

**Theme 6: Interfacing Traditional Knowledge, Community-based Monitoring and Scientific Methods for sustained Arctic Observations**

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**Our Beluga, Fish and Environment are Changing: Traditional Knowledge study on food resources on Kendall Island in the Inuvialuit Settlement Region**

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**Summary/Abstract**

Inuvialuit people are making observations of climate change that may be affecting the health of beluga and fish at traditional harvest camp on Kendall Island, Inuvialuit Settlement Region, NT, Canada. In response, the Inuvik Hunters and Trappers Committee led a community based research project with Elders and youth to document the types of changes being observed in the Western Arctic coast through traditional knowledge interviews and experiences on the land. Outcomes from interviews highlighted eight themes that ranged from the importance of respecting the land to the value of beluga harvest and fishing to the culture and well-being of the Inuvialuit.

**Introduction**

At the global scale the Arctic has experienced warming at twice the global average (IPCC 2013) with rates of sea ice loss faster than previously predicted (Stroeve et al., 2012). At the local and regional scale, communities are noting changes in the environment and need to adapt to continue their subsistence-based livelihoods (Pearce et al., 2006). The Inuvialuit settled their land claim in the western Canadian Arctic in 1984; today, the Inuvialuit reside in six communities and co-manage their natural resources (IFA 1984). Beluga whales (*Delphinapterus leucas*) have long been an important component of Inuvialuit subsistence and are central to their cultural well-being (McGhee 1988). Despite the settlement of permanent communities in the Mackenzie Delta (e.g. Inuvik and Aklavik), many Inuvialuit continue to harvest beluga whales travel to summer camps along the coast to both hunt and fish (Harwood and Smith, 2002). Billy Day described where people went historically to harvest beluga whaling; these locations are still utilized as whaling camps today.

“There are a number of places that people would go for whaling each summer: East Whitefish Station (Nalguriak), Kendall Island (Ukeevik), West Whitefish (Neakonnak), and Shingle Point (Tapkak). The people from Tuktoyaktuk would also go whaling right from home.” (Billy Day, Tusaayaksat, p.30).

Community members, harvesters, elders and youth have observed changes in the physical environment, fish and beluga whales that they hunt at these camps. Questions and concerns have been raised regarding the viability of long term harvesting in the area, access to these areas, and how to properly monitor the changes in order to determine a means to adapt to ongoing and future changes. Thus, a community-based project was proposed by the Inuvik Hunters and Trappers Committee (IHTC) to respond to harvester and community questions and concerns about the changing environment. This project specifically addressed changes in beluga whales and fish being observed at the whaling camps, as these changes were affecting the livelihoods of the Inuvialuit. The IHTC identified the need to collect traditional and local ecological knowledge (TEK/LEK) of the area and species. A pilot project was launched by the IHTC to collect beluga whaling and fishing TEK at Kendall Island in July 2012. This project was organized to have Inuvialuit youth collect TEK from Elders and seasoned hunters and trappers through a series of interviews.

### **Approach**

The project was led by the community; the two project leads and coordinator were residents of Inuvik and they created a team made up of four Elders, three youth and one translator to conduct TEK interviews on Kendall Island. The team spent four days conducting interviews with six people who stay out at Kendall Island during the summer whaling season. The elders were the boat drivers, navigators and teachers who took time to teach the team about fishing and whaling practices as well as told stories of lessons they learned when they were younger. The translator was the camp boss who owned the camp that the team resided. She also taught the team important lessons that related to hunting, preparing food and safety. The research participants have lived seasonally and hunted at Kendall Island for approximately 15-50 years.

In total, approximately twelve hours of interviews were transcribed, verified and themes were extracted. Interviews were transcribed and later verified by each of the interviewees. The two youth and the project coordinator transcribed all of the interviews. The project coordinator analyzed the transcribed interviews and drew out underlying themes from the interviewees' answers to various questions that ranged from cultural practices to adaptation to a changing climate. The themes were then returned to the interviewee to disapprove, approve or edit as they saw fit. The small sample size allowed for the coordinator to read and listen to all of the interviews and draw out underlying themes from each interview. The nature of the questions and small number of interviews did not allow for large, quantifiable data, but rather more of an observational set of data.

### **Outcomes**

Analyses of the interviews revealed reoccurring themes were present and those themes are valuable for future research and monitoring designs around Kendall Island and the ISR. Here we present some of the shared observations of ecosystem change followed by reoccurring themes identified.

Elders and harvesters noted ecosystem changes from the terrestrial to the marine that require some attention for future monitoring and climate change adaptation. The permafrost thawing and slumping at camps were noted throughout the harvesting area where the historic camps remain. The Arctic islands are becoming smaller and the water is becoming shallower making it difficult to travel by boat to the coast of the Arctic Ocean. The whales are arriving earlier and earlier due to the earlier ice break up and melting in the area. Fluctuations in both beluga whales and fish were observed and were thought to be due to natural causes. If any beluga whales or fish show any signs of sickness, it is not eaten in case it will make people sick.

The following reoccurring themes were identified in the six interviews, which highlight the importance of whaling camps and harvesting activities for strengthening the culture and knowledge of the Inuvialuit:

- Only take what you need and share what you have;
- Where one chooses to hunt whales is very important and is worth protecting and preserving;
- Going out to the whaling camp every summer is instrumental in enriching one's culture and also to have a better grasp of Inuvialuktun, the native language;
- A traditional way of living brings family closer together;
- Technology is utilized more to communicate during a beluga hunt and is beneficial for assuring that a family will get a whale;
- Until someone (scientists, health professionals, family etc.) says that beluga or fish are unsafe to eat, people will continue hunting and harvesting beluga and fish for consumption;
- In terms of adaptation to a changing climate, search diligently and thoroughly for a better way of doing things and follow that way; and,
- It's not all about money, food or environment but it's important to pass down traditional knowledge for the "togetherness of the Inuvialuk".

## **Conclusions**

This pilot study drew on the capacity and expertise of the Inuvialuit to document the observations of environmental changes and their impacts on culture and subsistence. The

Inuvialuit Settlement region is arduously working toward being able to generate research ideas and to independently conduct the research thus defining community based research (CBM). This pilot study is the epitome of CBM, which also launched a TEK local observations component of the Beluga monitoring program. To be able to document this vital work is not only documenting the participants valuable knowledge but also able to create a stronger and more dynamic foundation for further research endeavors.

## References

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