

Inuvialuit Perspectives of Polar Bear Population Health and Harvest Sustainability
2009

Contact information:

Milton M.R. Freeman
Canadian Circumpolar Institute
University of Alberta, Edmonton AB, T6G 2H8
780-492-4682, 780-492-4999
780-492-1153
milton.freeman@ualberta.ca

Introduction:

a. This proposed research aims to explore Inuvialuit perspectives of polar bear population health and harvest sustainability. Using social research methods, the researcher will document Inuvialuit knowledge, perspectives, and observations of factors that influence polar bears population health on Banks Island and explore how traditional knowledge, community observations, scientific studies, and other information interact to inform hunters about sustainable harvest levels of polar bears. This research has potential to strengthen wildlife co-management and research partnerships, support community-based conservation and monitoring initiatives, and could inform appropriate, adaptive management responses for the conservation and continued sustainable harvest of polar bears.

- The need to cooperate with local user groups and incorporate traditional and local knowledge with western science to aid polar bear conservation is recognized as a priority by the IUCN Polar Bear Specialist Group (PBSG). In that regard, and consistent and well-meaning efforts to work with the Inuit are being made by scientists. In recent years, more and more scientists in Canada and elsewhere have found that when it comes to determining the nature of the problem, there is a surprising level of agreement between traditional ecological knowledge and science -- particularly in the regard to empirical evidence of changing patterns in the environment. However, because of their different world views and other factors, scientists and local communities often disagree about what is causing the observed changes and how to solve the consequent management difficulties. Therefore, in order to assist in reconciling the assessment of polar bear population health, gain consensus in conservation decision making, and determine the appropriate management response, it is necessary to recognize the customary users' perspectives on the health, behavior, and abundance of a population and understand how these perspectives are formed and informed.
- This research explores how multiple forms of information on polar bears (traditional knowledge, community-based observations, scientific studies, and media) interact to inform sustainable management and harvest of the species. Exploring the structures and dynamics of these perspectives and knowledge institutions, including the ways that learning evolves within a changing socio-ecological environment, is a major component of resilience research and is essential for implementing adaptive ecological management practices. Beyond this, exploring the community's rationale as to why local people hold these ecological perspectives, is not often explored in the co-management dialogue. Yet such a shared understanding is a critical first step towards building and sustaining the goodwill, trust and eventual consensus needed for a durable co-management institution to function. The specific objectives of this research are to:
 1. Document Inuvialuit knowledge, perspectives, and observations of factors that influence polar bears population health on Banks Island and in the Beaufort Sea region;
 2. Explore how traditional knowledge, community observations, scientific studies, and other information variously informs hunters about sustainable harvest levels of polar bears;Secondary objectives of this research include:
 - i. Collaborate with the community of Sachs Harbour to record and communicate local and traditional knowledge of polar bear ecology, behavior, and habitat conditions in assessing and monitoring population health for resource management and educational purposes;

ii. Explore challenges and opportunities to better incorporate and utilize Inuvialuit knowledge of polar bears in scientific research and wildlife management decisions;

iii. Assist in communicating Inuvialuit perspectives of polar bear population health and harvest sustainability to the scientific and management community.

- While extensive biological research has been carried out on the Southern and Northern Beaufort polar bear populations, no documented traditional knowledge study on Inuvialuit perspectives on polar bears in the region has been reported. The need to gather and incorporate traditional and local knowledge with western science to aid polar bear conservation is recognized as a priority by the IUCN Polar Bear Specialist Group, by COSEWIC, and during the recent polar bear roundtable in Winnipeg convened by the federal Minister of Environment. Traditional and local knowledge of polar bears has been conducted elsewhere in the Arctic (e.g. in the Kivalliq and Kitikmeot regions of Nunavut and in Alaska).
- Mr. Dan Slavik, a Masters student in the Department of Rural Economy at the University of Alberta, is currently undertaking this research in Sachs Harbour NT. Mr. Slavik has an undergraduate degree in Environmental Studies and Native Studies, and has worked with Dr. Henrik Moller and his research team in the Zoology Department at the University of Otago, New Zealand. Dr. Moller has a significant program of research undertaken with aboriginal (Maori) resources users aimed to better document utilize traditional knowledge and sustainable use practices into national conservation strategies in that country. Prior to beginning his fieldwork, Mr. Slavik undertook a reconnaissance visit to Inuvik in order to discuss his research with representatives of IGC, WMAC(NWT), NWT Government biologists and others in Inuvik and Tuktoyaktuk. He also subsequently discussed his research with IGC at meetings in Whitehorse and at Pigeon Lake AB and with Sachs Harbour HTC personnel by e-mail and telephone prior to arriving in the community. He has received funding from the INAC NSTP, GNWT Wildlife Department, and Aurora Research Institute programs.
- This social sciences research combines traditional knowledge research methods that, with community approval, will involve participatory research, group discussions, and semi-directed interviews with 15-20 locally recognized experts and knowledge holders identified by the IGC and Sachs Harbour HTC. Interviews in the community and on the land are being recorded on video with the active participation of a local youth assisting in filming and interviewing.
- As mentioned above, we are unaware of any traditional knowledge study of polar bears undertaken on the Northern Beaufort Sea polar bear population or among those who hunt this particular polar bear regional population. This research was planned to contribute to the work of the ArcticNet Phase I research project "Inuit, Polar Bears, and Community Values", a project that concluded at the end of 2008. However, discussions are on-going regarding a possible successor project that will focus research attention on polar bear governance and human dignity (involving the policy aspects of a more culturally-inclusive system of polar bear management and conservation). The ArcticNet research project was a component of the IUCN North America Sustainable Use Specialist Group's core program that is examining conservation hunting in northern North America – an IUCN program that continues at the present time. It is reasonable to assume that the significant cultural and economic value of polar bears to northern indigenous peoples that has resulted in growing interest in studying current changes in the human-polar bear relationship, will continue and that Mr. Slavik will contribute to that on-going research community's work.

Methods:

a. Mr. Slavik is committed to research on wildlife sustainable use and conservation-related issues in the Canadian North; his background in environmental studies and native studies and his personal attributes will serve him well in that regard.

- In addition to Mr. Slavik's Masters degree course work in the Department of Rural Economy (including training in fieldwork methodology and data analysis) he also took a graduate course in Arctic Mammalogy offered by a senior polar bear biologist in the Department of

Biosciences. The researcher's supervisor is Dr. Brenda Parlee, a Canada Research Chair in the Faculty of Native Studies and the Department of Rural Economy. Dr. Parlee has extensive Northern experience examining traditional knowledge, community-based wildlife monitoring, and co-management of natural resources. The researcher will also receive guidance and supervision from Dr. Milton Freeman, Senior Research Scholar at the Canadian Circumpolar Institute with extensive experience in Inuit Knowledge regarding Arctic wildlife and fisheries, and from Dr. Christopher Fletcher, a professor in Anthropology who is experienced in community-based research in the North and directs a program in Visual Anthropology incorporating film and video into research methods.

- Mr. Slavik is an experienced videographer and will be training a Sachs Harbour youth to work with that equipment. The 2000 Sachs Harbour Community Conservation Plan "recommends that WMAC and FJMAC work with Inuvialuit and non-Inuvialuit agencies to obtain funding and expertise to prepare educational audio and video tapes on the local ecosystem, the people, conservation practices and the IFA...[and] continue to record and convey traditional knowledge of the land, culture, wildlife, and conservation". With the cooperation of the Inuvialuit Communications Society a final deliverable of this project will be a video documentary provided to the community for educational purposes, and for general use in communicating Inuvialuit knowledge and perspectives to the benefit of the wildlife research and management community.
 - Fieldwork in Sachs Harbour commenced at early in March 2009, preceded by discussions in Inuvik with IGC, WMAC(NWT), GNWT-Wildlife, and Parks Canada personnel. The Sachs Harbour HTC have provided a list of Elders and other knowledge-holders and these fifteen individuals are in currently holding discussions individually and in small group settings as they choose.
 - Fieldwork methods follow standard ethnographic procedures, with informed consent being obtained prior to engaging in a semi-structured discussion aimed to elicit information pertinent to the research objectives. Mr. Slavik has refined his body of questioning to core issues relating to polar bears responses to observed environmental changes, and expects that as his interaction with community members increases, so to will the cultural and personal context for better understanding this information will be enriched.
- b. The Sachs Harbour HTC is the central community organization involved in this research project. Outside of the community itself, IGC and WMAC(NWT) are both interested in and providing information and other services to the researcher.
- Aurora Research Institute has provided a financial contribution toward hiring a Sachs Harbour youth to assist Mr. Slavik with the filming and sound recording.
 - Gathering traditional knowledge related to this polar bear research project is the primary objective. Elders are key knowledge holders, but hunters and other community members will also be interviewed. The community HTC has undertaken to facilitate the selection and participation of an initial cadre of 15 key Inuvialuit knowledge-holders. Apart from discussions held in the community, the researcher has traveled on the land and sea ice with a hunter and engaged in in-situ discussions while searching for polar bears.

Results:

- a. The research is ongoing, with the field phase of the study planned to continuing until early-mid May 2009.
- The primary CIMP category is "Monitoring and Research"; however, to the extent that a suitable local youth is willing to work with the researcher in the filming component of the project there will also be a secondary "Capacity Building and Training" category involved.
 - The Valued Component is polar bear population health and adaptation to environmental change.
 - The Capacity Building and Training component, if feasible (i.e. a local youth is willing to participate), will be decided in the next week or two. The training involves video camera operation and film production. Another element of capacity building will be the use to

which the documentation (in written text and film) can be deemed useful by the community and regional Inuvialuit organizations for their own purposes. These organization would likely include the Inuvialuit Game Council, Wildlife Advisory Management Council (NWT), the Inuvialuit Communications Society, Aurora College and local schools

- The purpose of the study is to prepare a report based upon Inuvialuit knowledge of the local polar bear population's health and adaptation to environmental changes associated with regional seasonal warming trends. The information will not be new to Inuvialuit of course, but the written and videographic documentation of this information will be made available in a form that can educate a variety of audiences, including polar bear scientists and other wildlife biologists, environmental managers and decision-makers working in the North (and elsewhere), students, journalists, and the general public. The purpose of this project is to present important information in a manner that augments the oral presentation of the same material that all too often fails to be regarded as credible by professionals trained to deem acceptable data only if it presented in a particular written form. A copy of the completed dissertation, the video, and any other written documentation (e.g. briefs invited by any of the Inuvialuit organizations), will be provided to INAC (YK) once available.

Discussion / Conclusions:

- a. As mentioned above, Inuvialuit traditional and local knowledge about polar bear population health and adaptation obtained during this research study will be made available in order to inform polar bear scientists and other wildlife biologists, environmental managers and decision-makers working in the North, students, journalists, and the general public. The purpose of this project is to present important information in a manner that augments the oral presentation of the same material that, in its oral form, all too often fails to be regarded as credible by professionals who tend to deem as acceptable only those data presented in a particular written form.
 - At this time, it is hoped that once the information has been processed it will prove possible to present the provisional final document at a regional workshop held in the ISR at which representatives from Sachs Harbour and other Inuvialuit polar bear-hunting communities will discuss the findings and provide suggestions for their improvement. It is stressed by Inuit experts that the value of their environmental knowledge lies in its (local) provenance, so the intent of the workshop is to add to the value of the findings by including something of the regional specificity and variability of both environmental changes in the eastern Beaufort Sea and polar bear behaviour associated with these observed changes. Beyond that regional workshop, future research plans will depend on continuing communication with Inuvialuit regional organization and other unforeseen circumstances.
- b. All communication means will be discussed with the community and Inuvialuit regional organizations.
 - Apart from written and video forms of communication, it is likely that DVD and website postings will be used to ensure the widest audience can be effectively and inexpensively reached.