Sahtu Goti'ine Traditional Knowledge: The Impact of Climate Change on Fishing Livelihoods

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Our Current Knowledge

In recent years, the effects of climate change have become increasingly visible in northern Canada; its impact on northern Indigenous peoples has become a particularly important area of research and policy (Nuttall et. al. 2005; Ficke, Myrick & Hansen 2007). While much focus has been on the experiences of high arctic communities, less is known about the effects of climate change on the livelihoods of those living in the sub-arctic including the Mackenzie River Basin (Caine, Davison & Stewart, 2009; Budreau & McBean 2007; Got'ine peoples of Dé lıne, and their fishing livelihoods, for example, may be affected by such problems as rising temperatures, erratic weather events and changing precipitation patterns (Cohen 1997). This has implications for food security and well-being; fishing not only contributes to necessary food resources, but also underpins healthy respectful relationships between people and cultural landscapes such as Great Bear Lake (Andrews & Buggey, 2012). Preliminary research in the region suggests that warming temperatures are already having an effect on the quality, population, diversity of fish being harvested and by extension the food security of the community (Martin and Simmons 2016).

Objectives:

The research will build on previous ethnographic, sociology and ecology research in the region (Muir, Leonard & Kruegar, 2013) as well as the broader literature on traditional knowledge and climate change (Krupnik & Jolly 2002). Guided by the Sahtú Renewable Resources Board, I aim to contribute to the literature on climate change and fishing livelihoods based on fieldwork in Déline; the work will revolve around three objectives: (**Obj. 1)** Drawing on the traditional knowledge of elders and active fishers from the community, I will document the observations and experiences of ecosystem dynamics and determine what kinds of ecological changes fall outside the norm of natural variability. (**Obj. 2)** Using a household survey and semi-structured interviews with a cross section of residents, I also aim to determine how these changes affect fishing livelihoods including patterns of fish harvest, food purchases and consumption of traditional foods. (**Obj. 3)** Finally, I seek to learn more about the implications for future generations – how does climate change affect how and what kinds of traditional knowledge are shared?

Methods:

Fieldwork activities will take place in the summer of 2017 on Great Bear Lake and areas of the Mackenzie River considered ecologically and culturally significant to the Sahtú Got'ine. 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.

Significance:

The research will enable me to develop valuable and transferable skills that can be used for future graduate work or within the workplace. Specifically, I will gain experience in cross-cultural communication including oral and written plain language reporting (e.g., newsletters, video). By doing so, I aim to build the capacity of the Sahtú Renewable Resources Board to understand and address more about the effects of climate change on local communities. I will also develop greater skills in academic writing by work collaboratively to co- produce two peer reviewed articles in international journals. These will focus on theories of Indigenous climate change adaptation and address gaps in the literature on Indigenous knowledge and the sustainability of fishing livelihoods. This project is particularly important to me because I am an Indigenous woman that strongly believes in the legitimacy and potential impact that traditional knowledge can have within academia. This project is important to me personally because this past summer I had the chance to develop meaningful relationships with a lot of youth and elders from Déline, which ignited my interest in conducting a community-based research project of my own. The research will also form the basis of my MSc thesis which I aim to complete by the spring of 2018 and thereby address the gap in knowledge about the effects of climate in the Mackenzie River Basin.

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