

4. Climate Change Observations and Experiences in Jean Marie River

The objective of the interview process was first, to ask participants who have lived in JMR for most of their lives how the climate or weather in the last 15-20 years is different from the climate 20-50 years ago, depending on the age of the participant. Secondly, participants were asked how the changes in climate have impacted (i.e. caused changes to) the environment; as well as the people, community and culture of the JMRFN.

Observations of climate change and their associated impacts were categorized into six themes. The process for selecting these themes is primarily based on the observations common among most, if not all, of the interviewees; and from major climate change topics identified in the literature review related to changes in the weather and the environment, such as thinner ice cover on lakes and rivers and melting permafrost. The six themes identified for this project are:

- Seasonal Weather Patterns
- Rivers, Lakes, and Water Quality
- Permafrost
- Wildlife
- Vegetation
- Community and Culture

For each theme observations of any changes that are directly or indirectly related to climate change were documented, along with any associated potential or existing impacts. Further, from these impacts the relation to health, if applicable, was identified as the first step in assessing the vulnerability of our community to health related impacts of climate change. In the context of this research means, vulnerability to climate change refers to: “the degree to which a system (community) is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes.” (Séguin and Berry, 2008:5; *parentheses added*).

The second step in preparing the vulnerability assessment was to review, verify, discuss, and clarify the climate change observations and impacts documented in the interviews. This step was accomplished through a focus group session, where community participants were presented thematic posters showing the documented observations and impacts. Participants discussed each impact on the posters and provided feedback to confirm, clarify, and/or add any other information to the posters.

During the focus group session participants were also asked to rank which health related impacts were most significant based on:

- The vulnerability of, or how at risk is, the community to the impact (*high, medium, low*);
- The magnitude (i.e. seriousness/severity) of the impact to the community (*strong, medium, weak*);
- The perceived duration of the impact (*long, intermediate, short*), and;
- The capacity of the community to adapt to the impact (*difficult, moderate, easy*).

These categories were used to display a matrix on the posters where the participants ranked each impact according to these categories using low, medium, and high type scales (see Tables 1-6 in the subsequent sections). This method for prioritizing climate change impacts was adapted and modified from Smit et al. 2008, and from the six *Climate Change Planning Tools for First Nations Guidebooks* (2006) produced by the Centre of Indigenous Environmental Resources (CIER).

From the answers and stories shared by the interviewees a brief collective account of JMR’s climate from the mid 1950s to the 80s, from a local cultural perspective, is presented below. This account is important