

Written Submission No. 09

2016 Draft Nunavut Land Use Plan

Proposed Land Use Designation Additions and Amendments:

Community Areas of Interest - Caribou Sea-Ice Crossings,

Melville Peninsula, Baffin Island and High Arctic

To: The Nunavut Planning Commission

From: The Qikiqtaaluk Wildlife Board (QWB), and the Hunters and Trappers Organization (HTOs) of Clyde River, Grise Fiord, Resolute Bay, Hall Beach and Igloolik

Background Information:

Caribou is a keystone species for the maintenance of Inuit culture and well-being, as well as for the northern ecosystem. Arctic tundra Caribou are known to go through long-term cycles (Ferguson et al. 1998). During these cycles, there are years and decades when caribou are in low abundance, when they are especially sensitive to disturbance by humans

Caribou abundance in the mountains of northeastern Baffin Island (Ferguson 1989) rarely reaches densities seen at times on southern and northern Baffin Island, or on the mainland of Nunavut; the mountainous terrain, fiords and glaciers are challenges to their migrations. Similarly, Peary caribou on the High Arctic islands are typically at low densities, compared to caribou farther south, due to the severity of the climate where they live. Because of their usually low abundance, they are vulnerable to disturbance by human activities at all times. Vegetation is especially sparse on the High Arctic islands, and among the mountains of northeastern Baffin Islands. Most vegetation in these areas is inaccessible to caribou during winter due to wind-hardened snow cover, and occasionally due to icing on the land.

Caribou move between northern Baffin Island and Melville Peninsula at two specific crossings in Fury and Hecla Strait. These crossings are important to the seasonal and interannual movements of these tundra wintering populations.

To adapt to changing conditions of forage availability and accessibility throughout the snow-covered period, caribou on Baffin Island, Melville Peninsula and the High Arctic often move short distances across fjords and straits, and longer distances between islands as and when

needed. Sea-ice crossings are critical to female caribou as they migrate to access suitable areas where they can successfully give birth to their calves, and then move to favourable post-calving areas. All of these caribou must cross fiords, inlets and straits to find wintering areas where forage may be accessible. In some areas, caribou must cross on the sea ice because of unpassable icefields and cliffs that jut out of the sea vertically up to 1600 m in elevation.

Icebreaking at or near known sea-ice crossings will have significant negative impacts on the survival of these populations of caribou. Caribou may attempt crossing icebreaker tracks, and subsequently die through injury, exhaustion, drowning, or freezing upon failure to escape the water on the far side of the track. If they do not attempt the crossing, they may never reach areas with accessible forage at various times during winter, or never reach suitable calving and post-calving areas risking the population's reproduction.

The 2016 draft Nunavut Land Use Plan (NLUP) claimed that there is insufficient information for caribou-specific land use designations, except on the mainland of Nunavut. The QWB believes that this is not true, given the extensive Inuit Qaujimajatuqangit (IQ) that was shared with NPC and governments by Inuit of Qikiqtaaluk communities in the past, and peer-reviewed papers already published about caribou in Qikiqtaaluk Region.

Further, the 2016 draft NLUP specifically excluded all caribou wintering areas from potential protection. The QWB views this as a serious error. Throughout the period from freeze up to break up, ready access across sea-ice is critical to the survival of caribou on northeastern Baffin Island and in the High Arctic. Future unmanaged human impacts from winter ship traffic would be devastating.

Special Note:

Several Caribou Sea-Ice Crossings were identified in the 2016 NLUP. The HTOs and QWB support the designation of Sites # 153 and 154 as per Table 1 in the 2016 draft NLUP, assuming that on-ice winter roads and winter skid tracks are also prohibited (see Conditions below). The Caribou Sea-Ice Crossings identified in this Written Submission are additional Crossings that should also be protected. Construction and operation of wind turbines for electrical power generation have been found to negatively impact reindeer, which are far more habituated to humans. Inuit expect such infrastructure near sea-ice crossings would have similar or greater negative impacts on tundra caribou in Qikiqtaaluk Region.

Source of information: Inuit Qaujimajatuqangit.

Proposed Designation: Special management Area

Proposed Restrictions:

Conditions:

- Closed to all ship traffic, subject to safe navigation, during Ukiaq, Ukiuq, Upingaksaag and Upingaaq.
- On-ice winter roads and winter skid tracks are prohibited.
- Wind turbines for electrical generation must be at least 5 km from caribou calving and post-calving areas, and must be positioned so they are not visible from caribou calving and post-calving areas.
- Any project in Nunavut that would violate these conditions is prohibited.

Proposed Boundaries of the Caribou Sea-Ice Crossings – Melville Peninsula, Baffin Island and High Arctic:

See the attached maps and the associated shp files.

References:

Ferguson, M. 1989. Baffin Island. *In*: E. Hall, editor. People & Caribou in the Northwest Territories. Department of Renewable resources, Government of the Northwest Territories, Yellowknife, Canada. Pages: 140-149.

Ferguson, M.A.D., R.G. Williamson, and F. Messier. 1998. Inuit knowledge of long-term changes in a population of arctic tundra caribou. *Arctic* 51: 201-219.

Skarin A. and M. Alam. 2017. Reindeer habitat use in relation to two small wind farms, during preconstruction, construction, and operation. *Ecol. Evol.* 7: 3870–3882.

Skarin, A., C. Nellemann, L. Rönnegård, P. Sandström and H. Lundqvist. 2015. Wind farm construction impacts reindeer migration and movement corridors. *Landscape Ecol.* 30: 1527–1540.

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