



THE CLIMATE CHANGE PROJECT

Impacts and Adaptation Measures for the Hunters, Trappers and Communities of Eeyou Istchee
Mistissini Community Report – April 2010

Have you noticed changes in the weather, changes on the land, the ice and the snow?

Is climate change affecting you and your activities on the land?

Are you afraid of driving your skidoo on the ice in the bay or on the rivers?

WHAT IS THE PURPOSE OF THE CLIMATE CHANGE PROJECT?

- To improve our understanding of the consequences of climate change on the land and on people in Eeyou Istchee - hunters and trappers and other community members;
- To find out where we should be especially careful and find solutions to problems that are created by climate change.
- To encourage Cree participation in finding solutions.

Concerns over climate change and its impacts for the Cree of Eeyou Istchee have been expressed in various community meetings and discussions over the last few years.

Scientists have been studying the effects of climate change over the world and are now in a better position to forecast what is coming our way in the next few years if the warming trend continues.

Also, the knowledge of our elders, hunters and trappers who have spent their lives on the land is precious for our understanding of climate change. It can help us define ways to adjust to change and cope with the impacts.



The CLIMATE CHANGE PROJECT is a joint initiative of the Cree Trappers Association (CTA), the James Bay Advisory Committee on the Environment (JBACE) and the Cree Regional Authority (CRA) and it is funded by Indian and Northern Affairs Canada (INAC).

The project is taking place in three selected communities: Waskaganish, Whapmagoostui and Mistissini.

So far, workshops have been taking place in each of the communities, as well as individual interviews. The observations presented in this report were discussed during the Mistissini workshop, held in November 2009. We would appreciate it if you could give us feedback during the next workshop planned for June 2010.

CLIMATE CHANGE IN MISTISSINI – RESULTS OF THE WORKSHOP

The workshop was held in November 2009 at the Mistissini Lodge. A total of 29 participants from the community were present and shared their knowledge and observations on changes in the climate over the years.

Here is a summary of observations made by participants, and a few examples of impacts that these changes in weather patterns have on land use.

TOPIC	CHANGE/OBSERVATION	IMPACTS
Weather patterns	<ul style="list-style-type: none"> • Winter is two months shorter. • The wind is changing. • There is no severe cold before snow falls so the ground is not frozen before freeze up. • There are more forest fires now. 	<ul style="list-style-type: none"> • Harvesting levels are impacted. Fur needs cold temperature to be prime. Less time to set the traps. It all affects the bank account. • You cannot keep geese and meat in the ground anymore because it is not frozen. • It was easier to sleep outside in winter because it was not as humid.
Water temperature/ level	<ul style="list-style-type: none"> • Currents are changing in Mistassini Lake. • Warmer water means earlier ice break-up. • In some lakes the water levels are lower and the ice is thick. 	<ul style="list-style-type: none"> • Warmer water increases the size of waves in summer and fall. • Changes in ice and temperature make it harder to trap beaver and set fish nets in winter.
Snow	<ul style="list-style-type: none"> • The snow is softer and it melts fast because the ground is not frozen and there is no ice between the layers. • The snow melts as it falls and drains into the lake. • There used to be 4 layers of snow – now there is less. Snow was much deeper. • Sometimes when the snow collapsed it used to make a sound; not anymore. • There is more slush in the spring. 	<ul style="list-style-type: none"> • You can't walk without snowshoes on the hard snow in early spring. • Transportation and hunting patterns are affected. • It is now difficult to use any mode of transportation, even snow shoes. It is also harder for the animals to travel. • When we go out in the spring to cut wood, the skidoo sinks in the snow. • You can get stuck travelling in slush.
Rain	<ul style="list-style-type: none"> • There is more rain and it comes down more heavily. • It rains for shorter periods. • Thunderstorms are not as strong as before. • There are more lightening storms. • It rains until Christmas time. • There is more drizzle. 	<ul style="list-style-type: none"> • You cannot paddle in the rain anymore, it comes down too hard. • We used to sleep and hunt without tents anywhere. We cannot do that anymore. You can't get the fire going so you get cold and sick. • When it drizzles it goes through your body.
Wind	<ul style="list-style-type: none"> • It is windier and the wind is stronger. • The wind from one direction blows for longer periods. • The winds are reversed: we get south winds in November and north winds in spring. • In the fall, the wind coming from the north is colder and more humid. Changes in wind patterns seem to affect currents in Mistassini Lake; it looks like a tide. 	<ul style="list-style-type: none"> • Winds blow the snow away so there is no snow accumulation. • The wind pushes water currents that in turn push the ice towards the ground, creating ice pile-ups. • The wind creates larger waves on Mistassini Lake in the fall.
Freshwater	<ul style="list-style-type: none"> • Currents are much stronger than they used to be in Mistissini Lake. 	

TOPIC	CHANGE/OBSERVATION	IMPACTS
Ice	<ul style="list-style-type: none"> • Freeze up of the lake is delayed by one month. • In the past you could walk on the ice one day after it froze, not anymore. • At the beginning of freeze up, there is no more clinging of the ice on the rocks along the shore. Now it just freezes over. • On the lake, there used to be 3-4 feet of ice, now it is 2 feet or so. • The ice is softer and breaks easily (white ice). Even if it is thick. • Black ice now forms in strips instead of being like a mirror; it's not as solid. • The ice melts faster and breaks up easily in the spring. It melts from top and bottom because the ground is not frozen. • In spring the ice no longer needs wind to break up; it melts from the water itself because of water movements. • Ice is piling up now during winter. 	<ul style="list-style-type: none"> • We have to wait longer to go out on the lake. • For a plane, you needed 8 inches of ice in the past; now you need 12 inches. • There are negative impact on harvesting activities and travelling. • Accidents happen where creeks come out in the lake. • People used to be a lot more familiar with their hunting territory and the land when they walked more. Today you see more of the territory with the skidoo but you have less time to observe the land. • Because the ice is unsafe, it is harder to travel to the trapline by land. We use helicopter now; it is more expensive. • When travelling on the land, using unsafe trails is dangerous for younger people and people with less experience.
Animals	<ul style="list-style-type: none"> • New kinds of ducks were seen, cougars, eagles, swans, vultures, there are less birds, less snakes, less frogs. • Animals are less scared. 	<ul style="list-style-type: none"> • Eagles scare away the geese.
Geese and waterfowl	<ul style="list-style-type: none"> • Generally, there are more geese on the territory and less ducks and partridge. 	<ul style="list-style-type: none"> • It's harder to know when the geese will be flying. Negative impact on goose hunting.
Fur-bearing animals	<ul style="list-style-type: none"> • There are less beavers in some areas and they are not as fat. • Marten is more abundant and is not as wild. It will look back at you. • There are less rabbits, muskrats, minks, lynx, but there are more wolves than before. 	<ul style="list-style-type: none"> • Change in the taste of rabbit- sauce not as thick when cooked. • Changes have impacts on food quality and taste.
Bear	<ul style="list-style-type: none"> • There are more bears and they are not as wild as before. 	<ul style="list-style-type: none"> • Bears wreck camps. • Bear meat tastes different.
Moose	<ul style="list-style-type: none"> • There are more moose. • Male hides are thin in the fall. • Females still breast-feed in September. • Increase of white lumps on moose liver, especially female. 	<ul style="list-style-type: none"> • Positive because less work to treat the hides. Used to chase moose for days for it to have a thinner hide.
Fish	<ul style="list-style-type: none"> • There is less fish and the flesh is less fatty than before. • There are less minnows, less trout, more suckers. 	<ul style="list-style-type: none"> • Less fish – important element of Cree diet.
Plants, berries and trees	<ul style="list-style-type: none"> • Are subject to weather changes. • Plants used to grow larger leaves. • There are less berries. 	<ul style="list-style-type: none"> • Less berries has an impact on animals who feed on them, like the bear. Medicinal plants seem to be damaged by overheating.



WHAT CAN BE DONE TO RESPOND TO IMPACTS OF CLIMATE CHANGE?

Many of the impacts of climate change are affecting land use, hunting practices, and most of all travelling on the territory. Each community will have to identify areas of risk and find ways to ensure conditions are safe for everyone.

The first task to consider is a way to keep track of changes that are occurring because of climate change. There needs to be a good monitoring system in place in each community so that the proper measures can be taken on time, at the right locations.



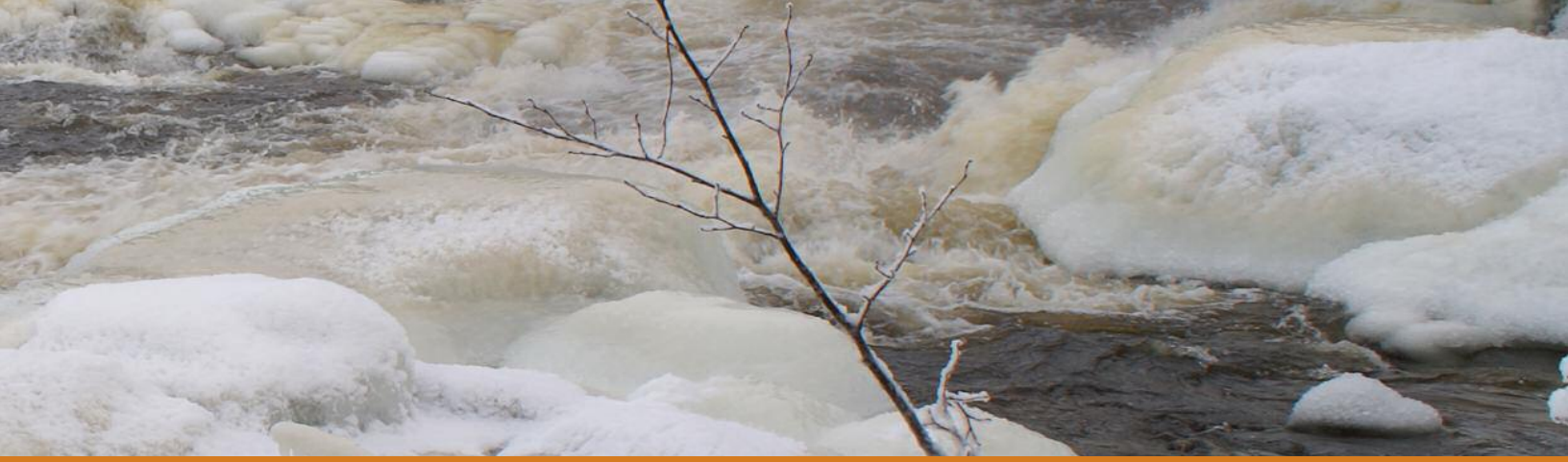
HOW CAN WE MONITOR CLIMATE CHANGE? Each community has its own challenges when it comes to climate change. The land is not the same from one community to another and the conditions are specific to each area. But there are nonetheless signs of climate change and these have to be watched closely.

Examples of climate change indicators in Mistissini:

- Early openings in the bay ice
- Changes in snow quantity and quality
- Geese moulting early
- Appearance of new animals
- Changes in animal behaviour



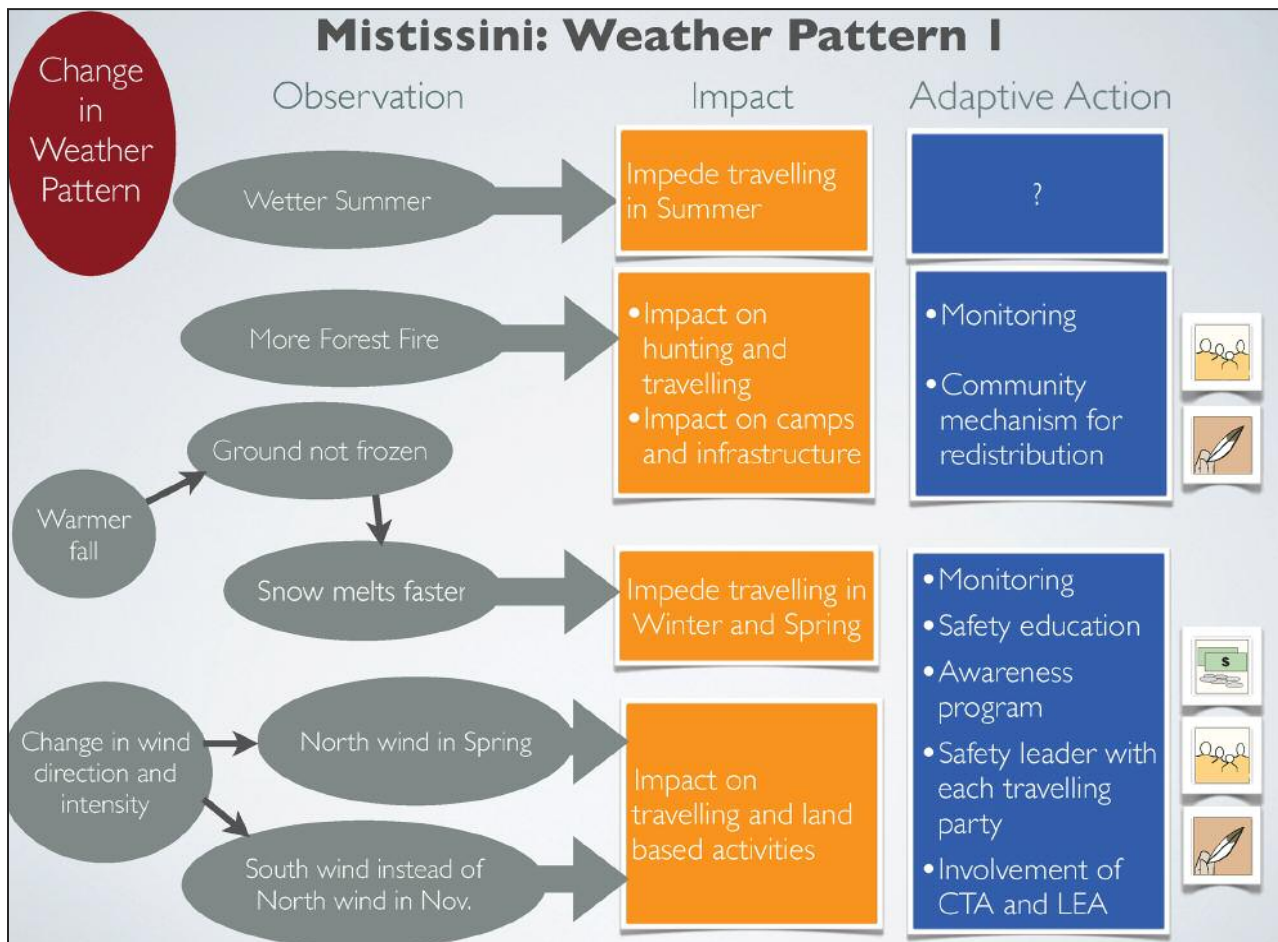
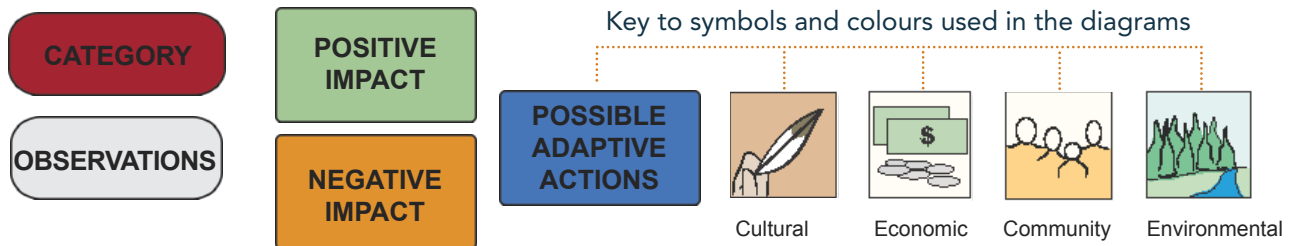
Potential adaptive actions were identified by the project team and are illustrated in this influence diagram.



INFLUENCE DIAGRAMS ON CLIMATE CHANGE

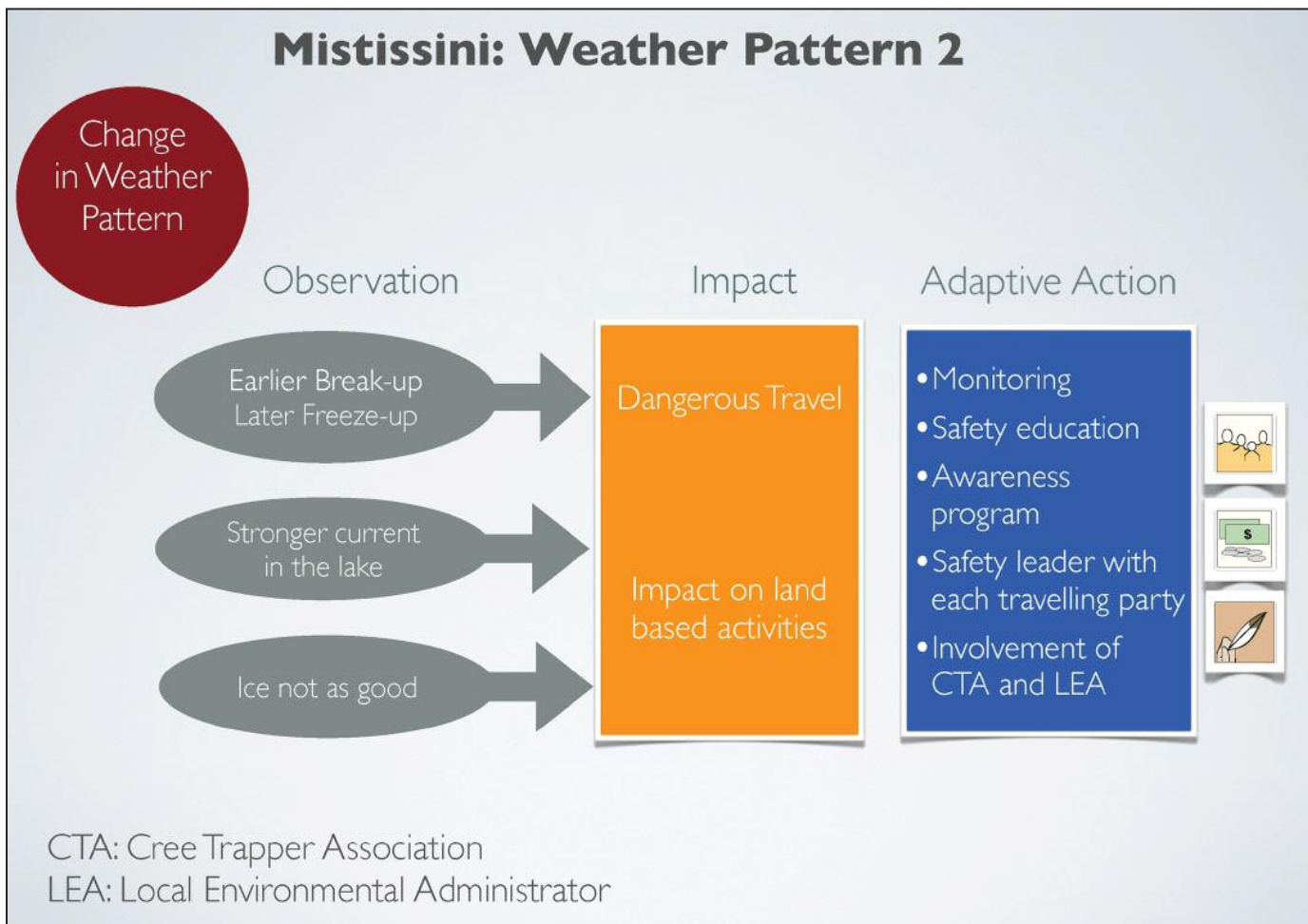
OBSERVATIONS, IMPACTS AND POSSIBLE ADAPTIVE ACTIONS FOR MISTISSINI

NOTE ON THE INFLUENCE DIAGRAMS. The influence diagrams propose a summary of the observations, impacts and possible adaptive actions of climate change that were discussed during the workshop held in Mistissini in the fall of 2009. A follow-up workshop will be held in the spring of 2010 to complete and validate these influence diagrams.





INFLUENCE DIAGRAMS ON CLIMATE CHANGE

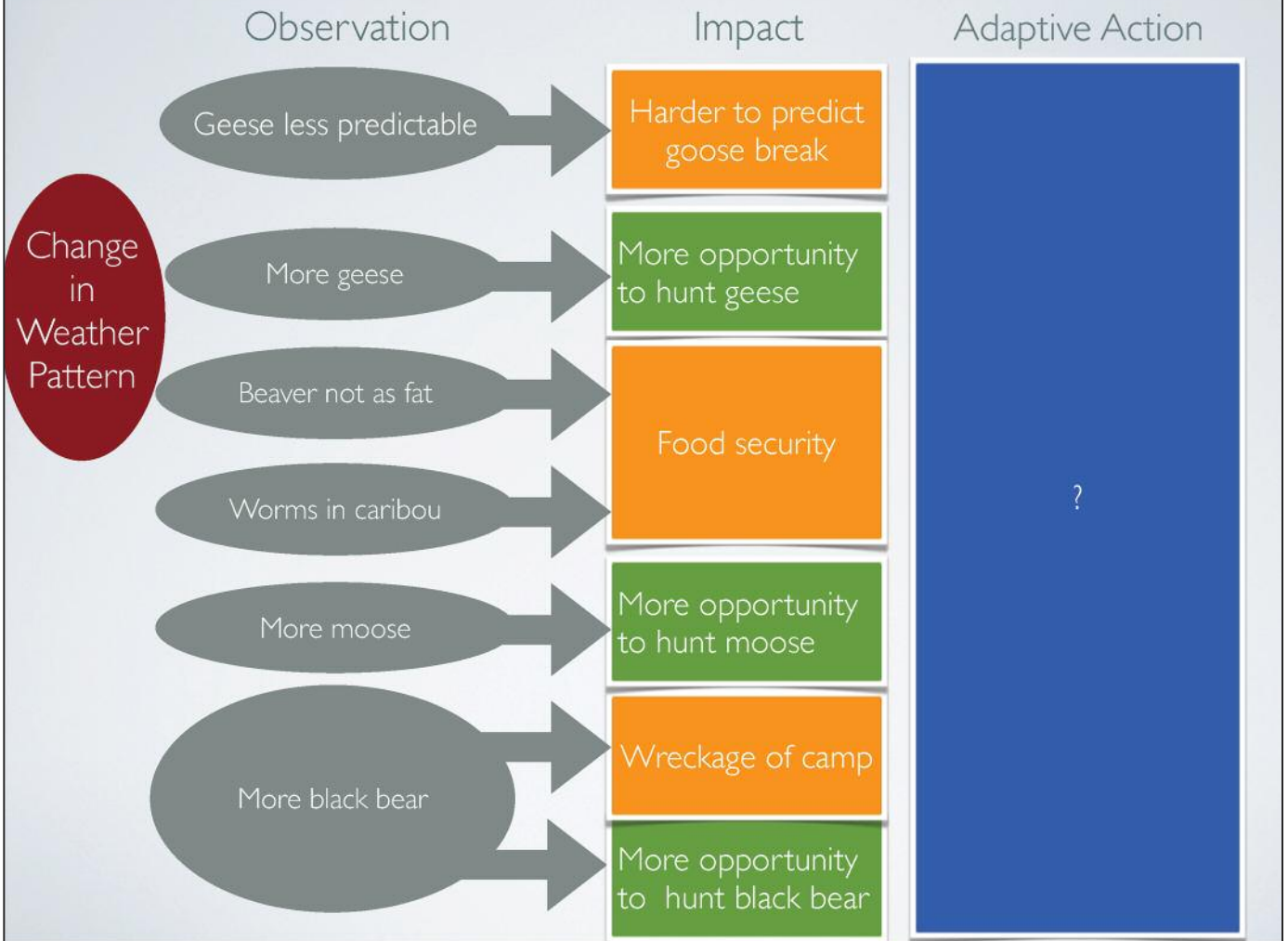


We felt a lot of change while we were on our trapline. There was a very long fall this year and it affected our harvesting activities. There was lot of rain and fog, but, we still went out hunting and trapping. It's the first time I've seen a lot of mosquitoes late in the fall and they are big too!

My dad tells me that back when he was young his dad mentioned to him that in the future - which is now - the weather will change in a way that everybody will have to change their everyday lives.

Observations from workshop participants

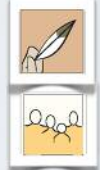
Mistissini Animal Behaviour I



Mistissini: Animal Behaviour 2



Mistissini: Vegetation



Next Steps...

The project team will be visiting Mistissini again in June 2010. We would like to validate the information gathered during the workshop, and receive your feedback and comments. We would especially like to discuss adaptive actions that could be undertaken in the community to monitor climate change.

In the meantime, if you have any questions/suggestions/comments, or if you simply wish to know more about this project please contact us.



Lately, weather conditions are changing; the weather used to be on time, now the weather is off its course; for example it's raining in late fall which when there should be plenty of snow already; or it is snowing when it should be raining. It is very unpredictable and also very dangerous; it affects our way life and what we would normally be doing in the bush: trapping, hunting for big game, and fishing.

Normally, when we kill a moose we cover the moose with snow to tenderize the meat but there was not enough snow to cover our harvest so we had to cover it with turf. We didn't have hard snow last year; in spring we normally walk on top the of the hard snow without snowshoes.

Lately I have experienced strong gusty winds; the wind blows away outhouses; we didn't have that problem before and I have been hunting and trapping on our trapline more than twenty years.

There are more animals out when it's warm, they don't go out when it's cold. It's better for hunting big game when there is warm weather.

Observations from workshop participants

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