

6. Adapting to Climate Change in Jean Marie River

For our community, adapting to climate change is viewed in a similar perspective as our approach to many of our community initiatives – to build and create a sustainable and healthy community. Sustainability is essential for our community to survive and thrive in the current cultural, social, economical, and political contexts our community is a part of. The impacts being caused by climate change now, and possible impacts in the future, pose some new challenges, along with compounding existing ones, to achieve our objective of a sustainable community; however, our people have a history of resiliency when it comes to adapting to climatic, environmental and socio-cultural changes.

As a first step to address the current and potential vulnerabilities of JMR to climate change, a community workshop was conducted where members of the community were presented the vulnerability assessment of JMR to climate change as influence diagrams (see Appendix 6). Community members discussed possible adaptation strategies that the community could explore to minimize and/or prevent health related risks linked with climate change, and strategies to take advantage of potential opportunities afforded by climate change.

Based on the vulnerability assessment several possible adaptation strategies were identified that could be implemented at the community and possibly regional level. Other adaptation strategies identified would require support from the territorial and federal governments and technical assistance from subject matter specialists, as JMR does not have the capacity or resources to independently develop and implement some of these strategies. These adaptation strategies have been grouped according to the key vulnerabilities identified in Section 5.

6.1. Food Security

The major climate change impacts regarding food security are primarily in relation to restricted access at certain times of the year to both country and store bought foods, and a decrease in the abundance of important country foods, such as berries and fish. To improve food security in the community many of our members suggested growing food locally. Shortly after JMR was first settled in the 1920s a community garden was created where vegetables such as cabbages, carrots, and even tomatoes were grown; and with a milder climate developing a community garden would alleviate some restrictions to access to country foods, and provide community members with local access to produce that is healthier and less expensive than store bought foods.

“To seriously consider and plan agricultural actions (JMR needs to have a) big community garden, can grow our own food, have our own poultry business to produce meat, eggs, etc. to ensure that we are self sufficient in case we get disconnected from the South, where most of our food products are currently coming from.” (*Margaret Ireland, September, 2010; parentheses added*).

If a community garden is successful and produces a surplus of food a root cellar could be built to store the surplus food, and community members could can and dry foods, to store over the winter months. Moreover, a warmer climate may allow for a longer growing season and more varieties of produce could be grown. Another food source that could be available to the community locally is chickens and geese that could be raised in the community.

A step further could be the possible coordination of more formalized food sharing networks with other small communities in the area, such as with Trout Lake and Nahanni Bhalte. Communities that have a

healthy supply and quality of certain country foods could share surplus with the other communities for their surplus in other country foods. In the long term a store and warehouse could be built in JMR as a central point for distributing food amongst the communities, which may eventually lead to a commercial enterprise if there is enough food grown and/or harvested locally to have a surplus for other communities and temporary work camps in the area to purchase. Such an enterprise also has the potential to create job sharing opportunities with the communities involved.

Another adaptation strategy to address food security is to change harvesting locations where species are less abundant and/or unhealthy, including areas where scientists have identified increased levels of contaminants, such as at Ekali Lake and McGill Lake. People are already reducing their consumption of fish from these lakes, based on the recommendations of scientists. There is also the potential to harvest new species that are being seen in the area, but most of the animals and birds seen so far are not considered food by community members, with the possible exception of whitetail deer.

6.2. Access to Safe Drinking Water

In regard to adaptation strategies to address the challenges of accessing safe drinking water, there are a number of factors that are contributing to the deterioration of the water quality in the area. Pollutants and contaminants are prime contributors to this; however, the warming of lakes and rivers can also affect the quality of the water and cause contaminants trapped in the ground to leach into the water table. Without more information it is difficult to elucidate the connections between a warming climate and its effects on the water quality in the Dehcho region.

At this stage our community needs a contaminants study conducted for the area, and we also need improved methods for monitoring the quality of drinking water and for treating it. People have already started adapting to the lack of quality drinking water in the community by buying bottled water for the grocery store. This is an expensive adaptation strategy, but a necessary one, as many people consider drinking water in the community and out on the land not to be safe.

6.3. Cultural Continuity & Community Sustainability

The climate change impacts affecting the health of our culture and community are intertwined and developing adaptation strategies that promote cultural continuity includes promoting a sustainable community and vice versa. The adaptation strategies initially explored regarding the climate change impacts that are affecting these aspects of our health are principally initiatives that can be planned, developed, and implemented by the community with little or no outside assistance. However, there are other potential adaptation strategies specific to addressing climate change impacts at the community and regional levels that would require collaborative approaches with other communities and researchers; as well as regional, territorial, and federal governments.

At the community level a number of adaptation strategies can be developed in the form of education and communication initiatives to inform community members about the health risks associated with climate change, and what actions people can take to prevent or minimize these risks. For example, education strategies about how to prevent heatstroke and sunburn (e.g. drink plenty of fluids, sunscreen, limit time in direct sunlight, etc.), or a community fire education strategy in case of a forest fire could be developed by the community and implemented in the form of community workshops or information sessions, as well as in the school. Community initiatives that address climate change related issues when out on the land could be developed as part of youth learning survival skills and learning about their spiritual connection with the land, such as at culture camps and ecology camps, and through the passing on of TK from older family members and Elders.