

Climate Change Impacts on Ice, Winter Roads, Access Trails, and Manitoba First Nations

The goals of this project were to:

- Determine the impacts of climate change on ice, winter roads, access trails, and Manitoba First Nations; and,
- Identify actions for addressing these impacts

Climate Change and Manitoba

Climate change is any change in climate over time, whether part of a natural cycle or a result of human actions. Since Manitoba is in the middle of the continent and relatively far north, we are likely to face earlier and larger impacts from climate change than other regions of the world. Scientists have predicted that Manitoba's average seasonal temperatures could increase by 3 to 8°C by 2100.

Climate Change and First Nations

First Nations peoples in northern Manitoba are particularly susceptible to climate change due to their strong and direct connection to the environment - a connection that is integral to their way of life. In the wintertime, community members rely on ice, winter roads, and access trails for their daily activities.

Over 25,000 First Nations individuals in 28 communities in Manitoba rely on these winter roads, and the number of individuals is expected to double in the next 20 years.

Who provided information for this project?

Information was gathered through a series of interviews with leadership and community members from five Manitoba First Nations (Barren Lands First Nation, Bunibonibee Cree Nation, Poplar River First Nation, St. Theresa Point First Nation, and York Factory Cree Nation), as well as through surveys and interviews with others (including universities, federal / provincial government departments, First Nations regional organizations, construction and transportation companies, and others).

What Can I Do?

Learn More...

1. Talk to your Elders and other community members about climate change impacts on your way of life!
2. Order a Climate Change Toolkit from www.ainc-inac.gc.ca/clc/kt/
3. Check out the following websites www.climatechangeconnection.org/ www.pembina.org/climate-change/

Take Action...

Talk to Chief, Council, and community members about developing a Community Climate Change Action Plan! Check out our website for guidance on how to do it.

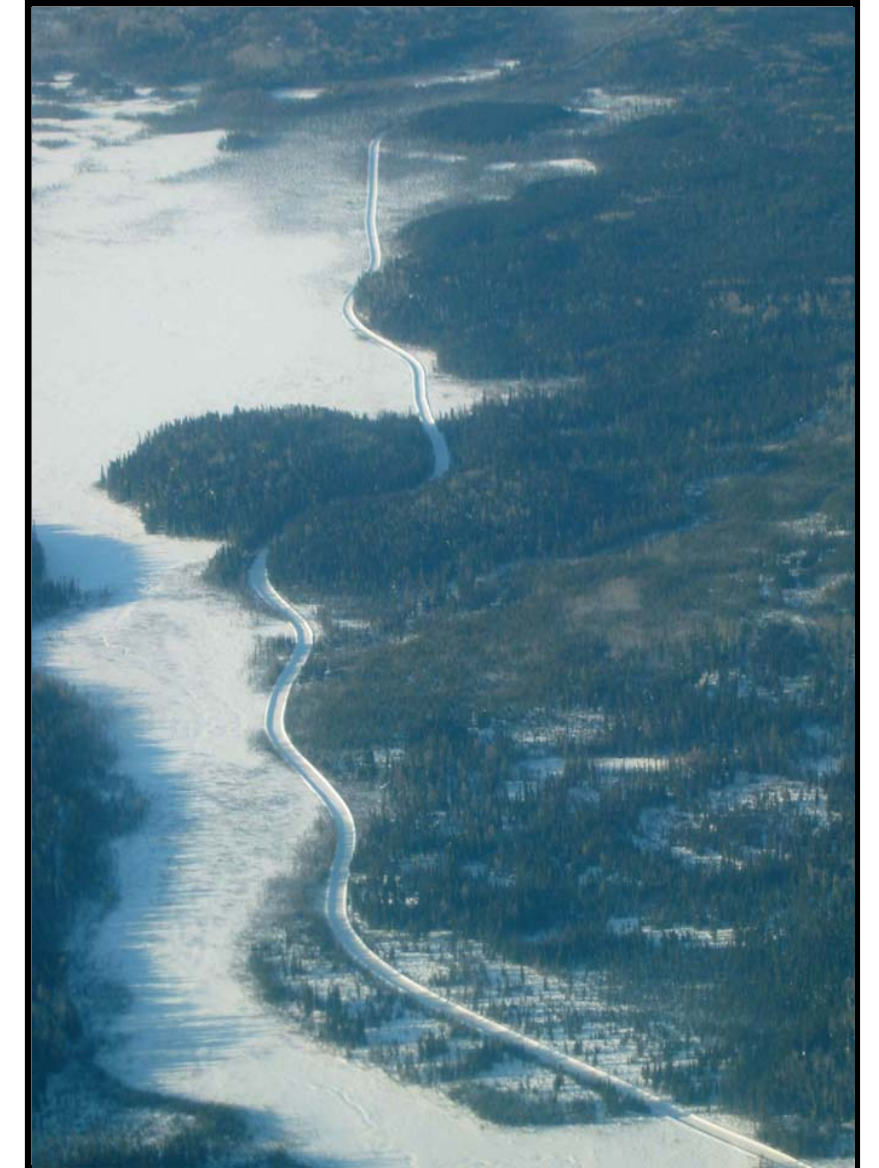


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The Centre for Indigenous Environmental Resources (CIER) conducted this research in partnership with Barren Lands First Nation, Bunibonibee Cree Nation, Poplar River First Nation, St. Theresa Point First Nation, and York Factory Cree Nation. Community-based researchers from these First Nations helped to gather and interpret the information that was collected. An Advisory Committee (made up of people from First Nations regional organizations, and government / university departments) provided guidance on project design, information sources, and data analysis.

It's a Way of Life and It's Changing... Climate Change Affects Us All



Climate Change Impacts on Ice, Winter Roads, Access Trails, and Manitoba First Nations

What did we learn?

First Nations described a changing environment. Community members from five Manitoba First Nations described a number of changes in weather, water and ice conditions, winter roads, access trails, and wildlife. Although gradual, many of the changes were described as being most obvious in the last ten years.



1. The weather is changing

- Shorter, warmer winters
- Change in snow texture and colour
- Longer, warmer falls and springs
- Hotter and drier summers
- More windstorms and thunderstorms
- Changes in snowfall and rainfall
- It is harder to predict weather

2. Ice conditions are changing

- Water levels go up and down quickly
- Lakes and rivers freeze later and thaw earlier than they used to
- Ice is thinner and weaker, and there is sometimes open water
- There are air pockets in the ice and deeper slush on top
- There are ice shelves or ridges along frozen water bodies

3. Winter roads and access trails are changing

- Ice on the roads and trails is weaker and thinner than in the past
- There is more slush on the roads and access trails
- The roads sometime have air pockets and earth patches
- Muskeg no longer freezes well
- Winter roads and access trails now become useable later in the season and for a shorter time period than in the past

4. Wildlife is changing

- There are more of some animals, but fewer of others
- There is a decrease in the quality of some furs, fish, and meat
- Some plants that are used for medicine, food, and tea have decreased in number
- The leaves and berries on some plants are dried up in the summer



How are First Nations lives changing?

First Nations described changes that are affecting many aspects of their lives.

Financial

Short winter road seasons increase the price of fuel, groceries, and supplies in the community, and make it harder to travel outside of the community for affordable goods. When there is slush on the access trails and weak ice on lakes and rivers, it is hard to make money through trapping and fishing.

These problems are made worse by higher fuel and equipment costs, and by lower quality of some fur, fish, and meats.



Safety

In recent years, warmer weather and weaker ice has made travel around the communities less safe. Individuals described accidents involving people and/or machinery falling through the ice.

Health

When there is less travel on winter roads and access trails, healthy fresh food is expensive and it is harder to gather local foods. People are worried about eating less healthy foods and about higher levels of stress and disease amongst community members.

The percentage of First Nations Status people of all ages who have diabetes is 18.9% versus 4.5% for non-Aboriginal people.

Social/Cultural

When winter road seasons are shorter, there is less chance to travel to nearby communities and larger centres to shop and visit with friends and families. When there is lots of slush on the access trails, there is less chance to hunt, fish, trap, and take part in recreational activities (e.g. trail riding and winter carnivals).



Community Operations

When winter road seasons are shorter, it affects the ability of communities to get supplies needed for operations. The length and timing of the winter road season has an impact on economic development, housing, capital, and special projects in communities.

Actions to decrease climate change impacts!

There are seven broad strategies that can be used to address climate change impacts on ice, winter roads, access trails, and First Nations. **In order to be successful, First Nations, regional organizations, and federal/provincial governments all need to take action and be part of the solution.**

1. Develop a 'Community Climate Change Action Plan'

- Communities should meet to discuss climate change impacts and to identify potential solutions and set priorities; include Traditional Knowledge in Action Plan
- Take action to implement the community plan
- ** Government and First Nations regional organizations should provide funding and technical assistance if needed.

2. Increase Security of Winter Roads

- Communities should include safety training as part of construction costs
- ** Government should continue to include First Nations in short and long-term planning processes.

3. Develop a Communication Strategy

- Community members meet regularly to discuss climate change issues and discuss their ideas with leaders
- ** Government and First Nations regional organizations should meet with First Nations to discuss potential solutions to climate change impacts on all aspects of their lives.

4. Increase Social/Cultural/Recreational Opportunities

- Establish a committee to develop ideas and promote participation in activities and events
- Work with neighbouring communities to share ideas, develop solutions, and share financial resources
- ** Government and First Nations regional organizations should provide funding to support activities and events.

5. Increase Consumption of Local Foods

- Establish a Healthy Foods Committee, a Community Foods Program, and a Land-skills Mentorship Program
- ** Government and First Nations regional organizations should provide funding to support these initiatives.

6. Enhance Community Safety

- Develop a community safety training program
- Travel in pairs, move trails off ice, travel at the coldest time of day, and use different out-going/return routes
- ** Government should provide funding and training for community or Tribal Council safety officers

7. Increase Funding for Community Operations

- Establish a monitoring program and plan ahead for community fuel and food consumption
- Take part in budget training programs to learn how to get the most out of O&M budgets
- ** Government should provide funding for training.