

# trackingchange

Local and Traditional Knowledge in Watershed Governance

## The Importance of Traditional Knowledge for Maintaining Fishing Livelihoods During Times of Change in the Sahtú Region

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### KEY QUESTIONS:

**Objective #1** focuses on learning about environmental variability and change in the Great Bear Lake (GBL) area, based on local and traditional knowledge.

**Objective #2** aims to determine how these changes affect peoples' fishing livelihoods.

**Objective #3** considers mechanisms or means by which knowledge is shared, interpreted and/or transformed between generations.

### Key Objective

Few studies have focused on the climate related knowledge and experiences of First Nations including the Sahtú Got'iné of the Mackenzie River Basin.

This project will help address this gap while at the same time investigating how the livelihoods of Sahtú Got'iné fishers are impacted or adapting to climate related changes.



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### Key Question of the Study 1:

**Which changes (if any) are outside the norm of natural variability and are interpreted by Déljne elders and youth as effects of climate change?**



### Key Finding 1:

According to the interviews, unfortunately there are many observable changes in the GBL region. The most significant include softening fish flesh, increased number of fish cysts, warming water temperatures, thinning ice and lower water levels.



### Key Research Question 2 / Key Finding 2:

**Are there changes in the health (condition) of the fish, that can be attributed to climate change (ex: warmer water)? Are these affecting the number and/or species of fish being harvested and consumed?**

Community members in Déljne have noticed an increasing number of cysts on the fish in GBL and this has been attributed to warming water temperatures. Some people just cut out the cyst and utilize what is left, while others toss the fish out entirely. This has significant implications for fish harvest and yield as well as an increased cost for maintaining fishing practices. Less viable fish harvests also increase the likelihood that community members will choose store-bought food over traditional foods due to the added monetary and physical stresses.

### Key Research Question 3 / Key Finding 3:

**How do community members understand and define climate change within the community?**

The way in which Déljne community members understand climate change is very interesting because their perception is strongly influenced by the prophecies foretold by Prophet Ayah. They understood that changes were going to come and the way in which they converse about these changes indicates their resiliency to change and adaptable worldviews. Definitions include more than just changing weather patterns and thinner ice; they incorporate how the land is reacting, how animal and fish behavior is changing, as well as the importance of being stewards – not masters – of the land.



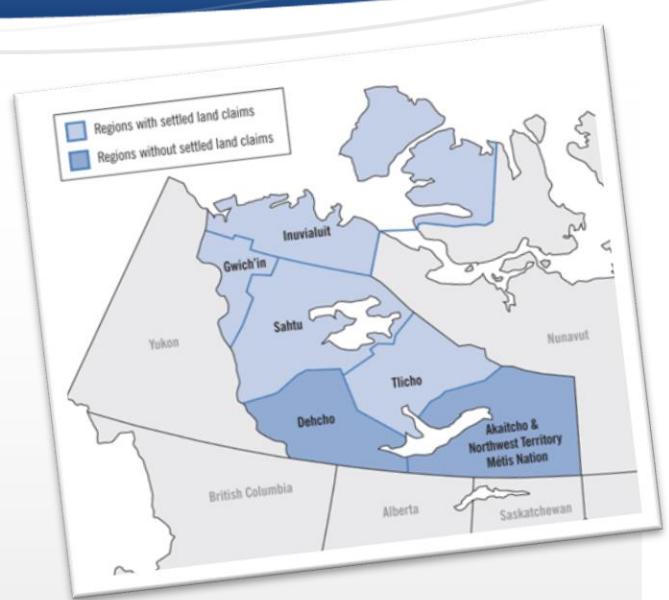
**Two Thumbs Up!** Thanks to my community research collaborators:

Mandy Bayha and Michael Neyelle



## How did we do the research?

Research activities took place during the summer of 2017 in Déljne. In order to accomplish the research objectives, semi-structured interviews were utilized and carried out with Sahtú Got'ine elders, fishers, and youth. These interviews are used to document oral histories as well as contemporary observations of variability and change in Great Bear Lake, the Mackenzie River and the surrounding region. Each interview was audio-recorded with the assistance of a translator, transcribed and coded to identify themes and insights related to research objectives and key questions. A survey was originally included in this research project but after community consultation, it was decided to abandon the survey. In addition to the terms of the University of Alberta Research Ethics Board process, the guidance of the Sahtú Renewable Resources Board and mentors through *Tracking Change* ([www.trackingchange.ca](http://www.trackingchange.ca)) were followed on ethical research.



## Who was involved and Why?

Déljne has a long tragic history associated with the Port Radium uranium mine located on the other side of GBL. As a result of working at the mine, many elders and people from the community have suffered from various types of cancer. Many who have passed on have been important Elders within the community – which is why documenting their stories and knowledge is so important; not only for this study but for future generations in Déljne. Elders were crucial because they have witnessed greatest environmental change within their lifetime and can help to identify a 'baseline' environmental norm. Expert fishermen were also significantly important to this research project because they interact with the environment on a regular basis and can identify which changes are having the greatest impact on their livelihoods. Lastly, youth were particularly essential to this project because they represent the new generation of fishers. It's important to highlight their perceptions of change, as well as the knowledge they are able to bring to the project.



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More details and updates  
about project funding,  
research news and team  
members are on our  
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