Two Master's Student Opportunities: Is Our Water Good to Drink?

These two Master's Student positions at the University of Saskatchewan are funded through the Global Water Futures project "Is Our Water Good to Drink?" a joint research initiative with the Akaitcho Territory Government (ATG).

Project Description: While Indigenous communities recognise western science (WS) standards for drinking water quality, potability as a concept is not sufficient to address the Indigenous concepts of "good" or "bad" in relation to water. The purpose of this collaborative research project is to develop Traditional Knowledge (TK) indicators of "good" and "bad" water in order to explore the similarities and differences between the WS concept of "safe to drink" and the TK concept of "good to drink". This will be achieved through an exploration of water-related health, how human health (encompassing physical, spiritual, mental, and emotional health) is affected by "good" and "bad" water, development of appropriate TK indicators, and community case studies. Through this process and its outcomes, communities will be able to better understand and assess water-related health in Indigenous communities through a TK system and be able to share this with government agencies currently responsible for water management, remediation, and quality monitoring.

A mixed-methods community-based participatory research (CBPR) approach will be employed. The CBPR approach is accepted by many Indigenous communities seeking equitable and active participation, collaboration, and mutual learning in research activities. Academics and community members will continue to work collectively to plan methodology, engage participants, contribute to and embrace social learning, and create capacity-building strategies to answer the research questions in this program. CBPR strives to be community-situated, collaborative, and action oriented.

Start Dates: Spring 2019 and Fall 2019

Student 1: Working primarily with community research team members and summer interns (under the supervision of university research team members and ATG), this student will undertake survey pretesting and data collection, enter and code data, and support data analyses. Data will be synthesized at the community and regional scale. The outcome of this activity will be a series of potential Traditional Knowledge (TK) indicators for "good" and "bad" water that will be refined at a joint workshop with ATG, community representatives, and Elders. Survey data will be augmented by up to eight video interviews with Elders and women, in which they will be asked to share their water-related health stories and (for women) their water-related health experiences.

Student 2: Working primarily with community research team members (under the supervision of university research team members and ATG), this student will design a data collection framework that

augments existing WS data collection programs in each location with data in support of the TK indicators emerging from the work of Student 1. These case studies will be undertaken in Yellowknife Bay, Resolution Bay, and the Eastern Arm, representing all ATG member communities participating in this study. Existing water quality data include the NWT-wide Community-based Water Quality Monitoring Program that collects contaminant and nutrient levels in several locations of interest (Fort Resolution at Resolution Bay / Great Slave Lake; Fort Resolution at Slave River / Big Eddy; Yellowknife at Yellowknife Bay - Dettah / Great Slave Lake; Yellowknife at Yellowknife Bay - N'dilo / Great Slave Lake; and, Yellowknife at Yellowknife River / Upstream from Bridge). Water will be determined as "safe" to drink using the Federal drinking water guidelines and World Health Organisation drinking water quality guidelines. Water will be determined as "good" to drink using the indicators developed within this study. Existing data will be augmented by data collected through this study to ensure that all variables have been measured in each location. Findings from both approaches will be evaluated in terms of implications for human health from being both safe and good to drink before assessing the similarities and differences between the two approaches, identifying how and where the two knowledge systems strengthen each other, and providing recommendations for development of more fulsome monitoring protocols and decision-support tools.

Eligibility: A background in water resources, Indigenous studies, community-based research, mixed methods research, or a combination of these is preferred. Experience with NVivo© (Student 1), water quality analyses (Student 2), and statistical packages (Students 1 and 2) will be an asset. Students must be willing to travel to the Northwest Territories to work alongside community research team members in undertaking data collection. We strongly encourage Indigenous and female candidates to apply.

Application Process: Interested applicants should submit a cover letter stating their motivation and expectations. In addition, a curriculum vitae, unofficial transcripts, and contact information for three references should be included in a single pdf file and sent to cschuster.wallace@usask.ca. Please include the project title in the subject line. We thank all applicants for their interest, however, only selected candidates will be contacted.