

## **Observations on Changes in Polar bear behaviour from Four West Hudson Bay communities**

### Arviat:

From the 1930's to the 1950's, two elders who traveled frequently from Churchill to Chesterfield Inlet as part of their responsibilities as RCMP Special constables, rarely saw polar bears. One of the Special Constables traveled to Churchill to get supplies and to deliver mail to people in the area during the early 1950s. He stated that encounters with polar bears were rare. For example, in one year, the dog teams they were used for traveling smelled something at Nunaalaaq (a location between Arviat and Churchill). He was puzzled because there were no caribou to be seen. He later learned that a denning polar bear (hunted by an Inuk hunter later that year) was in the area. He first observed a live polar bear when he was about 18 years old, despite extensive travel in the area, and during spring and summer family camping trips, there were almost no encounters with polar bears.

Inuit started to notice more polar bears in the region, beginning in the 1970s, when in their spring and summer camps. In the last 10 years, they indicated that polar bear population numbers have further increased. Both elders and hunters expressed the view that polar bears constantly move in search of food and are capable of traveling great distances. Where previously there were very few sightings and encounters, there are now many more sightings of females and their cubs, and of individual polar bears. The hunters observed that camping on the land at the present time requires much more vigilance due to the higher frequency of encounters with polar bears.

### Whale Cove:

From the late 1950 to about the 1980s there were very few encounters with polar bears in this region. One hunter indicated that when he caught a polar bear in those days, it was a big event because it was so rare. When the quota system was introduced in the 1960s, Whale Cove hunters typically travelled to the Arviat region to hunt polar bears. More recently, hunters do not need to travel as far to hunt bears because they are found closer to the community. One hunter stated that he would like to know more about the situations of the bears that affect the population, such as the currents and winds that push the ice platforms used by these animals to different areas of Hudson Bay.

### Rankin Inlet:

Currently, Inuit hunt seals, beluga whales, caribou and polar bears in this area, from the late 1950s to the early 1980s there were very few encounters with polar bears. However, recently there have been more and more encounters and successful hunts in

the vicinity of Marble Island, and during summer, Inuit have to monitor camps in the area are now seeing polar bears 20 to 30km inland from the Hudson Bay coast.

#### Chesterfield Inlet:

From the 1930s to the 1940s very few polar bears were observed and hunted in the Chesterfield Inlet area. It was only when hunters traveled to Coates Island (about 400km east of Chesterfield Inlet) to hunt walrus that they were almost certain to see and hunt polar bears. They would also be more certain of encountering polar bears if they traveled to Wager Bay (about 240km to the north). Recently, people have observed greater number of bears closer to Chesterfield Inlet. For example, groups of polar bears were not normally seen, but they are now. Furthermore, polar bears now congregate near the Baker Lake River waiting for freeze up, something that did not do in earlier times. A hunter indicated that in one day while hunting he counted over 20 polar bears. Based on his previous experience of the area, he concludes that the abundance and distribution of polar bears in this area has changed markedly in recent years.

## Chapter Ten

### *A Nunavut Inuit Perspective on Western Hudson Bay Polar Bear Management and the Consequences for Conservation Hunting*

Gabriel Nirlungayuk and David S. Lee

#### **Introduction**

This chapter addresses some of the local concerns regarding the most recent management decisions and related scientific population estimates for the Western Hudson Bay (WH) polar bear population. First and foremost, polar bears, or *nanuit* in Inuktitut, are a highly respected and culturally valued animal to the Inuit of Nunavut. Inuit have co-existed with polar bears for millennia. Historically, Inuit hunted these animals with knives and spears with the assistance of their dog teams. These tools have since been replaced with modern equipment including rifles and snow machines. Through hunting, Inuit have observed polar bear behaviour closely, and respect how well polar bears are adapted to the arctic environment. Over millennia of hunting, Inuit knowledge of polar bear ecology and behaviour has accumulated and been communicated from generation to generation through an oral tradition.

In 1973, the *International Agreement on the Conservation of Polar Bears* was signed between the five polar bear range states, namely the governments of Canada, Denmark, Norway, the former Union of Soviet Socialist Republics (now Russia), and the United States. At that time, Inuit did not participate in discussions leading to the *Agreement*. However, consideration of the aboriginal rights to harvest polar bears as a traditional activity was respected and included under Article III (d) and (e) of the *Agreement* that states:

Subject to the provisions of Articles II and IV any Contracting Party may allow the taking of polar bears when such taking is carried out:

- ...
- d) by local people using traditional methods in the exercise of their traditional rights and in accordance with the laws of that Party; or
- c) wherever polar bears have or might have been subject to taking by traditional means by its nationals.
- ...

In 2005, the Nunavut Wildlife Management Board (NWMB) and the Government of Nunavut increased the annual harvest allowed to be taken from the WH polar bear population from 45 to 56. However, from 2005 to 2007, the Canadian Wildlife Service (CWS) had been advising wildlife management

parties that the WH polar bear population was in decline. In 2007, a population estimate of less than 1,000 animals for the WH population was reported (Regehr et al. 2007). As a result, the NWMB decided to reduce the WH polar bear harvest from 56 to 38 for the 2007-2008 harvest season, and from 38 to 8 for the 2008-2009 harvest season. However, the reported population trend has caused confusion and reaction among local Inuit. In fact, in 2007, Inuit presented contrary information to the Nunavut Wildlife Management Board (NWMB) in a public hearing on the issue held in Arviat, Nunavut.

The Kivalliq Wildlife Board (KWB)—the authority that allocates the polar bear harvest among the five communities hunting WH polar bears), accepted the harvest level reduction to 38 for the 2007-2008. However, it has repeatedly rejected a further reduction to 8 because of the unreasonable burden that level of reduction places on affected Inuit communities. In making its decision, the KWB was aware that defence kills of nuisance bears must be taken from the community quota, and further, that decreasing the harvest to 8 for the 2008-2009 season would remove the opportunity for Inuit in the region to derive benefit from conservation hunting. For example, the investment made by local sport hunting outfitters, especially in the community of Arviat, has been jeopardized by this drastic harvest decrease, leaving very few income-generating opportunities that promote culturally important activities for Inuit families (see Chapter 2, this volume).

In order to explain some of the sources of confusion and frustration expressed by Inuit with regard to the WH polar bear harvest decrease, this chapter summarizes the results of a workshop on Inuit Qaujimaqtuqangit (IQ, Inuit knowledge) held in August 2005 with hunters and elders in Rankin Inlet, Nunavut. One of the main objectives of the workshop was to document relevant Inuit knowledge and understanding of polar bear population behaviour and the human-polar bear relationship in the region over the past several decades.

This workshop, facilitated by Nunavut Tunngavik Inc. (NTI), was attended by knowledgeable representatives from the communities of Arviat, Whale Cove, Rankin Inlet, and Chesterfield Inlet. Five elders and hunters who possessed extensive knowledge participated in the workshop. Collectively, these individuals possessed more than 200 years of experience living and traveling in the area. Two elders had served as Royal Canadian Mounted Police (RCMP) Special Constables and traveled regularly and extensively throughout the region from the 1930s to the 1950s. The workshop consisted of group discussions as well as individual interviews and was conducted entirely in Inuktitut. The discussion included both open-ended and semi-structured questions. The workshop was recorded using audio and video recorders, and written notes were also taken. A summary of the information on polar bears, provided by knowledgeable residents of these four Western Hudson Bay coastal communities, follows.

### General Knowledge of Polar Bears in the West Hudson Bay Region

Female polar bears (*arnaluit*) normally enter a den in November or December to give birth, usually to two cubs (*atiqtaqtaq*). The preferred polar bear denning sites are usually situated on south-facing slopes on small hills or cliffs where

snow accumulates. Polar bears may eat a lot of grass and seaweed prior to going into dens. Females with cubs (*piaraluit*) usually leave the den during the period from March until early April, depending on the weather and how hungry the bears become. Usually, the same locations are used year after a year by returning sows, with or without cubs, or even by solitary male bears. Inuit know where these favoured denning areas are located and they visited these denning areas to hunt bears. This was a preferred method of hunting polar bears because it was efficient. But other information about polar bears was also highly relevant for hunting. For example, female bears usually move at a characteristic speed, males are distinguished by being a darker yellowish colour, and female tracks are usually broad, while male tracks are longer and narrower.

Table 1: Polar Bear Inuktitut Terminology

Age Group	Description
<i>Atiqtaqtaq</i>	A newborn cub
	A cub
<i>Atiqtaq</i>	A cub that is with its mother
<i>Piarcaq</i>	A cub about 1 year old
<i>Advaravataq</i>	When they are a little bit bigger than an <i>advaravataq</i> , which is a little bit bigger than a sled dog, about the height of the mothers belly.
<i>Nalitiqathiniq</i>	Offspring that is the same size as its mother
<i>Namniaq</i>	A young male
<i>Nukangaq</i>	Adult female
<i>Tackaq</i>	Full grown male
<i>Angurnaq</i>	Pregnant female
<i>Arnalcaq</i>	Female with cubs
<i>Piaraalik</i>	Family group with cubs
<i>Namiaritit or Pingahuqat</i>	

The main diet of polar bears is ringed seals, although they also prey on bearded seals, walrus, and small whales such as beluga and narwhal. Polar bears also scavenge for dead marine mammals, including carcasses of larger animals such as bowhead whales. Polar bears also seek bird eggs in the spring. They hunt ringed seals in the winter by waiting at the seal breathing holes in similar fashion to Inuit hunters, and have been seen to surprise their prey by swimming under water to catch a seal basking on a piece of ice or a ringed seal sleeping in the water.

The knowledge of hunters and elders at this workshop provide some insights into the relationship that Inuit have experienced with their environment over a long period of time. Participants emphasized that recent biological population estimates and Inuit Qaujimaqtuqangit are not operating at the same geographic and temporal scale. Direct attempts to compare or to integrate parts from each source without full comprehension of the background often lead to misunderstanding. Inuit consider the current population to be higher than it has ever been in comparison to historic population levels in the region extending from the early 1900s to the 1970s. People living in Western Hudson Bay

communities, and especially in Arviat, have been coping with more frequent encounters with polar bears due to their abundance and changes in their distribution and behaviour. As indicated by hunters and elders who traveled extensively throughout the region as RCMP Special Constables, the population of polar bears in Western Hudson Bay was extremely small during the 1930s and 1940s, an observation that is consistent with analyses of the harvest records obtained from the Hudson's Bay Company Archives (Honderich 1991) and other research findings (Chapter 2, this volume).

Polar bears are considered very dangerous animals. From the 1960s on, the regional polar bear population has increased to current levels where hunters must be more aware for the safety of themselves and their families when camping on the land. This concern for safety, in some cases, acts as a deterrent to visiting certain important seasonal hunting, fishing, and food-gathering locations (see Chapter 2, this volume), which has had a significant impact on their lives.

Inuit indicate that the situation has become more difficult because of observed changes in polar bear behaviour. Historically, from the 1930s to the 1970s, when a bear saw an Inuk, the bear would flee. Today, the bears are no longer fearful of humans. Polar bears that have been exposed to tourism and other encounters with humans in the Churchill area, have become habituated to human activity and are considered dangerous. Workshop participants have observed both direct and indirect feeding of polar bears in the Churchill area. Inuit support the tourism activity in Churchill, but view with disfavour consequent alteration of polar bear behaviour that results in the bears' fearlessness, and even attraction, to humans and their sled dogs.

Inuit also expressed the view that polar bears in the region had been affected when there was a large Canadian and U.S. military presence in Churchill during WWII. For many years the human population of Fort Churchill was small, but following the establishment of a military base and airfield in 1942, the population of Churchill dramatically increased from several hundred people to several thousand people. At one stage of WWII there were over 4,000 people living in Churchill (Coutts 2000). One immediate impact of this human population increase was the production of large quantities of garbage: workshop participants observed polar bears regularly feeding at the garbage dump during this period. In the early 1960s, both the Canadian and U.S. military left Churchill and the human population has since declined to less than 1,000 people. Recently, access to the dump has been closed to polar bears (Eliasson 2006). Interviewees indicated that this loss of a ready food source would affect polar bear population numbers and behaviour.

In summary, Inuit pointed out that the size of the polar bear population and polar bear behaviour have been affected by a series of human-related activities in the Churchill area. This includes hunting by Aboriginal people in denning areas, direct and indirect feeding of polar bears by people in Churchill, removal of polar bears by military and civilian safety officers, and various types of research conducted on polar bears over the past several decades.

## Observations on Changes in Polar Bear Behaviour from Four West Hudson Bay Communities

### *Arviat*

Arviat (which means 'a place of bowhead whales') is located on the west coast of Hudson Bay about 300km north of Churchill, Manitoba. Inuit historically utilized the area surrounding Arviat to hunt marine mammals such as beluga whales, bowhead whales, ringed seals and walrus for subsistence. The community of Arviat became a more permanent location for Inuit in the 1920s with the arrival of the Hudson's Bay Company trading post (1921) and Catholic and Anglican missionaries (in 1924 and 1926, respectively). The area provides forage for thousands of geese and is where large numbers of barren ground caribou are found during their spring and fall migrations. Several specific named locations, including the Maguse River, Tahanne, Nunahuaq, and Siugaajuk, were identified as important areas for fishing and hunting.

Sea-ice break-up and freeze-up in Hudson Bay varies each year; spring break-up usually occurs in the third week of June, and freeze-up usually begins at the end of October. The Hudson Bay does not completely freeze over, although it freezes each year from the shore to the floe-edge approximately 10 to 16 kilometres offshore in this particular region. Beyond the floe-edge there are leads, or areas of open water, between the floe-edge and the sea ice that cover most of Hudson Bay throughout the fall, winter and early spring seasons. These leads (*autanitq*) freeze over and break up repeatedly, as Hudson Bay is a very windy area and wind has a huge impact on sea-ice formation and break-up. Although temperature does affect the thickening of ice, precipitation (in this case, in the form of snow) has a greater effect on ice thickness; generally, when there is more snow, the ice will be thinner.

From the 1930s to the 1950s, two elders who traveled frequently from Churchill to Chesterfield Inlet as part of their responsibilities as RCMP Special Constables, rarely saw polar bears. One of the Special Constables traveled to Churchill to get supplies and to deliver mail to people in the area during the early 1950s. He stated that encounters with polar bears were rare. For example, in one year, the dog teams they used for traveling smelled something at Nunaalaaq (a location between Arviat and Churchill). He was puzzled because there were no caribou to be seen. He later learned that a denning polar bear (hunted by an Inuk hunter later that year) was in that area. He first observed a live polar bear when he was about 18 years old, despite extensive travel in the area, and during spring and summer family camping trips, there were almost no encounters with polar bears.

In general, all workshop participants believed that polar bears could travel to other areas of Hudson Bay depending on the sea ice and currents. When the polar bear quota system was introduced in the late 1960s, the community of Arviat received a quota of five polar bears. Those interviewed reported they would be fortunate if three polar bears were taken in any single year.

Inuit started to notice more polar bears in the region, beginning in the 1970s, when in their spring and summer camps. In the last 10 years, they indicated that polar bear population numbers have further increased. Both elders and hunters expressed the view that polar bears constantly move in search of

food, and are capable of traveling great distances. Where previously there were very few sightings and encounters, there are now many more sightings of females and their cubs, and of individual polar bears. The hunters observed that camping on the land at the present time requires much more vigilance due to the higher frequency of encounters with polar bears.

#### Whale Cove

Whale Cove (*Tikirajuaq*, which means 'long point'), is located approximately 160km north of Arviat. This is a traditional Inuit hunting area for beluga, ringed seal and walrus. This area also has excellent fishing rivers and habitat conditions suitable for thousands of geese and migrating caribou. From the late 1950s to about the 1980s there were very few encounters with polar bears in this region. One hunter indicated that when he caught a polar bear in those days, it was a big event because it was so rare. When the quota system was introduced in the 1960s, Whale Cove hunters typically travelled to the Arviat region to hunt polar bears. More recently, hunters do not need to travel as far to hunt bears because they are found closer to the community. One hunter stated that he would like to know more about the situation of the bears in Ontario and the Eastern Hudson Bay, noting that there are many factors that affect the population, such as the currents and winds that push the ice platforms used by these animals to different areas of Hudson Bay.

#### Rankin Inlet

Rankin Inlet (*Kangirliq*, which means 'deep bay' or 'inlet') is located approximately 70km north of *Tikirajuaq* and is the most recent settlement in the Kivalliq region of Nunavut. Rankin Inlet was not a traditional camping area; it was created following mining operations that began there in 1953 and resulted in Inuit from other northern communities moving there to work in the North Rankin Nickel Mine which operated from 1957 to 1962. Prior to the mining development, few Inuit lived in the immediate area because of the scarcity of wildlife. Inuit in this area fished for Arctic char and hunted caribou and geese in fall and spring at the mouth of Iqalugaarjuk River. Currently, Inuit hunt seals, beluga whales, caribou, and polar bears in this area. From the late 1950s to the early 1980s there were very few encounters with polar bears. However, recently there have been more and more encounters and successful hunts in the vicinity of Marble Island, and during summer, Inuit have to monitor polar bears that come into the community. Hunters and observers at mining camps in the area are now seeing polar bears 20 to 30km inland from the Hudson Bay coast.

#### Chesterfield Inlet

Chesterfield Inlet (*Igluligaarjuk*, which means 'places of few houses') is one of the oldest settlements in Nunavut. It is located approximately 100km north of Rankin Inlet. Inuit historically hunted terrestrial and marine animals in this area. In 1914, a Royal Northwest Mounted Police detachment was established in Churchill. The coastal area between Chesterfield Inlet and Churchill will

regularly patrolled by the RCMP,<sup>1</sup> including the two Special Constables who participated in this polar bear workshop.

From the 1930s to 1940s, very few polar bears were observed and hunted in the Chesterfield Inlet area. It was only when hunters travelled to Coates Island (about 400km east of Chesterfield Inlet) to hunt walrus that they were almost certain to see, and hunt, polar bears. They would also be more certain of encountering polar bears if they traveled to Wager Bay (about 240km to the north). Recently, people have observed greater numbers of bears closer to Chesterfield Inlet. For example, groups of polar bears were not normally seen, but they are now. Furthermore, groups of polar bears were not normally seen, but they are now. Furthermore, polar bears now congregate near the Baker Lake River waiting for freeze-up, something they did not do in earlier times. A hunter indicated that in one day while hunting he counted over 20 polar bears. Based on his previous experience of the area, he concludes that the abundance and distribution of polar bears in this area has changed markedly in recent years.

### Conclusion

The *Nunavut Land Claims Agreement* (NLCA) is a constitutionally-protected treaty that provides Inuit with the opportunity to make full use of traditional resources and identifies their harvesting rights; Section 5.6.1 states:

Where a total allowable harvest for a stock or population of wildlife has not been established by the NWMB [Nunavut Wildlife Management Board] pursuant to Sections 5.6.16 and 5.6.17, an Inuk shall have the right to harvest that stock or population in the Nunavut Settlement Area up to the full level of his or her economic, social, and cultural needs, subject to the terms of this Article.

NTI's mission is to foster Inuit economic, social, and cultural well-being through the implementation of the NLCA. Implementation of this *Agreement* is on-going. Institutions of public government, such as the Nunavut Wildlife Management Board (NWMB) and the Nunavut Impact Review Board (NIRB), are a result of the implementation of the NLCA. These boards seek contributions of Inuit *Qaujimatugangit* in their decision-making processes; however, elders and hunters stress the need for Inuit *Qaujimatugangit* to be treated fairly. The expectation is high and has led to frustration when decisions, such as the harvest reduction to 8 polar bears for the 2008-2009 hunting season, are considered to be unfair, if not unjustified, given their understanding of historic polar bear population changes that have taken place in the Western Hudson Bay region.

Current management approaches have lacked an appropriate historical context to fully appreciate the different understandings possessed by local resource users. The current management approach should be revisited and improved, so that the historical knowledge and perspectives of each party can be adequately considered. It is likely that some level of consideration will be

<sup>1</sup> In 1920, the Royal Canadian Mounted Police (RCMP) replaced the Royal Northwest Mounted Police throughout Canada.

necessary if the management process is to advance. It may be beneficial for decision-makers to recognize the different perspectives of community members who harvest and live with polar bears in the region. Inuit want to be understood clearly during the current dispute about polar bear harvest numbers. They do not believe that such drastic reductions in harvest numbers serve the common interest, and in fact contribute to disagreements over: (1) the methods used to estimate polar bear population numbers; (2) the time period used in management (i.e., the posited 'base-line' population used to determine any increasing or decreasing trend in population levels); and, (3) disputes with management agencies over the appropriate use of Inuit Qaujimajatuqangit in their analyses and decision-making.

An initial step to improve the current situation will be to express understanding of Inuit perspectives by acknowledging the unique history of Inuit interaction with polar bears in this region. This may assist in developing the basic trust required to sustain equitable and enduring solutions that meet the needs of local communities and national concerns regarding polar bear conservation.

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## Chapter Eleven

### *Response to the Proposal to List Polar Bear under the U.S. Endangered Species Act*

#### **Inuit Tapiriit Kanatami and the Inuit Circumpolar Council—Canada—April 4, 2008**

Our two organizations represent the interests of Inuit in Canada: Inuit Tapiriit Kanatami (ITK) at the national level, and Inuit Circumpolar Council—Canada (ICC-Canada) at the international level.

It is the opinion and position of ITK and ICC-Canada that the polar bear should not be listed as threatened throughout its range under the *U.S. Endangered Species Act*.

Polar bears are an integral part of Inuit life in Canada. We place a high value on the polar bear culturally and spiritually. They are a very important food and natural resource. The yearly harvesting and associated uses of polar bears are a part of a suite of protected rights for Inuit under Canada's Constitution. Any proposal to restrict the hunting and use of polar bears, either within or outside of Canada, would necessarily affect the rights and interests of Inuit in Canada directly and substantively.

Inuit in Canada have conserved and continue to conserve the polar bear at healthy population levels through proper and responsible wildlife management, co-management, research, and monitoring, as well as through our sustainable harvesting measures and practices at regional and local levels. Our interests and rights are expressed through our finalized land claims agreements, which include: *Inuvialuit Final Agreement; Nunavut Land Claim Agreement; James Bay and Northern Quebec Agreement; and the Nunavik Off-Shore Land Claim Agreement for Northern Quebec*; and, the *Labrador Inuit Land Claim Agreement*.

In view of this, it is clear to both ITK and ICC-Canada that the intention of the Petitioners to this proposed Rule (i.e., the Center for Biological Diversity, Greenpeace, and the Natural Resources Defense Council) is to use the U.S. *Endangered Species Act* (ESA) listing mechanism, targeting the polar bear as an iconic Arctic species, to heighten public attention and apply pressure upon the U.S. Government to address its domestic greenhouse gas emissions that contribute to global warming. We view the petitioners' use of the polar bear for political and public campaign purposes under the ESA as misguided and short-sighted. The U.S. Department of Interior (DOI) should acknowledge this intention of the petitioners during its 12-month review, and fully evaluate its relevance to this and any future process or finding.

It is our concern that elevating the listing of the polar bear to *Threatened* will impose arbitrary, and scientifically unfounded, penalties and hardships upon Inuit. These penalties and hardships would have negative impacts on our rights