

Information Requests (IRs) from Municipality of Igloolik

General IR

In general the Municipality of Igloolik supports the IR prepared and submitted by QIA on the DEIS. QIA has submitted approximately 40 IR, and many of their IR are appropriate to concerns raised by Igloolik such as on harvesting and cultural well-being, potential impacts on the distribution and calving of caribou, and the extent of dust deposition on caribou forage. Igloolik also agrees with QIA concerning the IR on the lack of baseline data on birds, which is very important for assessing any impacts arising from the proposed project, and for future monitoring purposes.

Response to General IR

Baffinland surveyed a terrestrial regional study area for birds of more than 250 km (Milne Inlet to Steensby Inlet) over a period of 3 consecutive years, and a marine study area spanning to the entrance of Hudson Strait.

IR#1 Traditional Knowledge

It is evident that the proponent consulted with communities and incorporated traditional knowledge into various sections of the DEIS. It is not clear, however, how traditional knowledge has led to development of the project as a whole, or to specific components of the project, and how it will be used to manage and monitor the project if it proceeds. Given the importance of traditional knowledge to Igloolik and other communities, it would be useful to provide a section, to summarize and highlight the ways the project as proposed actually incorporates and reflects the use traditional knowledge and values. Similarly, it would be useful to highlight how the project may not agree with traditional knowledge and values, and to identify any gaps or areas of concern that need further attention for establishing mitigating measures. In many cases this type of IR could be provided by using tables or charts.

Response to IR#1

Traditional knowledge was utilized in project planning as well as within the impact assessment. Below are a few key examples:

- With respect to Project planning, the shipping route through Foxe Basin to the east of Rowley and Koch Islands was selected over a proposed westerly route based on both feedback Baffinland received during public meetings as well as biological information on marine mammal occurrences (mainly walrus). It was clear that in relative terms a western route through Foxe Basin would have been more intrusive to both marine wildlife and to harvesting activities and so the eastern route was selected.
- The socio-economic impact assessment focused on youth, as this represents a large demographic group and elders in the communities continued to refer to the need for opportunities for youth, and the need for progressive approaches to maximize employment.
- Inuit knowledge of North Baffin caribou was critical in understanding the current and historic distribution and abundance of caribou, and past and anticipated future trends, as very little scientific data was available. The information received from hunters on trends in caribou abundance matched very well with historic harvest records.
- Land use documented as part of the traditional knowledge study was important in understanding land use and to evaluate potential effects of the Project on land use.
- In terms of monitoring, Inuit participation in surveys will be key, to both involve Inuit and to help put context to the observations of monitoring staff. Baffinland has also given consideration to a wildlife

harvest study as a means of using Inuit knowledge and experience to monitor trends in wildlife distribution and abundance.

- Generally, we found very good agreement between Inuit knowledge collected and scientific studies. We did find varying Inuit perspectives on items such as whether the railway would be disruptive to caribou migration. Some indicated they felt the railway could disrupt normal movement patterns from central to northern Baffin Island. Some elders suggested, however, that the animals would become acclimatized to the railway just as they can become used to Inuit hunters if followed (an old hunting strategy). Experience from the George River herd in Labrador suggests the railway there does not provide a barrier to caribou.

IR#2 Socio-economic Impacts

The DEIS does not provide a thorough discussion on the socio-economic effects from similar types of projects that have occurred elsewhere, even though an extensive body of literature exists on this subject. It would be useful, therefore, to summarize this literature, and highlight appropriate factors relevant to the proposed project, to help identify issues that may need to be addressed, and how they could be mitigated.

Response to IR#2

The Baseline Report includes some 21 references to literature describing experiences from similar types of projects. Some 10 references are included in the DEIS itself. This includes reports of research carried out in relation to the Jericho mine and Nanisivik mine, some of which the author wrote. Experience from the NWT diamond mines was also referenced.

Additionally, broad experience has been presented within the context of specific issues as one more source of insight to complement local knowledge and statistical data. It is believed that the work which has contributed to the socio-economic impact assessment is adequate and does not present a barrier to the project review.

IR # 3 Walrus and Marine Mammal Hunting

The Igloodik HTO has been concerned for the effects of tourism on the walrus population and placed a moratorium on all tourist activities for the last several years. Although the moratorium has been lifted, we feel the DEIS does not adequately address the potential impacts of the shipping corridor on the walrus population and their calving areas. In short, the walrus is central to the identity of Igloodimiut, and any adverse impacts to the procurement, consumption, and distribution of walrus food will have an impact on Igloodik, and its ability to continue to pass on traditions from generation to generation. As such, the hunting of walrus is a significant activity that not only provides food, but also enables communities like Igloodik to provide stability in the face of a rapidly changing world. In fact, it can be thought of as the glue that binds social and economic relations in the community, and requires much more attention than provided in the DEIS.

Response to IR #3

The effects of shipping on walrus were addressed in Volume 8, Section 5.7.2 of the DEIS. The approach taken was to estimate underwater sound levels from shipping (Cape-size ore carriers in open water and ice). This information was used to predict the potential response of walruses along and adjacent to the shipping route. The assessment considered the location of the shipping route relative to identified calving areas based on Inuit knowledge as well as haul-out areas (see Table 8-5.6) with known relatively large numbers of walruses. Effects of shipping on walruses were considered not significant, in large measure

because the route had been selected to avoid large concentrations of these animals. The DEIS does, however acknowledge that shipping could cause some localized avoidance responses in walruses.

Baffinland recognizes that the walrus hunt is a critical part of Igloolik's cultural wellbeing and that walruses serve as an important country food source for Igloolik and other communities. Baffinland is committed to ongoing community consultations and a monitoring program to ensure that the walrus harvest is not affected by Project activities, notably shipping. If effects of the Project do result in limitations to walrus harvesting by Igloolikmiut (despite ongoing communication with hunters and mitigation measures), compensation provisions of the Inuit Impact Benefits Agreement (IIBA) will be applied. However, providing compensation is seen as a last resort and the preferred alternative is to ensure that the walrus harvest is unaffected by Project activities.

IR # 4 Cumulative Effects Assessment

Volume 9 of the DEIS discusses the potential effects of the project on the marine environment. It would be useful to expand this section by providing more information on how the project, particularly concerning the port and marine shipping in Foxe Basin, may impact hunting of marine mammals and fish. Moreover, more attention needs to be placed on how the marine mammals could react to open leads from the shipping corridor, and the subsequent impacts on hunting. Any negative impacts should be highlighted, particularly if there are potential adverse effects to food security, as well as safety issues while hunting in a changing sea ice environment.

Response to IR #4

The potential for creation of leads by icebreaking vessels and the interaction with marine mammals was addressed in IRs from both Parks Canada (PC IR #4-2) and DFO (DFO IR #14). The response is repeated below.

"In assessing the question of marine mammals following the ice-breaking ore carriers into leads created behind the vessels, it is important to distinguish stable fast-ice from constantly moving pack-ice. The pack-ice environment is extremely dynamic with ice floes and pans constantly moving. In areas such as Hudson Strait and Foxe Basin, leads regularly open and close as the ice moves in response to wind, currents and tides. The marine mammals that winter in this habitat are accustomed to the constant opening and closing of open water areas where they can surface to breathe. The passage of the ore carriers through this dynamic environment will have little effect on the already moving ice and will not create leads in the ice that can be followed by the marine mammals that winter in this habitat. Species that winter in the pack ice of Hudson Strait include bowheads, narwhals, belugas, walruses, bearded seals, and ringed seals.

Fast-ice habitat is much more stable than pack-ice habitat. When icebreakers enter fast-ice, they leave a narrow track that is completely filled with small pans and brash ice. The ice in the track quickly refreezes (within a few hours) in cold weather (A.P.P. 1981). It has also been shown that most arctic marine mammals will avoid close proximity to moving ships. Therefore, it is unlikely that marine mammals would follow ships into the fast ice before the ship's track has refrozen. Observations of belugas and narwhals along the Admiralty Inlet ice-edge in spring confirmed that they did not follow an ore carrier into the fast-ice (LGL and Greeneridge 1986). It is relevant to note that virtually all cases of whales being trapped in the ice have occurred because the whales have not left an area before freeze-up in the fall. The recorded cases of entrapment have not involved whales getting caught because they enter an area too soon (e.g. Porsild 1918; Freeman 1968; Kapel 1977).

References:

A.P.P. 1981. *Integrated Route Analysis. Report by Arctic Pilot Project, Petro-Canada, Calgary. 3 vols.*

Freeman, M.M.R. 1968. *Winter observations of beluga (Delphinapterus leucas) in Jones Sound, NWT. Canadian Field-Naturalist 82:276-286.*

Kapel, F.O. 1977. *Catch of belugas, narwhals and harbour porpoises in Greenland, 1954-1975, by year, month and region. Rep. International Whaling Commission 27:507-520.*

LGL and Greeneridge. 1986. *Reactions of beluga whales and narwhals to ship traffic and ice-breaking along ice-edges in the eastern Canadian high arctic: 1982-1984. Environmental Studies Report No. 37, Dept. Indian Affairs and Northern Development, Ottawa. 301 p.*

Porsild, M.P. 1918. *On "Savssats": a crowding of arctic animals at holes in the sea ice. Geog. Rev. 6:215-228."*

As discussed in the Shipping Management Plan and in various sections of the DEIS (e.g., Volume 4, Section 10.5.2), direct travel on the landfast ice of Steensby Inlet will be affected by vessel and port activities. In order to address safe travel in this area, Baffinland has proposed mitigation measures such as the placement of reflective markers in the ice to delineate the ships track. Public notices will advise of ice and travel conditions to assist travelers in their planning for travel on the ice.

A detour route will be available for travelers to access either side of Steensby Inlet without having to cross the ships track through landfast ice. As noted in the DEIS, Baffinland will continue to meet with the QIA and communities, including Igloolik, to discuss options for travellers that detour through Steensby Port. Baffinland is committed to ongoing community consultations and a monitoring program to ensure that safe travel routes for hunting are available.