

**Written Submission No. 06**

**2016 Draft Nunavut Land Use Plan**

**Proposed Land Use Designation:**

**Community Areas of Interest – Caribou Wintering**

To: The Nunavut Planning Commission

From: The Qikiqtaaluk Wildlife Board (QWB), and  
the Hunters and Trappers Organizations (HTOs) of Arctic Bay and Resolute Bay

**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, with each cycle lasting up to the entire lifetime of an elder (Ferguson et al. 1998). In the High Arctic, population fluctuations usually occur over shorter time periods, and are sometimes mediated by especially severe foraging conditions during some winters.

During these population fluctuations and cycles, there are decades when caribou are in low abundance, and they are very sensitive to disturbance by humans. Unlike large populations of caribou, small ones are not resilient to disturbance, loss of habitat, and human disturbance and development that may separate them from their seasonal habitats. The protection of important areas for caribou during these decades is critically important, or the populations may never return to their former abundance, and their natural recovery and cycles could be lost.

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 Qaujimagatuqangit (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. Winter ranges are critical to the survival of Arctic tundra caribou. When populations of Peary and other caribou have suffered major declines, it has occurred during severe winters. Qikiqtaaluk caribou are at low population levels due to forage limitations according to IQ, which is supported by scientific research on Baffin Island. Inuit have seen caribou dying naturally most often during winter. Future unmanaged

human impacts could be devastating without protection of tundra caribou on their key wintering habitats.

Impacts of industrial exploration and development cannot be effectively mitigated in any of these key wintering areas during decades when caribou abundance (i.e., density) is low. These realities are well known through IQ (although science may lag behind), and the impacts of development will likely be most severe for caribou populations that winter on the tundra.

Inuit are well aware that the season of highest natural mortality for tundra caribou is during winter, their most stressful season. In winter, tundra caribou have great difficulty finding and digesting accessible forage, compared to summer. Lichens, the caribou's winter forage, are very slow growing and naturally sparse on the Arctic islands, and thus susceptible to long-term grazing and human impacts. Avoidable disturbance during winter would put populations of tundra caribou at high risk; however, disturbance effects are difficult to detect because nutritionally stressed caribou do not have the energy to respond immediately. Thus, they may not appear especially stressed or alarmed to persons who are not intimately knowledgeable about tundra caribou. IQ indicates that tundra caribou may not respond immediately to disturbance, but if they do survive, in future they will avoid important wintering areas where they have been disturbed in the past or where development occurs while at low abundance. Disturbance and development can have long-term impacts.

Special wintering areas are critical to the survival of tundra caribou populations, and the many Inuit families that rely on them. The protection of these areas is critical to the livelihoods of Inuit who depend on these caribou populations throughout the year, and in the future when and if populations recover. Without protection of these key wintering areas for tundra caribou, the Nunavut Land Use Plan will fail in its goal to protect and promote the well-being of all of Nunavut's residents as a primary purpose of land use planning under Article 11 of the Nunavut Agreement.

Cameron Island is known to be the major annual wintering area of Peary caribou in the Bathurst Island archipelago. The 2016 draft NLUP proposed to protect the sea-ice from ice breaking to enable Bathurst Island caribou to migrate to and from their critical wintering area on Cameron Island. Qausuittuq National Park (QNP) was created to protect some important calving, post-calving and rutting areas of Bathurst island caribou. With the support of both the QWB and the HTO of Resolute Bay, the 2016 draft NLUP further proposes to protect the population's calving and other habitats east of QNP on northeastern Bathurst Island (NPC. 2016. Draft NLUP, Table 1, Site # 43). All of that effort will be wasted if the annual wintering area on Cameron Island is not also protected from future development. Winter is known to be the season of highest natural mortality among this population of Peary caribou, an endangered species. The area of Bent Horn on southwestern Cameron Island may be excluded from the protection area, assuming that any future human access to the site is restricted to coming from the south and west. In August and October 2018, the QWB applied to the Government of Nunavut (GN) to use

the shp files of Cameron Island wintering areas generated by Poole et al. (2015). The GN has not approved such use, so we could use only the small figure in their paper.

On Baffin Island, Inuit elders know of special places where there will be some caribou when there are no caribou anywhere else. Baffin Island caribou depend on such areas to recover during periods of cyclical low abundance. Development and disturbance of these important caribou wintering areas must be avoided at all times. Any long-term development in these special places will jeopardize the future of Baffin Island caribou for centuries to come.

Note: The QWB and HTOs have decided to include some of these key wintering areas south and east of Nettilling Lake, east and north of Amadjuak Lake, and around Mingo Lake in the Multiple Values Area of West Central Baffin Island (see WS-11).

**Source of information:** Inuit Qaujimagatuqangit, and some scientific information.

**Proposed Designation:** Protected Area

**Proposed Restrictions:**

**Prohibited Uses:** The following uses are prohibited:

- Mineral Exploration and Production;
- Oil and Gas Exploration and Production;
- Obnoxious Land Use;
- Quarries;
- Hydro-electrical and related infrastructure;
- Wind turbines for electrical generation and related infrastructure;
- Linear Infrastructure; and
- Related research except Non-Exploitive Scientific Research

**Conditions:**

- Wind turbines for electrical generation must be at least 5 km from caribou harvesting areas, and must be positioned so they are not visible from caribou harvesting areas.
- Any project in Nunavut that would violate these conditions is prohibited.

**Proposed Boundaries of the Community Area of Interest - Tundra Caribou Wintering Areas:**

1. Cameron Island wintering area, based on IQ, M. Ferguson (pers. comm. and unpubl. data) and Poole et al. 2015. Fig. 4, excluding AIN2013-01 Call-for-Bids area around Bent Horn, as per the attached map and the associated shp files.
2. Baffin Island based on IQ, as per attached map and the associated shp files.

Note: We have identified only important caribou wintering areas that occur outside of national parks.

**References:**

Ferguson, M.A.D., L. Gauthier and F. Messier. 2001. Range shift and winter foraging ecology of a population of Arctic tundra caribou. *Can. J. Zool.* 79: 746–758.

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.

Poole. K.G., A. Gunn, J. Wierzchowski and M. Anderson. 2015. Peary caribou distribution within the Bathurst Island Complex relative to the boundary proposed for Qausuittuq National Park, Nunavut. *Rangifer* 35, Special Issue No. 23: 81-98.

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.

Skarin A, P. Sandström and M. Alam. 2018. Out of sight of wind turbines—Reindeer response to wind farms in operation. *Ecol Evol.* 8: 9906–9919.

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