



Community Proposal Climate Change Adaptation Action Plan

developed by
the Cree Nation of Mistissini and the Cree Nation Government

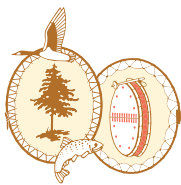
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March 2018

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Grand Council of the Crees (Eeyou Istchee)

Grand Conseil des Cris (Eeyou Istchee)

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Cree Nation Government
Gouvernement de la Nation Crie



This report is an output from a project managed by the Cree Nation Government and the Cree Nation of Mistissini. It was delivered by InsightShare in collaboration with Ouranos. With the financial support of Environment and Climate Change Canada.

Why do we need this plan?

It is now well known and demonstrated that global warming is happening. Northern regions are experiencing even faster changes than other areas on our planet. In Eeyou Istchee, annual mean air temperature has increased by 1.5°C in the last 35 years, with an increase of 2-3°C in the winter months. This warming affects a broad range of natural and human systems.

In Mistissini, our community members have observed more extreme weather events, unpredictable weather patterns, as well as seasonal shifts and changes in flora and fauna. These changes are of high concern to us as they have an impact on our land access, food security, health, safety and infrastructure.

Over time, we, the Cree of Eeyou Istchee, have adapted our practices in the face of multiple environmental and social changes whilst preserving our traditional use and occupancy of our lands for our survival and well-being. The Cree Nation has continued to undergo profound social and economic changes especially since the 1970s; Today, there is however an extra urgency for us to take action as climate change is happening at a much higher speed and scale than in the past. The severity of observed and projected changes (e.g. temperature, precipitation, snow, ice) and their environmental and socio-economic repercussions require collective actions and mobilized efforts to adapt current practices. This will enable us to protect our natural and cultural heritage, identity, livelihoods, health and infrastructure for future generations. How well we adapt to climate change will also be determined by how well prepared we are.

It is time for us to come together and plan how we would like to respond to all the changes. This report describes our provisional plans to cope with and adjust to the current and expected climate and the impacts on our community. It outlines how we aim to protect our natural and cultural heritage, identity, livelihoods, health and infrastructure for our future generations. Click [here](#) to watch the video version of our adaptation plan.

“We have to learn from the traditional ways of our people and one of them really is to love the land and to care for it. We have to learn from the past, because we have children and grand children that need to enjoy what we enjoy today.”

Kenny Blacksmith, community member

Photo by: Northern Visions Photography & Video



How was this plan developed?

This plan came out of a community-based participatory project that took place in February and March 2018. The goal of this project was to bring together the community members of Mistissini to identify appropriate solutions to cope with climate change impacts and to increase our resilience.

As a starting point, we used the findings and recommendations from the 'Climate Change in Eeyou Istchee' project by the Cree Trappers Association (2009-2011). This initiative identified the observed impacts of climate change and adaptation measures for Cree communities (Mistissini, Waskaganish and Whapmagoostui). The main recommendations were; to create local climate change committees, to implement community-based monitoring, to establish safety programs and to involve Cree youth.

To move forward, our project adapted a participatory approach, that included the training of a local researcher and video team to conduct interviews with community members. In addition, two stakeholder meetings and a community screening event were held.

The findings and recommendations that resulted from this process are presented in this climate change adaptation plan as well as a 25 minute video. Our hope is that these outputs may guide our community members and other Cree communities in the planning and implementation of actions that will help to lower the risks associated with present and future climate change.

Photo by: Marleen Bovenmars, InsightShare



Mistissini

With a population of approximately 4000 people, we are a vibrant Cree community. We are situated in the south-eastern portion of Eeyou Istchee and on the shore of Mistassini Lake, the largest freshwater lake in Quebec and the heart of our land. This lake is an important travel route and we are very fortunate it gives us access to many of our traditional lands, and past and current gathering places, enabling the practice of traditional activities and assuring food security. Our traditional family territories cover about a quarter of the total Cree territory with more than 125,000 km² that is divided into 81 traplines. Whereas the community itself and the more southern traplines lie in the continuous boreal forest (spruce-moss domain), the northern traplines are situated in the taiga dominated by the spruce-lichen domain. Our traditional lands remain relatively intact compared to other southern areas. We value the practice of our traditional activities and Cree way of life. The land is central to our identity.

Of course, industrial activities also take place on our land, such as mining, forestry and hydro-electric development. These activities raise various issues, but also bring opportunities for our people. It is important that we maintain and even increase our control over the development of our land and its impacts. Development must be done responsibly and in a way that will protect the environment, maintain our Cree way of life, ensure our access to the land, our continued practice of traditional activities and the transmission of Cree culture and language.

We are growing as a nation, but because of climate change and other developments our land access is decreasing. Sustainable management of our resources is therefore essential. We will continue to maintain our involvement in the management and the decision-making.

Photo by: Northern Visions Photography & Video



Climate Change and Adaptation

Climate is the observation of long-term patterns of weather in an area - such as how the winters have changed between when your parents were young and now in Eeyou Istchee, whereas weather refers to very short-term conditions and can change in only a few hours, e.g. this morning it was clear, and this afternoon it started snowing.

The Earth's climate has evolved over millions of years. However, since the Industrial Revolution, human activities have heavily modified and warmed up the Earth's climate by emitting large quantities of greenhouse gases into the atmosphere. Fossil fuel burning, agriculture, deforestation and industrial processes have contributed the most to the warming.

Global air temperature has warmed by 0.85°C. Northern regions are experiencing even faster changes, especially during winter. Indeed, in the last 35 years, air temperature in Eeyou Istchee during winter has increased by 2-3°C while the annual mean temperature has increased by 1.5°C.

Over the past decades, communities around the world have started to notice the impacts of climate change on the environment as well as on their health, safety, livelihoods and infrastructure. Changes in extreme weather and climate events, such as heat waves, drought, flooding, heavy rains and severe storms are the primary way that most people experience climate change.

Due to the Crees' close ties with the land, climate change represents an additional stressor for Cree culture, health, livelihoods and economic prosperity in addition to other stressors such as industrial development and socio-economic constraints (cumulative impacts).

Adaptation is the capacity to cope with and adjust to actual and expected climate conditions and their effects on human and natural environments. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

The Cree of Eeyou Istchee have adjusted to experienced changes of the environment, demonstrating a strong capacity to adapt practices in order to pursue traditional use and occupancy of the land necessary for survival and well-being. This resilient behavior has been a strength for the Cree as it is deeply-rooted in traditional knowledge passed on from one generation to the next.







In this report, community members of Mistissini share the impacts they have noticed over the past decades and what they feel should be done to adapt.

Photo by: Cree Nation Government



What can we expect in terms of future climate?

In the last decades, our community members have observed later freeze-up and earlier break-up of lake and river ice; shorter winters and longer summers; unpredictable weather patterns; stronger and reversed winds and more extreme weather events such as flooding and lightning storms and also stronger and changing currents in Mistassini Lake.

Area	Past Trends ¹	Projected trend (2050)	
Air temperature 	↑	↑	+3.6°C warming of mean temperature, 5.5°C in the winter. High regional and seasonal variability.
Rainfall 	↑	↑	+13-20% and more extreme precipitation. High uncertainty about the amplitude of the increase and regional variability.
Snow 	↓	↓	Large year-to-year variability and likelihood of differing snow trends across the region (potential increase in Mistissini).
Extreme Weather 	↑	↑	Weather has become more unpredictable. The intensity and frequency of extreme weather events (e.g. flooding or storms) will increase.
River discharge 	↑	↑	+2-15%, but significant variability due to hydro-electric flow modifications. Earlier onset of maximum river discharge.
Lake/River ice 	↓	↓	Ice forms later in autumn and melts earlier in spring.

Source: Hennigs & Bleau, 2017

¹ Past trends have been observed by both Cree land users and scientific studies.

“Something is happening on the land. The snow conditions, the ice conditions they are all changing and the weather is very unpredictable.”

Thomas Coon, Former Director of the Cree Trappers Association

How is this plan structured?

By topic

In order to allow the reader to focus on his areas of interest the information is separated by the following topics impacted by climate change;

- Hunting, fishing and trapping;
- Health and safety;
- Food security;
- Culture and youth, and;
- Infrastructure.

Most of the topics are interconnected; therefore, similar information is sometimes found under two topic-tables whereas other times it might seem to be missing from a table but is in fact covered in another topic-table. Look for the asterix (*) indicating where to find related information.

Tables

The information is summarized in a table format where the **observations and impacts** of climate change are presented in a column and the **potential responses** in another column.

Priorities and response measures

As the list of potential responses in the table is brief, following the tables, for each topic, the reader will find some priorities (expressed throughout our discussions during the workshops) and their associated response measures explained in more detail. The actors/community local organizations who could be implicated or expressed an interest in the elaboration and implementation of such measures are also listed. It is important to emphasize that the priorities/response measures are not presented in order of importance. At this stage, the exercise of prioritization is not complete as it has to be discussed with the local leadership.

Please also note that for the list of actors, all departments are from the Cree Nation of Mistissini, unless otherwise specified.

Next steps

A separate section (on pages [20](#), [21](#) and [22](#)) briefly explains the next steps to undertake for this adaption plan to climate change to be effective and implemented.

What about hunting, fishing & trapping?

Climatic changes

warmer longer summers, shorter warmer winters, dryer earth, snow cover variability, unpredictable ice

Observations/Impacts

Decreasing populations

- ducks and partridge
- rabbits and muskrats
- minnows and trouts

Changing behavior and spatial distribution

- geese using different routes flying at night and in smaller groups
- moose feeding in different places

New encounters

- coyotes, mountain lions
- lynx and fox
- white tail deer
- other species of ducks

Increasing populations

- bears, wolves
- suckers

Changing health

- brain worms in caribou
- moose tick affecting the quality of hides
- ticks on ptarmigan
- beavers are skinnier
- more furunculosis in fish

Potential Responses

Decreasing populations

- monitor priority species
- prevent invasive species
- monitor the pests/diseases & prevention program
- encourage sustainable harvesting practices
- study the behavioural change of priority species (to be identified)
- collaborate with other communities in monitoring efforts and data collection

Information/Education

- communication on safe travel route conditions in relation to hunting and harvesting practices and adapt hunting/harvesting calendar if needs be
- limit harvest of decreasing populations
- increase harvest of increasing populations
- adapt hunting strategies
- consider the introduction of new species to diet

“There is a big difference in terms of harvesting. The behaviour of the animals is changing.”

Lesley Mianscum, hunter/trapper

* For the impacts on [Cree culture see page 16](#)

Priority: Sustainable harvesting in the face of climate change

Response measure: develop a sustainable harvesting program to ensure populations thrive despite external pressures (changing climate, industrial activities, hunting, etc.).

The main objectives of the sustainable harvesting program are:

- to monitor, evaluate and communicate changes in distribution, quantity and health of identified priority species;
- to investigate behavioural changes of priority species;
- to monitor new diseases and pests in order to establish protective measures and to prevent their spread.

Moreover, the program should be elaborated in a way:

- that does not restrict access to land-users but that encourages sustainable harvest and resource management;
- that builds on the data that the Cree Trapper Association and other local organizations already have for fur-bearing animals;
- that uses observations from land-users as data and is informed by scientific knowledge;
- that aims to actively involve young people and elders;
- that considers the merits of the traditional system of one elder managing each trapline;
- that considers the merits of the rotational system that was in use in the 1940's-60's;
- that promotes the "Eeyou Hunting Law". <http://creetrappers.ca/eeyou-hunting-law>

Actors interested in being involved:

Cree Trappers Association, Local Land Management & Environment Division and Elders Council

"My grand father would tell me to respect the land and not hunt because of the changed weather: when you do respect, next winter you will see game nearby and you will have good hunting season. but if you don't there will be nothing there."

Lesley Mianscum, hunter/trapper

Photo by: Corina Munteanu



What about our health & safety?

Climatic changes

warmer summers, shorter warmer winters, dryer earth, shorter freeze period, thinner ice cover, softer snow and shorter period of snow cover

Observations/Impacts

Unpredictable weather, unstable ice

- accidents on the ice
- travel routes cut-off
- ice-blinds can be dangerous
- increase in natural forest fire frequency and intensity
- increase in risks of human-induced forest fires linked to drought episodes
- increase in flood frequency and intensity
- access roads cut off
- people getting injured/dying

Physical/Emotional health

- depression, emotional distress due to all negative impacts of climate change (e.g. unsafe conditions, more difficult access to the land, etc.)
- less emotional distress due to positive impacts (longer summers, new opportunities etc.)
- potential zoonotic diseases (diseases transmitted from animals to humans)

* For the impacts on [food security see page 13](#)

“We have to monitor what is going on so we can have our own observations and involve the people on the land, the elders and the hunters.”

Thomas Coon, Former Director CTA

Potential Responses

Systems/Plans

- assess existing local data and develop more extensive and coordinated ice condition monitoring program
- update the community emergency response plan and clearly assign roles and responsibilities
- build team cohesion within emergency management committee

Infrastructure/Resources

- prepare alternative routes on the land
- invest in ice monitoring technology
- invest in a weather station in the community
- invest in opening portage routes
- alternative means of transport
- prepare a second escape route
- invest in more forest fire fighting equipment
- use of cellphone towers around the lake

Information/Education

- prevention campaign(s) on human-induced forest fire risks and on travel security
- communication on safe travel route conditions in relation to hunting and harvesting practices and adapt hunting/harvesting calendar if needs be
- promote alternative travel route
- promote safety practices such as jackets (when skidooing), personal locator beacons, satellite messengers and travelling in groups

Priority: Safe travel

Response measure: develop a collaborative ice monitoring program in order to improve safety for the travelers in the face of changing climate and more unstable ice conditions.

The objective would be to have an ice monitoring program which:

- functions throughout the winter;
- uses local weather data (through local weather station, see page 18);
- uses observations from land-users as data;
- is informed by the latest scientific knowledge;
- provides information on a daily basis;
- provides information to people's phones through Facebook/emails;
- aims to actively involve young people.

Actors interested in being involved and taking the lead*:

Local Fire & Public Safety Division*, Niskamoon, Cree Health Board, Cree Trappers Association and Elders Council

Response measure: put in place a campaign on safe travel to tackle the more frequent unsafe conditions on the land due to unpredictable weather conditions.

The campaign would:

- aim at preventing people from getting hurt;
- reach all land-users, not just hunters/trappers;
- spread awareness about the ice monitoring information service;
- promote alternative travel routes (when necessary);
- discourage people from travelling when the conditions are unsafe;
- recommend affordable personal locator beacons and satellite messengers;
- encourage people to wear safety jackets and to travel in groups;
- use clear, informative, visual messages as much as possible;
- communicate through platforms such as Facebook to increase the reach.

Actors interested in being involved and taking the lead*:

Local Fire & Public Safety Division*, Cree Health Board, Cree School Board and Cree Trappers Association

“The ice thickness is more dangerous now these days then before. We used to travel on the land, way into the spring, and on ice, and it was okay, but now it is different.... even the snow depth is not like it used to be”

Kenny Blacksmith, community member

Photo by: Northern Visions Photography & Video

Priority: Prepare for forest fires

Response measure: update the community emergency response plan to account for climate change predictions.

The emergency response plan would:

- bring together all relevant stakeholders;
- aim at team cohesion and at a coordinated response;
- clearly outline the roles and responsibilities of all;
- include a second escape route out of the community.

Actors interested in being involved and taking the lead*:

Local Fire & Public Safety Division*, Department of Eeyou Eenou Police Force and Cree Health Board

“We need to review the emergency response plan because it not fully implemented yet. We need to sit down with all the stakeholders to outline the roles and responsibilities, to have a better and more coordinated emergency response.”

Tracey Iserhoff, Fire Chief Mistissini

Photo by: Thierry Arrufat



What about our food security?

Climatic changes

warmer longer summers, shorter warmer winters, unpredictable ice, dryer earth, snow cover variability

Observations/Impacts

Flora

- less and smaller berries
- better opportunities to grow food (vegetables, herbs etc.)
- diseases/pests affecting plants/trees

Fauna

- some traditional species declining
- new species increasing
- diseases affecting quality of meat
- barriers to hunting (eg. harder to access the land and shorter winter trapping and hunting period).
- less consumption of traditional food
- more consumption of store bought food

“The community agriculture plan is an opportunity for us, as a community, to determine what we would want to do [and] what we need to see in our community, from a community garden to a greenhouse.”

Pamela McLeod, Local Environment Administrator

Potential Responses

Systems/Plans

- diversification of food supply system
- harvest substitute species
- introduce an urban agriculture program
- recommend to supermarkets what to provide:
 - food coming from local or closer sources
 - affordable healthy food

Infrastructure/Resources

- develop greenhouses
- foster community, school and home gardens

Information/Education

- raise awareness on healthy diets
- offer cooking classes
- promote knowledge transfer
- record healing practices and traditional recipes
- communication on safe travel routes conditions in relation to hunting and harvesting practices and adapt hunting/harvesting calendar if needs
- inform and promote environmental benefits of producing local food sources or resources

Priority: Food security

Response measure: develop a community agriculture plan to increase food security.

The general objectives of the program would be:

- to contribute to making Mistissini more self-sufficient in terms of food security;
- to provide locally appropriate growing spaces;
- to promote the establishment of community as well as private gardens;
- to encourage the use of greenhouses to provide year-round employment;
- to provide training and guidance for community members to be involved;
- to make fresh vegetables, fruits and herbs available (for free/affordable prices);
- to inspire a healthier lifestyle for community members;
- to especially involve people from vulnerable groups (i.e. low income households, etc.);
- to explore the production of locally made herbal medicines.

Actors interested in being involved and taking the lead*:

Local Land Management & Environment Division* & Cree Health Board

Note: during the summer of 2018, a community agriculture pilot project will be put in place.

“I see it as a good opportunity to start our own gardens and backyards, because up here it is really expensive to buy good, healthy food. Greenhouses can operate all year round and so could create a lot of jobs. If we grow products from our own soils, its much richer and better for us.”

Lucy Trapper, Community Organiser, Cree Health Board

Photo by: Pamela MacLeod



Priority : Healthier community members

Response measure: promote a healthy diet program to cope with potential reduction in access to healthy traditional food.

The program should be elaborated in a way:

- that clarifies the healthy aspects of our traditional diet;
- that encourages people to complement their diet with more fresh fruits and vegetables;
- that inspires people to cook healthy meals at their homes;
- that successfully documents and disseminates healthy traditional recipes;
- that actively involves young people.

Actors interested in being involved and taking the lead*:

Cree Health Board* & Local Land Management & Environment Division

Priority : Access to traditional food

See priority *Safe travel* under health and safety section on [page 11](#).



Photo by: Bethanie Blacksmith

What about our culture and our youth?

Climatic changes

warmer longer summers, shorter warmer winters, dryer earth, snow cover variability, unpredictable ice

Observations/Impacts

Flora

- less berry picking opportunities
- loss of healing practices
 - less quantity and lower quality medicinal plants/trees
 - forest fires decreasing abundance of trees/plants

Fauna

- moose tick decreasing quality of hides (for art and craft use)
- diseases affecting quality of meat
- traditional species declining
- new species increasing

Culture

- harder to access camps (due to shorter season and trickier climate conditions)
- loss of Cree way of life, language/culture (due to less time spent in the bush)
- diminution of expertise of the territory
- decrease of confidence in traditional knowledge
- sadness caused by the impact on hunting practices and the difficulty of going hunting
- limited opportunities to pass on knowledge to youth (due to shorter hunting seasons)

Potential Responses

Systems/Plans

- monitor priority flora species
- monitor priority fauna species
- develop bio/cultural diversity programs

Information/Education

- elders teaching youth
- promote transfer of knowledge
- record hunting/trapping knowledge
- record healing practices
- record traditional recipes
- educate on medicinal plant use

“We are the future so you have to engage us now so that we understand it [climate change] deeply in the future and we start to pay attention more to what is happening now.”

Gwyneth Petawabano, High School student

Photo by: Mistissini Participatory Video Team



Priority: Cultural preservation and continuity

Response measure: foster cultural celebration, knowledge exchange and learning program:

The program should be elaborated in a way:

- that teaches everyone about climate change (causes, impacts and responses);
- that clearly communicates the scale and speed of climate change;
- that inspires and prepares attendees to take action on climate change afterwards;
- that brings together youth and adults, in particular elders, and promotes the exchange of knowledge and views between them;
- that is camp-based and consists of outdoor and hands-on activities;
- that is designed in collaboration with youth and that is youth-led;
- that teaches through showing things and visual methods;
- that includes the teaching and documentation of traditional skills and knowledge;
- that takes youth away from their daily lives, away from internet connection and distractions.

Actors interested in being involved:

Cree School Board, Cree Health Board, Local Land Management & Environment Division & Youth Council

“The medicinal plants are very valuable as they can heal people who use them. However the other elders have already passed away so youth have to try hard to understand what they have been taught about our traditional knowledge.”

Mary-Ann Longchap, Community Elder and traditional medicine teacher

“I think around here a lot of youth like hunting, fishing and trapping and they like to be out on the land because it is healing, a stress reliever. We would like camp based programs that take youth from the community, elders, adults, and that put them in a camp or on a trapline. Whilst teaching them about climate change, hands-on, but they are also practicing their Cree way of life and traditions and preserving our values, and language as a people.”

Kimberly Wapachee-McDougall, youth local High School

Photo by: Bethanie Blacksmith

What about our infrastructure?

Climatic changes

heavy rain, more icy rain episodes, more freeze-thaw cycles, stronger winds, increased flooding

Observations/Impacts

Damage to public infrastructure

- contamination of property from flood water
- decreased efficiency and durability of bridges and drainage system
- overflow of sewers
- limited road access from floods
- damage to public buildings

Damage to private property

- flooded basements
- flooded houses or camps
- damaged homes
- damaged furniture/possessions

“In recent years we’ve had heavy rainfalls that would last for an hour whereas in the past it would only last for just a few minutes so we see a lot of heavy erosion which enters into our sewage systems.”

Jonathan MacLeod, Interim Director of Public Works

Potential Responses

Systems/Plans

Assess infrastructures for resilience to current risks and future climate changes. Climate-considerate management, eg. consider projected climate change and climate risks in:

- infrastructure planning, investment, construction
- infrastructure maintenance and replacement
- reviewing building design and codes
- reviewing Cree Nation insurance system by integrating climate risk
- erosion control (sand and waste flowing down with rain/snow blocks up drainage)

Infrastructure/Resources

- evaluate sewer and drainage system
- improve drainage capacity to long-term climate forecast
- increase snow removal
- install a weather station in the community to improve forecasting and monitoring

Information/Education

- professional trainings to learn about climate considerate management
- public awareness campaign to encourage people to consider climate change in home building and improvements

Priority: Flood damage prevention

Response measure: develop a flood-damage prevention program in anticipation of more frequent flood episodes.

A program aiming to:

- examine data (rainfall events)
- investigate infrastructure vulnerabilities, risks and potential responses;
- install a weather station (so that a local database can be started);
- explore methods to increase drainage capacity in the community;
- involve environmental engineers when designing infrastructure;
- adapt snow removal efforts based on anticipated flood-risks;
- raise public awareness about solid waste blocking drainage.
- better coordinate stakeholders.

Actors interested in being involved and taking the lead*:

Local Public Works Department*, Cree Nation Government
Capital Works and Services Department and Cree Health Board

“We could reduce the risks by coordinating our crew more and investigating before the actual thaw happens.”

Jonathan MacLeod, Interim Director of Public Works

“One thing that urgently needs to be done in order to plan is to install a weather station.”

Emmet MacLeod, Director of Housing

Photo by: Cree Nation of Mistissini



What are the next steps?

A few key messages on...

Local Communications

- The Climate Change Adaptation Plan Video is now available on the Cree Nation of Mistissini Website <http://www.mistissini.ca/en/home.html> and Facebook Page and on YouTube under [*Call to Action - Climate Change Impacts and Responses \(Cree Nation of Mistissini\)*](#). We invite everyone to watch and share our video!
- The current Community Proposal Climate Change Adaptation Action Plan is available on the Cree Nation of Mistissini Website. However, keep in mind that we want this Action Plan to be a *living document*... it should evolve and change over time! A revision of this Action Plan should be done periodically.
- Each participant who contributed to this project has received a copy of this Action Plan. They have been invited to continue the discussions on its implementation.
- The Community Proposal Climate Change Adaptation Action Plan will soon be presented by Mistissini's Environment Team to the Chief and Council, as well as to the Director General. A resolution to adopt this Action Plan will be proposed.

Photo by: Marleen Bovenmars, InsightShare



Coordinating Local and Regional Efforts

- Encouraging, mobilizing and supporting community-driven initiatives and outreach to better **coordinate and organize** implementation of this plan will be essential. Working in silos will be avoided, however responsibilities should be assigned to coordinate efforts in Mistissini. Key departments and organizations have been suggested as Actors but need to be validated by the community leadership and other-related entities.
- Not all priorities can be undertaken at the same time: **we need to prioritize our responses!** We have to identify what can be done on the short, medium and long term.
- A Climate Change Committee will be needed to further inform the discussion and implement the Action Plan. **This Action Plan is only the first step!**
- Implementation committee/s will need to determine what is feasible, what programs can be employed, what budget is needed, what schedule is realistic, etc.
- A Regional Forum to discuss the Climate Change Adaptation Strategies for Eeyou Istchee will be organized by the Cree Nation Government fall 2018. Each community will be asked to send a few representatives.

Engagement

- Everyone agrees: **Youth must be involved in all responses and as much as possible.** Their message was clear throughout the climate change adaptation video; youth are ready to be fully engaged in this and want to work together in finding solutions to coping with climate change impacts. Exchanges of knowledge between youth and elders should be promoted.
- Climate change is a crosscutting issue. Each sector needs to prepare and collaborate, and many community members are ready to engage and follow-up in the implementation initiatives of this Action Plan.
- We need to engage with the business sector (e.g tourism) and community members to cope with the impacts of climate change.

Monitoring

- *Key indicators* that specify the progress of the plan's implementation and relate to a key priority of the Action Plan will need to be identified. They reflect the stages in the completion of various implementation activities.

A few examples:

- Pest/diseases: moose tick, parasite in deer
 - Fish population/spawning
 - Ice freeze-up and thaw date as well as thickness
 - Frozen ground (November-January)
 - Snow cover variability (duration, thickness, quality)
 - Floods intensity, duration, frequency; especially in spring
 - Periods of dryness: frequency and intensity of fires.
- *Milestones* refer to timing. Key indicators that are planned to occur at certain times. Monitoring milestones is an effective way to keep things on track.
 - *Reporting*: Some actions take considerable time. Indicators and milestones need to be reported. An annual report on the progress of implementing the Action Plan will help the community to know what's going on and let people evaluate the success of the plan.
 - *Reviewing the plan*: Plans are dynamic and change should be expected! Gaps in original knowledge will be filled and new information will become available. Implementation may move faster than expected. The Action Plan may be reviewed every few years to ensure it is up-to-date and that the implementation schedule is still relevant.

Photo by: Marleen Bovenmars, InsightShare



Acknowledgements

A warm thank you to all who contributed to this project

the project facilitators and the research team

Bethanie Blacksmith, Local researcher

Marleen Bovenmars, InsightShare

Kelly LeBlanc and Pernilla Talec, Cree Nation Government, Environment and Remedial Works Department

Rebecca Hennigs and Stephanie Bleau, Ouranos

the local team

Andrew Loon, Charlie Voyageur,

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Thomas Stevens, Cree Trappers Association

Dr. Marie-Jo Ouimet, Cree Board of Health and Social Services of James Bay

This project was undertaken with the financial support of:

Ce projet a été réalisé avec l'appui financier de :



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

