NUNAVUT
COASTAL RESOURCE INVENTORY

June 2012

Marine Mammal Report

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Avatiliqiyikkut
Department of Environment
Ministère de l'Environnement

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INTRODUCTION

This document is one in a series of reports produced by the Nunavut Coastal Resource Inventory (NCRI). The overall goal of this initiative is to conduct inventories in all 26 of Nunavut's coastal communities. Each community is unique in terms of its physical environment, oceanographic setting, the organisms present and the interests and approaches of its hunters and trappers. One might even suggest that each community has been treated as one in a series of "pilot projects".

THE COASTAL RESOURCE INVENTORY

"Coastal Resource Inventory", as used in this report, is an information compendium on coastal resources and activities, gained principally from interviews with elders in each community. Coastal resources are defined as the animals and plants that live near the coast, on the beaches, on and around islands, above and below the surface of the ocean, above and below sea ice, and on the sea floor. Consequently, the extent of the survey varied by community, and "near the coast" can include species and activities up to 50 and sometimes 100 miles inland (mainly lakes and river systems).

Resource inventories have been conducted along Canada's margins, notably on our Atlantic and western coasts, where the information gained from this approach provided: the foundation for integrated coastal management plans; essential insights to protect important coastal areas; and, information facilitating environmental impact assessments, sensitivity mapping, and community planning. Coastal resource inventories have also provided different levels of government with the tools to engage in strategic assessments, informed development and enlightened stewardship.

The principle source of information for community-based coastal inventories is traditional knowledge (Inuit Qaujimajatuqangit in Inuktitut, or IQ) gathered through interviews. Over the past fifty years, the Inuit have gone from a resource-based nomadic life style to a wage-based economy. Nevertheless, coastal and land-based activities are still extremely important, contributing to Inuit quality of life, providing income and food, and as a significant part of Inuit culture. To ensure that we retain this traditional understanding and the above associated benefits, knowledgeable individuals (usually community elders) were engaged using a defined survey that addresses the presence, distribution and characteristics of various coastal resources. In addition, visual surveys of the coastline and the community provide diverse information on important coastal features, including the types and condition of infrastructure such as wharves and fish plants, as well as the location of different coastal activities or impacts, such as town dumps or sewage sites.

Fundamental to this process is the recognition that traditional knowledge (IQ) embodies both historical and contemporary information that might help with future decision-making, as well as having importance in its own right.

The Fisheries and Sealing Division of the Nunavut Department of Environment initiated the development and implementation of a community-based coastal zone inventory for Nunavut.

Project deliverables include the:

- provision of a final report;
- provision of the coastal resource inventory in a GIS database;
- provision of a series of resource-inventory maps for each community;
- provision of all documents used in the interviews, along with the methodology employed throughout the coastal inventory process; and,
- thorough evaluation of the methodology and supporting materials used to carry out the entire inventory process.

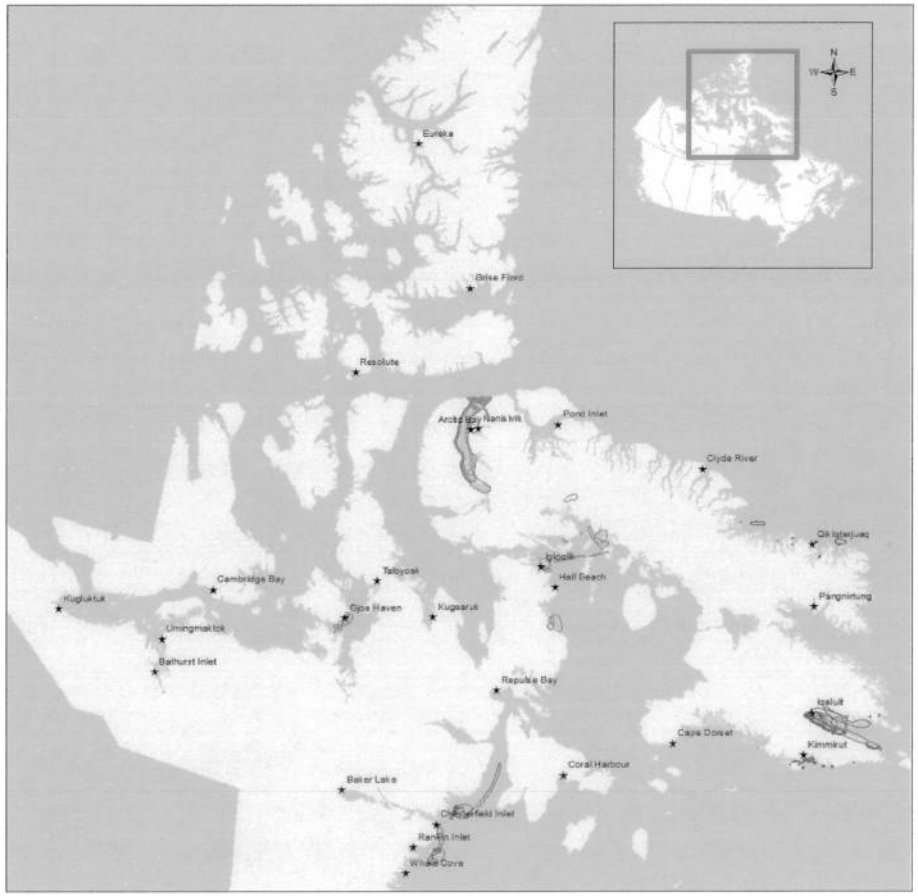
Now in the projects fifth year a total of ten communities have completed interviews for the inventory work: Kimmirut, Igloolik, Kugluktuk, Chesterfield Inlet, Qikiqtarjuaq, Gjoa Haven, Repulse Bay, Iqaluit, Arctic Bay, and Sanikiluaq (underlined names have published reports available). All except Repulse Bay are included in this marine mammal report.

As each coastal inventory is completed more organizations and programs are realizing the breadth of baseline data collection the inventories offer. They add tremendous value to our understanding of Inuit knowledge and species locations and they are one of only a handful of projects attempting to document Inuit Qaujimajatuqangit in Nunavut. Every inventory contributes to a species map of Nunavut (Figures 1 through 6), giving wildlife researchers, managers and communities vital information to our understanding of migration routes, areas of species occupation and land use patterns. The areas drawn in the maps provided in this document are places people in the adjacent communities have been, these are their hunting areas, their travel routes, and they are also areas that can highlight the biological productivity of a marine area.

This report is a presentation of Inuit knowledge from ten communities on Beluga, Narwhal and Walrus. These species represent valuable sources of food and income and are part of the culture and heritage of Inuit. The knowledge documented by the Nunavut Coastal Resource Inventory project is one way that Inuit can share their knowledge and their values.

Figure 1: Beluga - Nunavut

Beluga Area of Occupation - Nunavut



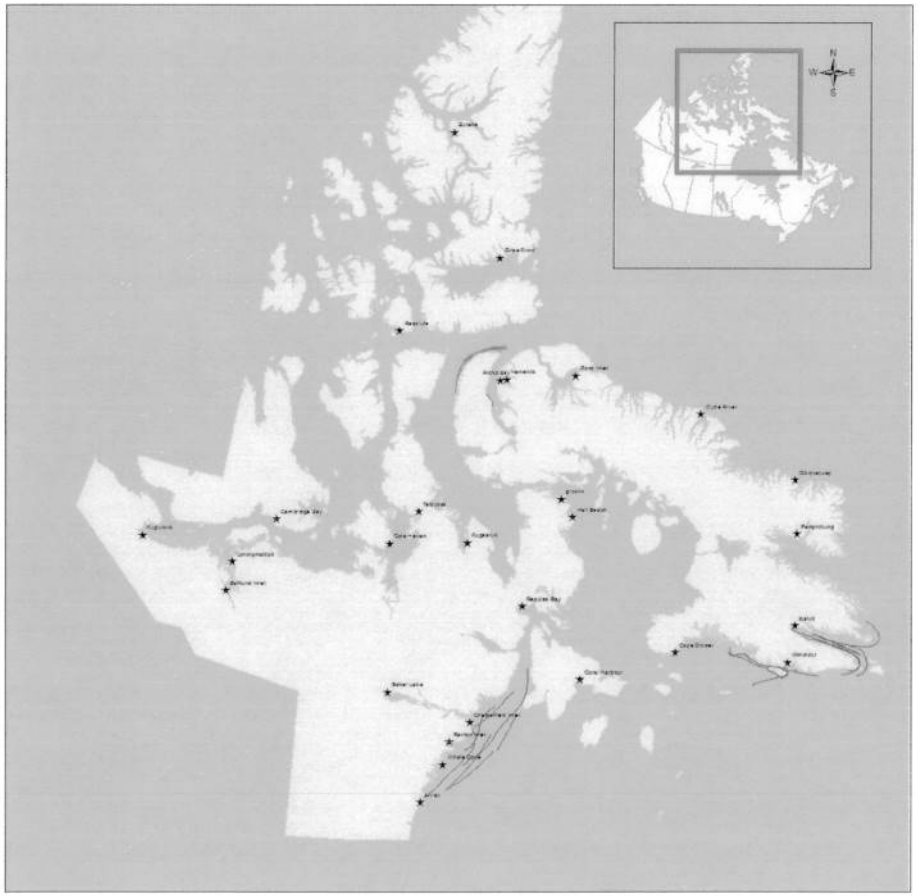
Community

- Arctic Bay
- Chesterfield Inlet
- Gjoa Haven
- Igloolik
- Iqaluit
- Kimmirut
- Qikiqtarjuaq

Projection: Canada Lambert Conformial Conic
Prepared by: Corenna Nuyalia
GN, DOE, Fisheries and Sealing Division
June 2012

Figure 2: Beluga – Nunavut Migration Routes

Beluga Migration Route - Nunavut



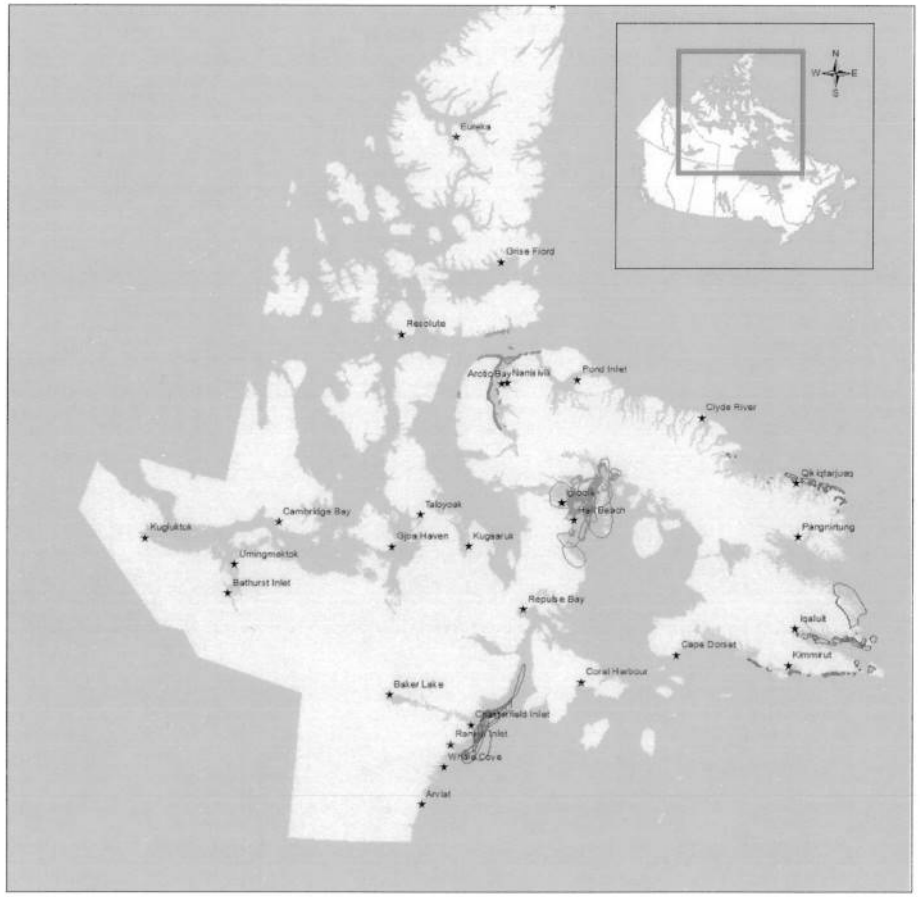
Community

- Arctic Bay
- Chesterfield Inlet
- Iqaluit
- Kimmirut

Projection: Canada Lambert Conformial Conic
Prepared by: Corenna Nuyalia
GN, DOE, Fisheries and Sealing Division
June 2012

Figure 3: Walrus – Nunavut

Walrus Area of Occupation - Nunavut



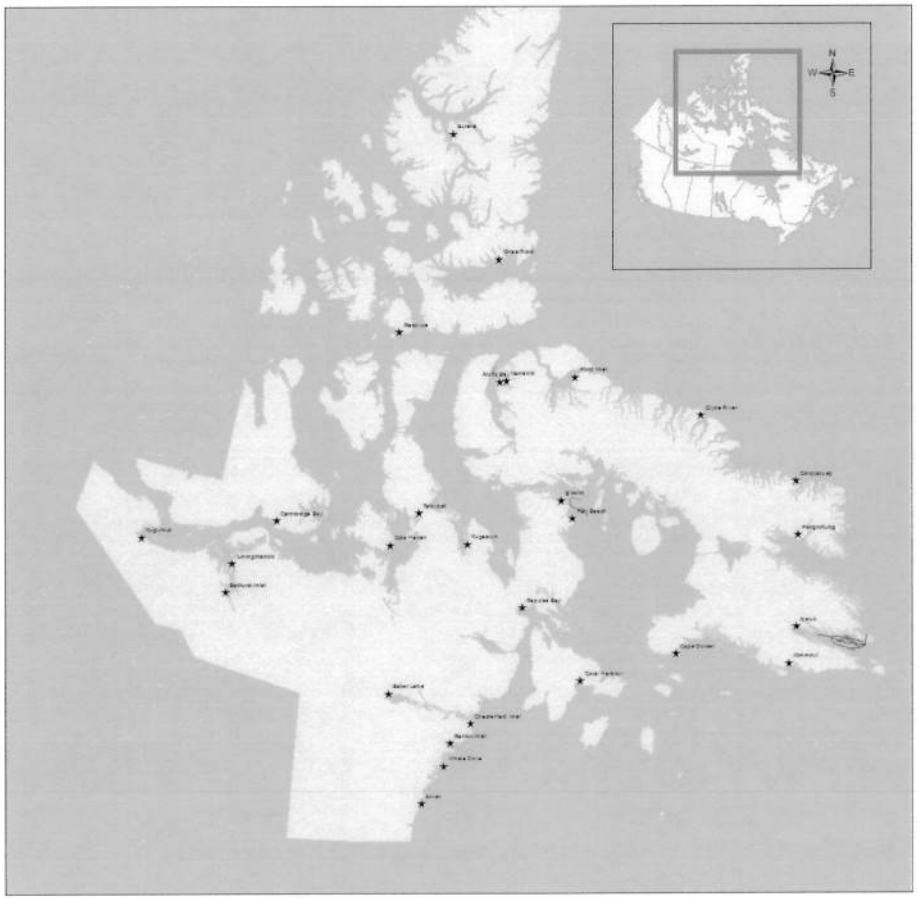
Community

- Arctic Bay
- Chesterfield Inlet
- Gjoa Haven
- Igloolik
- Iqaluit
- Kimmirut
- Qikiqtarjuaq

Projection: Canada Lambert Conformal Conic
Prepared by: Corenna Nuyalia
GN, DOE, Fisheries and Sealing Division
June 2012

Figure 4: Walrus – Nunavut Migration Routes

Walrus Migration Routes



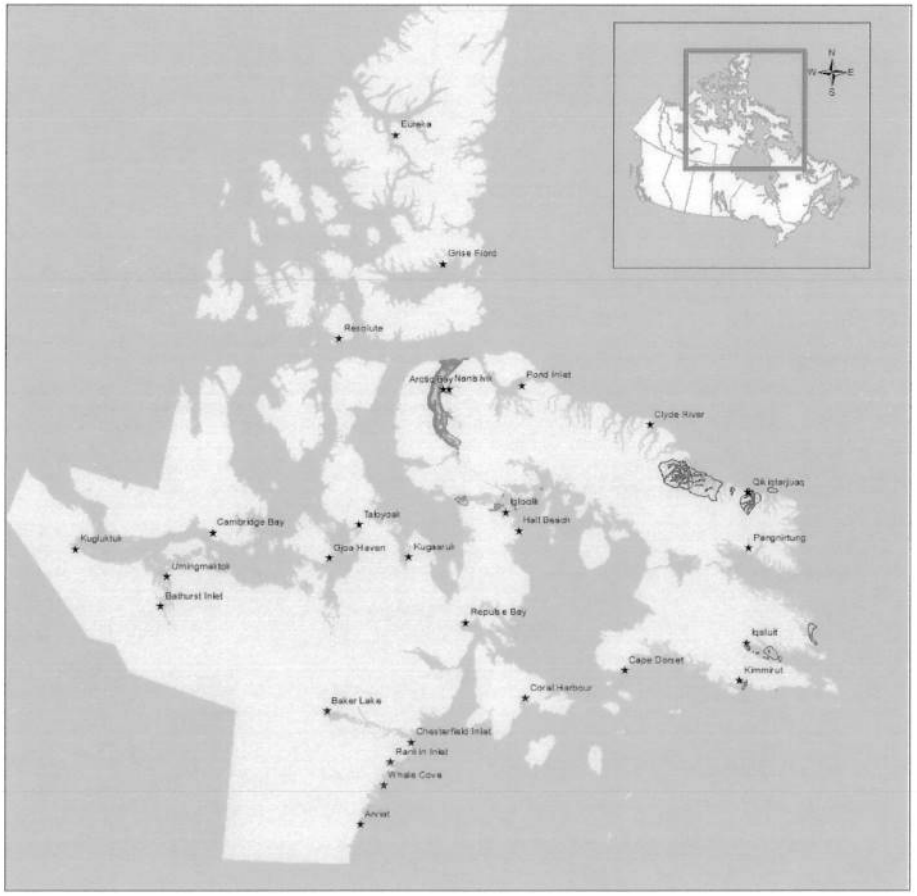
Community

- Arctic Bay
- Igloolik
- Iqaluit

Projection: Canada Lambert Conformial Conic
Prepared by: Corenna Nuyalia
GN, DOE, Fisheries and Sealing Division
June 2012

Figure 5: Narwhal – Nunavut

Narwhal Area of Occupation - Nunavut



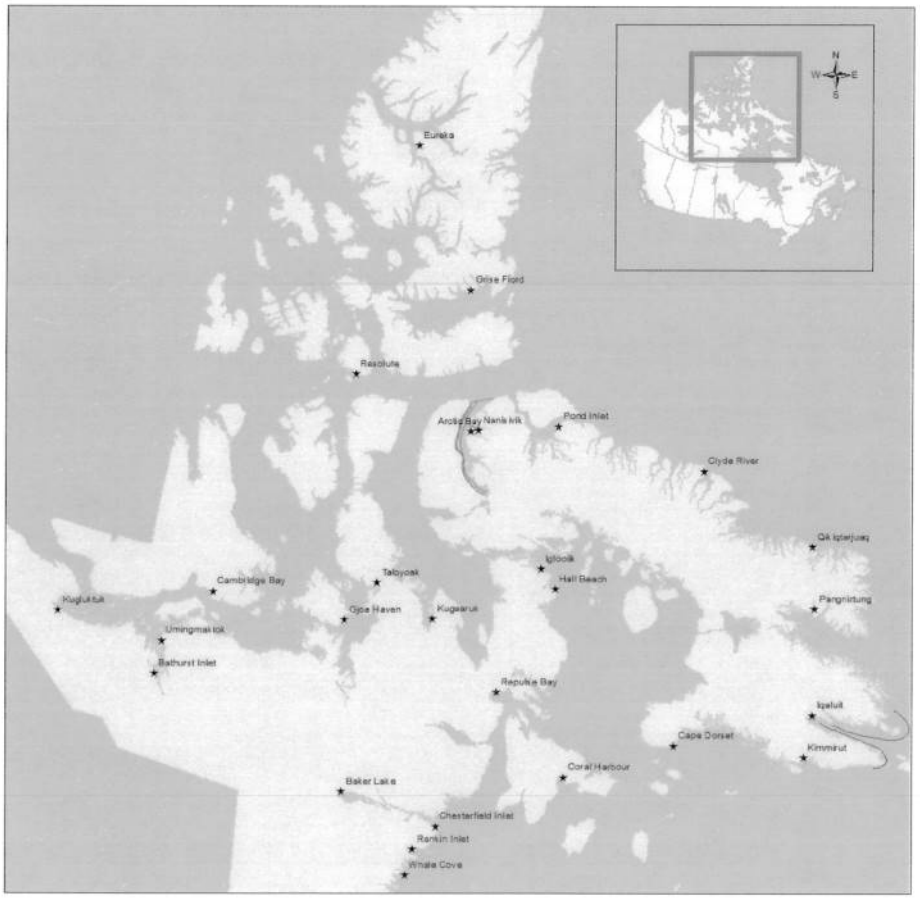
Community

- Arctic Bay
- Igloolik
- Iqaluit
- Kimmirut
- Qikiqtarjuaq

Projection: Canada Lambert Conformial Conic
Prepared by: Corenna Nuyalia
GN, DOE, Fisheries and Sealing Division
June 2012

Figure 6: Narwhal – Nunavut Migration routes

Narwhal Migration Routes - Nunavut



Community

- Actic Bay
- Iqaluit

Projection: Canada Lambert Conformial Conic
Prepared by: Corenna Nuyalia
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June 2012

NUNAVUT COASTAL RESOURCE INVENTORY

SUMMARY OF INTERVIEW OBSERVATIONS ON BELUGAS, NARWHALS, AND WALRUS

Arctic Bay (2008)

Beluga, narwhal, and walrus are commonly seen around Arctic Bay, in both Lancaster Sound and Admiralty Inlet. In winter, walrus were generally located near bivalve feeding sites, at the mouth of Admiralty Inlet, near points of land at the ice floe edge where both recurrent open water and haulout sites were available.

Walrus are usually found in areas where there are clams, since this is a significant component of their diet. Narwhal, by contrast, are thought to feed largely on arctic cod, Greenland halibut, cephalopods, and crustaceans.

The behavior of these species can be affected by killer whales. Although killer whales rarely prey on adult walrus (since these large animals can injure the killer whales) they will often attack younger, smaller animals. Killer whales will drive narwhal close to shore on the western side of Admiralty Inlet, which makes them easier for hunters to harvest.

Chesterfield Inlet (2008)

The only narwhal sightings recorded near Chesterfield Inlet are historical (between 20-50 years ago); however belugas and walrus are seen regularly (particularly in August-September, and May-June, respectively). Walrus are generally found in areas where clams are present, usually in areas near islands and in areas where the ice is thin or there is open water (e.g. the floe edge). June is walrus-hunting season.

Belugas were reported to occur all along the coast, but in two distinct populations: the first off Churchill (Manitoba) and the second near Repulse Bay. The belugas that migrate southward from Repulse Bay are primarily those that are caught by the community of Chesterfield Inlet; while the southern population routinely migrates north, they are usually intercepted by hunters from Arviat, Whale Cove, and Rankin Inlet.

Some hunters believed that many of the larger marine mammals, including belugas, are moving away from the coast, and out of reach of hunters, due to noise, pollution and turbulence related to increased shipping activity through Chesterfield Inlet toward Baker Lake, as well as near-shore blasting. Additionally, some interviewees considered it unhealthy to eat walrus killed in the vicinity of Rankin Inlet, due to runoff from mining activities in that area.

Gjoa Haven (2011)

The last narwhal and beluga sighting in Gjoa Haven was in 1972.

Igloolik (2007)

Belugas and walrus are very common in the Iglulik area (especially before freeze-up), particularly near Steensby Inlet; narwhal congregate around Richard's Bay to the north of Iglulik. Belugas and narwhal usually arrive through Fury and Hecla Straight in the fall (late August and September), possibly from Admiralty Inlet. Several interviewees suggested that beluga populations used to be higher, before there were motorized boats in the community.

Iqaluit (2011)

Walrus and whales are found in areas with clams, and hunters have seen more whales in areas where they fish. Most hunters noted that harvests of marine mammals are decreasing, possibly due to shipping or cruise ships disturbing the animals; in particular, the arrival of the first supply ships disrupts beluga hunting at the floe edge. Some interviewees were concerned about harvesting belugas without a quota, since they don't know to and from where they migrate.

Kimmirut (2010)

Belugas are routinely caught or seen in shore leads directly in front of North Bay and in the polynya between Big Island and the coast; however very few narwhal have been observed in the Kimmirut area. Walrus are known to eat clams and cockles.

Kugluktuk (2008)

Beluga and walrus sightings near Kugluktuk are all historic (over 20 years old for beluga, and more than 50 years ago for walrus). Interviewees indicated that belugas were mainly seen between May and August, while walrus could be sighted year-round.

Qikiqtarjuaq (2009)

Many interviewees said they mistook the belugas for polar bears, since they are not common in the Qikiqtarjuaq area – however, they have been sighted at the floe edge during spring (May-June), as well as in July and August.

Narwhal are mainly seen between July and October, and were indicated to breed in August around Home Bay. An interesting observation was that harp seals will try to avoid narwhals.

Walrus can be seen between July and October, and breed south of Qikiqtarjuaq. However, several interviewees commented that they used to be abundant during the 1970s and 1980s, but that people have since scared them away.

Repulse Bay (2011)

Narwhal come into Repulse Bay to escape killer whales. Most interviewees said they hadn't noticed any changes in marine mammal populations, or had conflicting opinions about whether beluga and walrus had increased or decreased. However, interviewees were concerned about the effects of shipping on marine mammal migration routes, and several had noticed changes in the animals. It was noted that more walrus are diseased now, and that both beluga and narwhal fat more frequently have yellow, unhealthy sections.

Sanikiluaq (2010)

Sanikiluaq hunters are highly reliant on marine species for country food, more so than other communities where the NCRI has been conducted. Walrus, along with various seal species, are commonly found in most fishing areas, and in areas where scallops and cockles are found. There were conflicting accounts of whether walrus populations had increased or decreased, or simply moved further from the Belcher Islands. The Islands were noted as important overwintering areas for walrus, due to the polynyas, which provide year-round open water sites. Then, in the spring, belugas congregate in areas with high currents.

Traditional Knowledge of

BELUGA

Kugluktuk, Gjoa Haven, Chesterfield Inlet, Arctic Bay, Iglulik, Qikiqtarjuaq, Iqaluit, Kimmirut, and Sanikiluaq.

Figure 7: Beluga – Kugluktuk

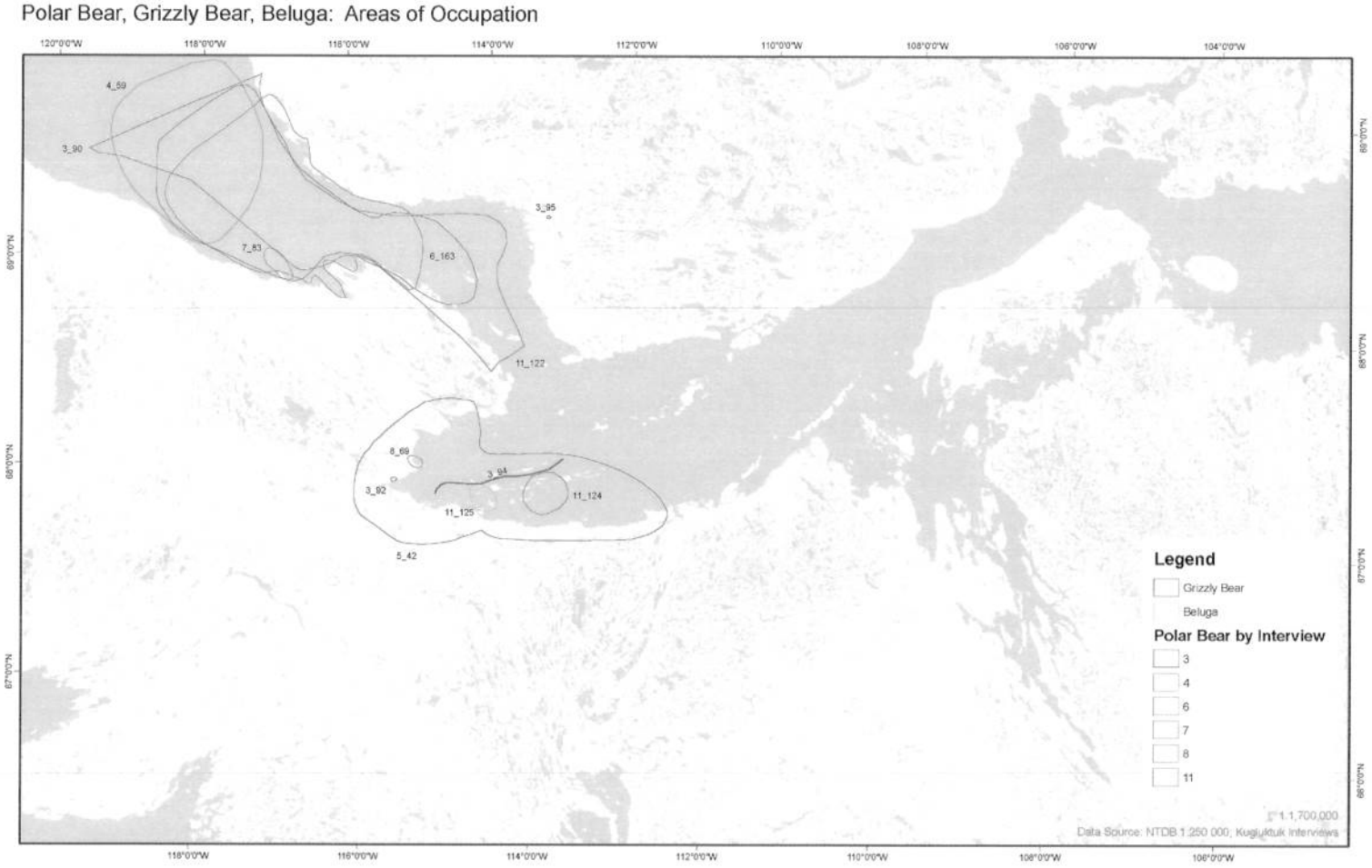
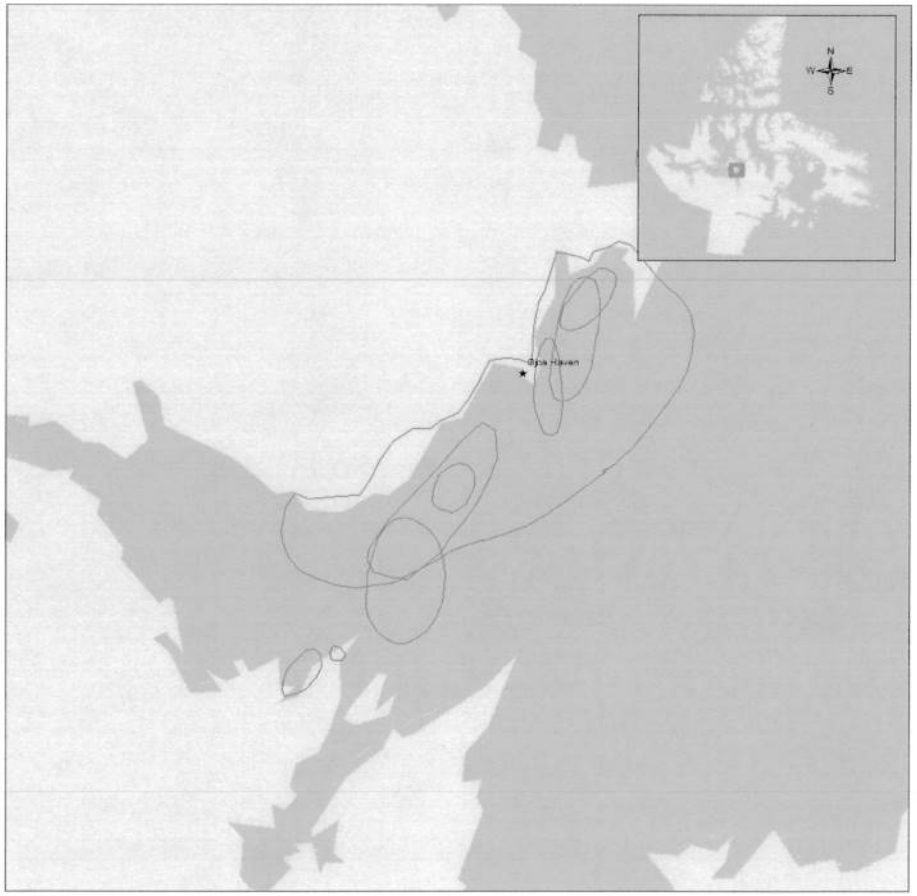


Table 1: Beluga – Kugluktuk

Label Number	Interview Code	Map Code	Species	Month/Year	Comments
3_95	KG_3_1008	GBear_1	Grizzly Bear		
5_42	KG_5_1008	GBear_1_AP	Grizzly Bear	October to April	Lots found along the coast; species considered abundant.
11_125	KG_11_1008	Bel_1	Beluga		
3_90	KG_3_1008	PB_1	Polar Bear		
3_92	KG_3_1008	PB_3	Polar Bear	May	
4_59	KG_4_1008	PB_1	Polar Bear	May	
6_163	KG_6_1008	PB_1	Polar Bear	March, April, May	
7_83	KG_7_1008	PB_1	Polar Bear	2001	Species seen 7 years ago.
8_69	KG_8_1008	PB_1	Polar Bear	August	
11_124	KG_11_1008	PB_1	Polar Bear	year round	
11_122	KG_11_1008	PB_1	Polar Bear	year round	Someone else caught polar bear.
3_94	KG_3_1008	GBear_1	Grizzly Bear		8 grizzly bears seen in area.
12_54	KG_12_1008	GBear_1_e	Grizzly Bear	June to October	
4_63	KG_4_1008	GBear_1_e	Grizzly Bear		Grizzlies are moving toward Victoria Island; eat muskox in the summer.
6_164	KG_6_1008	GBear_1_e	Grizzly Bear	year round	
8_70	KG_8_1008	GBear_1_e	Grizzly Bear		
9_25	KG_9_1008	GBear_1_e	Grizzly Bear		Seen going towards Cambridge Bay; "They were pretty skinny".
7_84	KG_7_1008	GBear_1_e	Grizzly Bear		Many currently seen on Victoria Island.

Figure 8: Beluga – Gjoa Haven

Bowhead, Narwhal, Belua Historic Area of Occupation - Gjoa Haven



Species

- Bowhead Whale
- Narwhal
- Beluga

Projection: Canada Lambert Conformial Conic
Prepared by: Corenna Nuyalia
GN, DOE, Fisheries and Sealing Division
June 2012

Table 2: Beluga – Gjoa Haven

Interview Code	Species	Category	Present – P Historic – H	Abundance	Year	Months	Comments
GJOA_6_1111	Bowhead Whale	Mammal	P			August, September	Richardson Point, a yound one landed five years ago. Saw an adult looking for it during that time
GJOA_7_1111	Bowhead Whale	Mammal	P				dead young one
GJOA_7_1111	Bowhead Whale	Mammal	P			May	dead adult
GJOA_3_1111	Beluga	Mammals	H		1973	August	
GJOA_3_1111	Narwhal	Mammals	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_4_1111	Beluga	Mammals	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_5_1111	Beluga	Mammal	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_3_1111	Beluga	Mammals	H		1973	August	
GJOA_3_1111	Narwhal	Mammals	H		1973	August	
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_3_1111	Beluga	Mammals	H		1973	August	
GJOA_3_1111	Narwhal	Mammals	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_4_1111	Beluga	Mammals	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_5_1111	Beluga	Mammal	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	

Interview Code	Species	Category	Present – P Historic – H	Abundance	Year	Months	Comments
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_5_1111	Beluga	Mammal	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	
GJOA_01_1111	Beluga	Mammals	H		1973-74	August	
GJOA_01_1111	Narwhal	Mammals	H		1973-74	August	
GJOA_3_1111	Beluga	Mammals	H		1973	August	
GJOA_3_1111	Narwhal	Mammals	H		1973	August	
GJOA_7_1111	Beluga	Mammal	H			September	
GJOA_7_1111	Narwhal	Mammal	H			September	

Figure 9: Beluga – Chesterfield Inlet

Beluga* and Bowhead* Whale

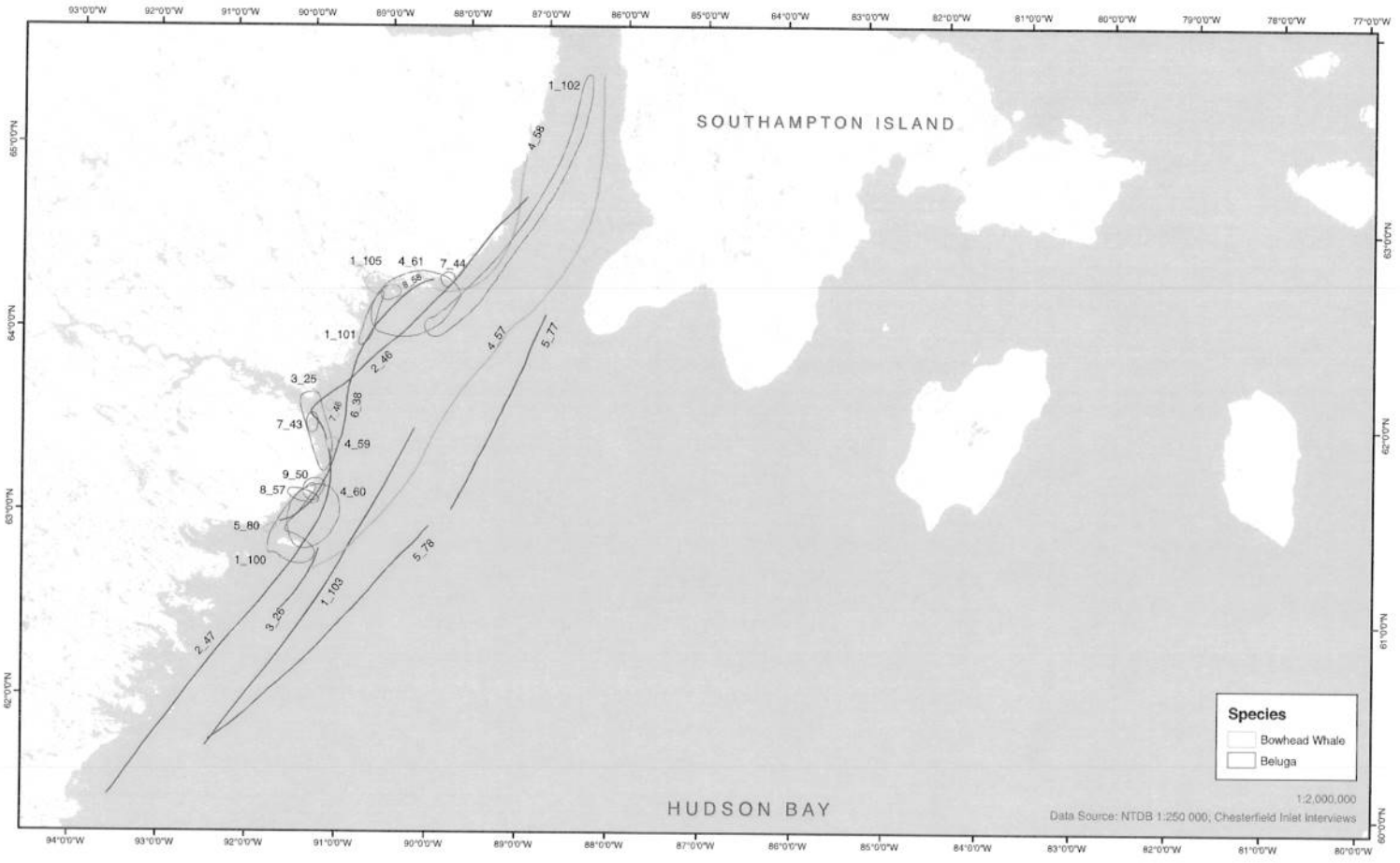


Table 3: Beluga – Chesterfield Inlet

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Bel_1	9_50	Beluga	P			
Bel_2	8_58	Beluga	P		August and September	
Bel_1	8_57	Beluga	P		August and September	
Bel_2_AH	7_44	Beluga	H	A	July to September	
Bel_1_AP	7_43	Beluga	P	A	July to September	
Bel_2	4_61	Beluga	P		July and August	
Bel_1_AP	4_60	Beluga	P	A	August and September	
Bel_1	3_25	Beluga	P		August and September	
Bel_2_AP	1_100	Beluga	P	A		
Bel_3_AP	1_101	Beluga	P	A		
Bel_4_AMP	1_102	Beluga	P	A, M		
Bel_5_AMP	1_103	Beluga	P	A, M		
Bel_1	6_38	Beluga	P		July to September	All along the coast, more in the past than recently.
Bel_4_MP	5_78	Beluga	P	M	June to October	
Bel_3_MP	5_77	Beluga	P	M	June to October	
Bel_2_MP	3_26	Beluga	P	M	August and September	
Bel_3_MP	2_47	Beluga	P	M	year round	Migrating from Foxe Basin.
Bel_2_MP	2_46	Beluga	P	M	year round	Migrate from Western Hudson Bay.
BW_1_H	7_46	Bowhead Whale	H			1970's
BW_1_H	5_80	Bowhead Whale	H		June	Saw about two years ago near Rankin Inlet.
BW_3	4_59	Bowhead Whale	P		July to October	
BW_1_H	1_105	Bowhead Whale	H			
BW_2	4_58	Bowhead Whale	P		July to October	Wintering ground for bowhead whales, also a traditional whaling area.
BW_1	4_57	Bowhead Whale	P		July to October	

Everywhere Coded Data: Beluga – Chesterfield Inlet

Interview	Map Label	Map Code	Species	Present – P Historic – H	Months	Comments
1	1-99	Bel_1_Ape	Beluga	P		
5	5-76	Bel_2_e	Beluga	P	July to September	
8	8-59	Bel_3_e	Beluga	P	August, September	All along coast.
2	2-45	Bel_1_e	Beluga	P	all year	All along coast.
8	8-60	BW_1_e	Bowhead Whale	P	August, September	Seen outside of Chesterfield Inlet in early fall.