



## Building Capacity to monitor fresh water quality in Pond Inlet

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-HISTORICAL AND CULTURAL PERSPECTIVE ON WATER USES- RISKS TO HUMAN HEALTH-  
CLIMATE AND ENVIRONMENTAL CHANGES-RECOMMENDATIONS FOR ADAPTATION-

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### Abstract

Access to healthy water is of paramount importance for Mittimatalirmiut. Water is important to keep us alive, sturdy and healthy; and bad water can be harmful for our people- our beloved elders, youth and infants. Water, of course, yields important cultural value to our people since many of us are going out on the land in order to provide our family with fresh water, just as our elders used to and they proudly taught us.

Under the dire and real influence of recent climate change, local people have expressed a common concern that water quality may not be the same as it used to be in the past.

We wanted to assess the quality of our water sources, explore vulnerability to climate change and investigate risk to human health in order to develop adaptations and best practices to ensure safe and sustainable access to water for Mittimatalirmiut.

In the fall of 2014 we have worked with 13 elders from our community of Pond Inlet in individual interview, mapping, archived photos screening and group interview to discuss on the following topics: **1)** Historical and traditional uses of water in Pond Inlet area, **2)** Historical and contemporary considerations on health and the occurrence of water-related sickness, **3)** Influence of climate and environmental changes on water quality and **4)** Adapting our water gathering/consumption practices to the changing climate/environment for a better access to quality water.

Working with elders allowed us to understand the historical importance of water quality and how people used to safely gather fresh water based on their knowledge and observation of simple indicators (taste, colour, flow rate, turbidity). People rarely fell sick when they used to live on the land and no record of water-related sickness has been reported. Our elders preferred iceberg and multi-year ice for drinking water as well as fresh streams. They used to find their own solutions when the preferred sources of water ran low or on hunting trips (underground water, melting ice in caribou carcass). Water gathering was a family responsibility and there were good practices to keep the sources healthy. Water was used for everything back then.

We have learned a lot about water use at the time of the early settlement (1970s) and the government decision on designing Water Lake as the municipal water source and how they set their standards for water treatment with chlorine. People did not like the chlorinated taste of



water so that the main source of drinking water still remained the ones coming from the land/ice at that time.

Through the observations of our elders we have gained a better understanding of the multiple manifestations of climate change that are currently taking place in our environment (receding sea ice and glaciers, decreased stream flow and dryness, increased temperature and rain events). Many of them would likely affect our water quality one day or another according to our elders. Pollution would be an important priority to assess in the future because it is everywhere.

Our research work has been a very positive experience for our research team (skills development) and the elders involved (research involvement). Elders did take the topic of the research very seriously and shared their information to help the community to the best of their knowledge. Everybody welcomed our initiative and we received warm encouragement to keep going with water monitoring as it helps to address public concerns. Elders also mentioned that further monitoring efforts are needed for glaciers, permafrost and water stream and lakes. They have formulated and agreed on a proposition to change the location of our municipal water source to a new site for safer provisioning of water to Mittimatalirmiut.