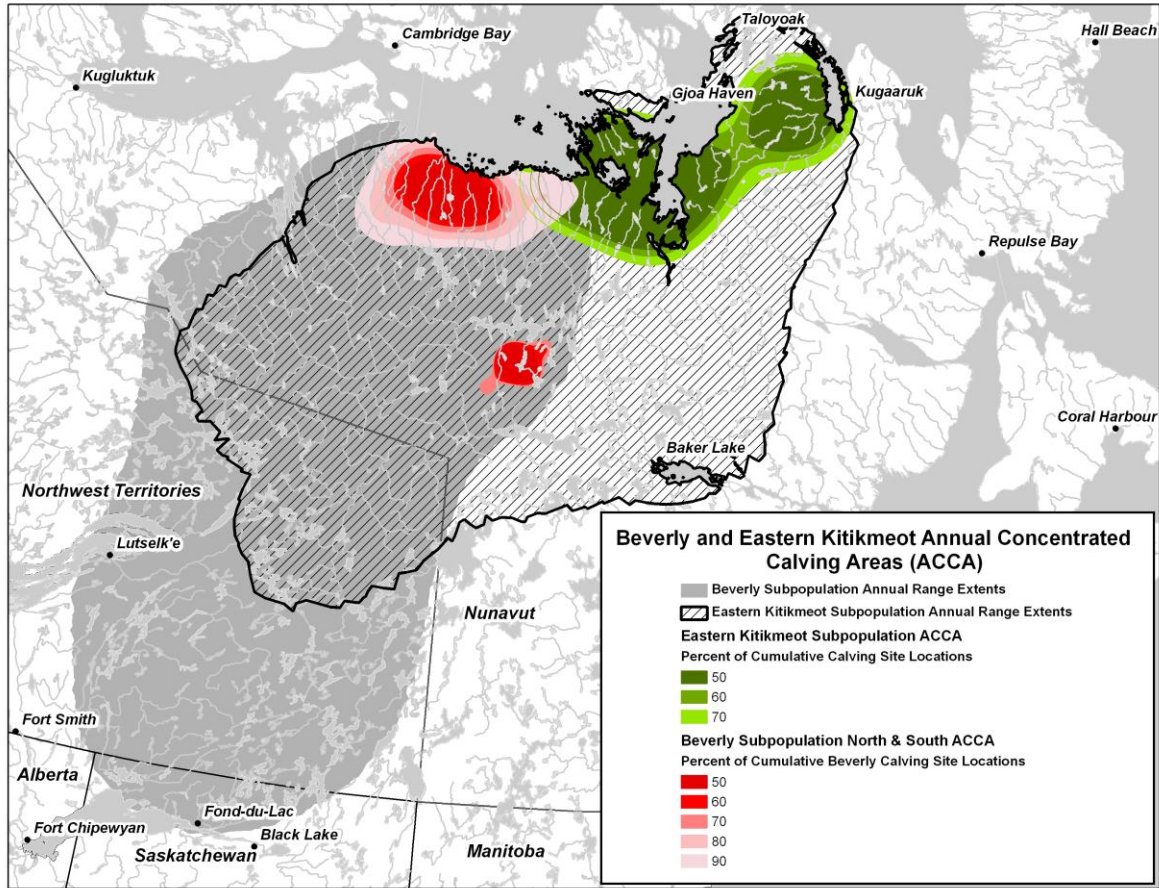


Figure 1 The annual concentrated calving areas of the Beverly and Eastern Kitikmeot barren-ground caribou subpopulations based on a multi-year fuzzy cluster analysis of barren-ground caribou collar locations (Via significant changes in movement rates) calving sites (After Nagy and Campbell, 2012).

Current Status

Population estimates of the Beverly sub-population in the vicinity of Beverly Lake were attempted by the GNWT in June 2007 and June 2008 but were not completed due to the extremely low numbers of caribou encountered. A survey conducted in 2011 in the same area also showed low numbers of caribou. New scientific analysis as well as IQ from communities across the range determined that the Beverly caribou population has shifted its calving grounds from near Beverly Lake to the coastal lowlands of the Queen Maud Gulf area about 200 to 300 km north.

An aerial survey was completed June 2011 on the current Beverly calving range. The results indicate about 124,000 animals for the Beverly sub-population. It is likely that, not only has the Beverly subpopulation shifted calving grounds, but also has declined (Figure 2). The magnitude of decline remains uncertain.

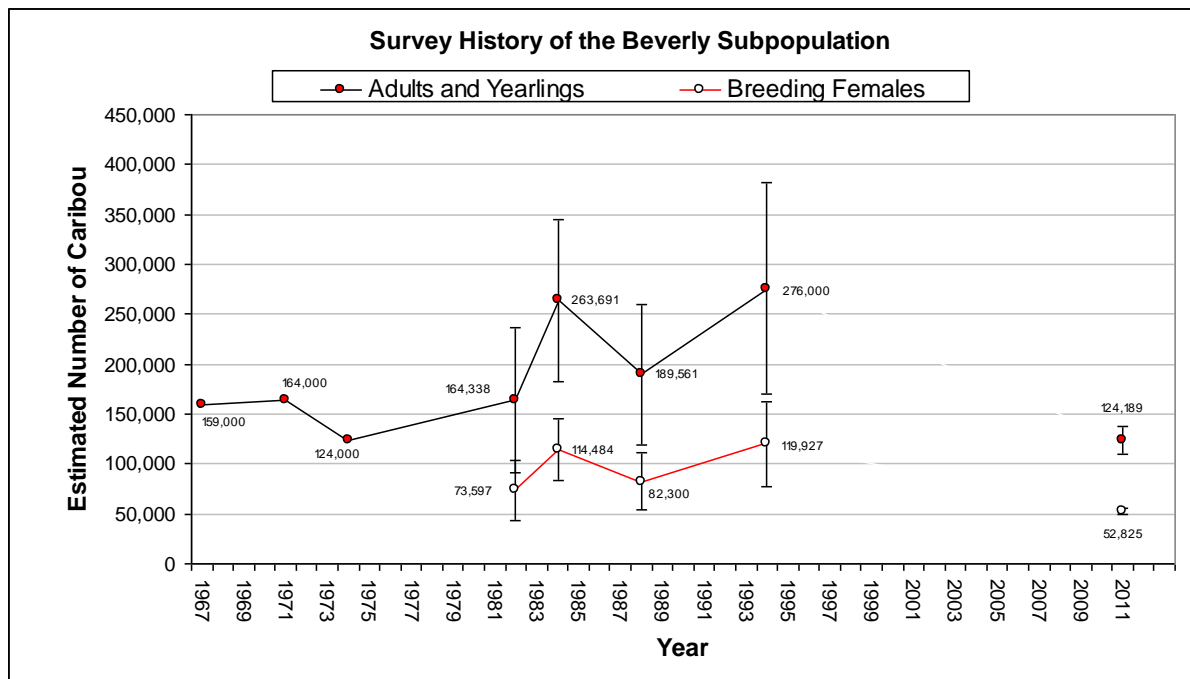


Figure 2 Survey histories of abundance estimates of adults and yearlings (1+ years of age) and breeding females for the Beverly subpopulation of taiga wintering mainland migratory barren-ground caribou on their southern annual concentrated calving area (1967 to 1994) and on their northern annual concentrated calving area (this report). Error bars indicate Standard Error of estimates.

Management Considerations

Monitoring of the Beverly caribou needs to be increased to identify population trends, the effects of human activities, and the effectiveness of various mitigation measures. Appropriate action needs to be taken to halt the continued population declines within the western and eastern Canadian barren-ground caribou populations.