

The Importance of Traditional Ecological Knowledge during times of Change in the Sahtú Region

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Our Current Knowledge

In northern Canada, 'it is expected that the effects of climate change will be felt earlier and more keenly in the polar latitudes than elsewhere in the world' (Berkes & Jolly, 2002, p. 2). A more recent publication notes that air temperatures in the Arctic are also rising 2 to 3 times faster than anywhere else on the earth's surface (Wright, 2019). Northern fishing communities understand that environmental conditions are likely to fluctuate and vary, but it is when those particular settings become abnormal or unprecedented that people become incredibly concerned (Berkes & Jolly, 2002). In order to identify these uncharacteristic ecological shifts, a research collaboration was developed with Sahtú Got'ine community of Déline (formally known as Fort Franklin), located on Great Bear Lake in the Sahtú Settlement Area of the Northwest Territories.



The Bear Lake People

Déline, formally known as Fort Franklin, is located in the Northwest Territories at 65° N, 123° W, on the western end of Keith Arm on Great Bear Lake, which is about 10 km from the outlet of Great Bear River (Woo et al., 2007). The people of Déline (known as Délīñot'ine) collectively identify as Sahtúot'ine (pronounced "sah-tu-ohtinay,") or Sahtu' Got'ine, meaning Bear Lake people in the North Slavey dialect of the Dene language (Caine, 2013). It is a thriving fishing community that continues to maintain its distinct identity through the use of dene customs and traditions that utilize the pristine resources of Great Bear Lake. Increasingly people are noticing significant abnormal environmental shifts, which is critically important for the sustainable future of Déline livelihoods.



Methods

Fieldwork activities took place in the summer of 2017 on Great Bear Lake and areas of the Mackenzie River considered ecologically and culturally significant to the Sahtúot'ine. Over the course of one month, 21 semi-structured interviews were carried out and the results were analyzed and verified with community members. In keeping with the principles of OCAP (Schnarch, 2004) and the respect for the intellectual property rights of traditional knowledge holders, the results of the study including raw data will be shared with the Sahtú Renewable Resources Board in order that it can be archived within their traditional knowledge database.

Climate Change: A Déline Point of View

Chapter 3 covers climate change perspectives from the Sahtu Gotine people. Climate change is a cultural construct which has different meanings in different regions and based on different kinds of knowledge. Traditional knowledge can help us understand the nature of climate change through the narratives of Indigenous peoples. In the case of Déline, the following was discovered: 1) Climate change descriptions matched conventional 'western' definitions, but also included their intrinsic relationship to the land; 2) Participants blame the production of fossil fuels or extractive resource industries for abnormal environmental changes and people generally believe that they hardly contribute to its acceleration; 3) People trust traditional knowledge over other forms of education; 4) Residents discussed how climate change is not considered to be a new concept to the community because these changes were always predicted and prophesized.



Fishing Related Indicators

Chapter 4 explores how climate related changes directly impact fishing livelihoods, and subsequently the valuable traditional knowledge of the Sahtú Got'ine people. In the case of Déline, the following was discovered: 1) Fish are important for cultural and nutritional reasons; 2) Warming water temperatures are causing the fish flesh to become softer, flakier and paler much faster than before; 3) Some people believe that water levels are declining – but this finding was not found across all interviews; 4) Community members mentioned that the Cisco, grayling and herring populations are in noticeable decline; 5) Interviews revealed that winter temperatures are definitely increasing, which is causing the winter road to melt faster than before; and 6) Participants discussed the increase in visible cysts found on the fish.

References:
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Purpose

This study aims to provide insight into the phenomenon and impacts of climate change in the Canadian Subarctic region, based on research with youth and elders from the community of Déline located on Great Bear Lake (GBL) in the Mackenzie River Basin. In collaboration with the Sahtú Renewable Resources Board, the thesis research focused on understanding two key questions. What is climate change from the perspective of Déline Got'ine people and their traditional knowledge (oral histories) of climate in the region? What are the impacts of climate change on the fishing livelihoods of the Déline Got'ine people?

