

## Global warming is REAL and unequivocal.

It influences climate. It changes *Eeyou Istchee James Bay*.

Like a beating heart, the climate in Eeyou Istchee James Bay is regulated, in the spring and late autumn, by the behaviour of two impressive bodies of water: James Bay and Hudson Bay. The contrast in temperature between the land, these water bodies and the ice affects atmospheric stability, prompting a cocktail of unpredictable precipitation, winds and fog that the inhabitants of this vast territory must contend with.

In this Northern environment, it is difficult to scientifically describe the climate's historic evolution and to project potential climate change. However, the Cree have significant local and traditional knowledge of this history.



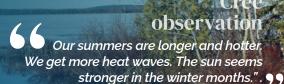
Observed and experienced by the Cree, and confirmed by scientists, global warming influences temperatures, precipitation, the ice regime and water levels, affecting ecosystems, which also increase pressure on Cree culture and lifestyle.

Such changes in weather patterns had not been seen for decades and even millennia.



The territory's North has warmed more than the South. Winter temperatures have warmed about 2-3°C in only about 30 years.

Scientists predict a greater increase in temperatures in this territory than globally. According to a climate warming scenario in Eeyou Istchee, by 2050, it is estimated that the mean temperature will warm 5.6°C in winter and 2.3°C in summer.







The territory's weather has become increasingly unpredictable:

- Shorter, milder winters
- Longer, hotter summers
- Later freeze-up
- Earlier breakup

Forest fires and extreme weather events, such as lightning storms and flooding, are more frequent and intense. These changes derail traditional Cree knowledge and impact the Cree subsistence harvesting cycle and food security.



In the territory, the sea surface temperature is warming at 6 times the global trend and at almost twice the rate of polar warming.

From 1979 to 2013, studies showed shortening of the sea ice season in Eastern James Bay by approximately 10 days per decade, and up to 30 days close to Chisasibi and Waskaganish. There is less ice and it is thinner on the Bay, on rivers and lakes. By 2050, scientists estimate a 50% loss of ice thickness in James Bay.

## Cree observation

The weather changes suddenly. For example, I can no longer navigate on Mistissini Lake the way my ancestors did and the way they taught me. 99



We have no more blue ice. Now, the ice is white and thinner. It melts earlier in the spring and freezes up later in the autumn.



For the past 50 years, it has been snowing far less but raining much more. Some communities report much drier conditions, but also heavier rains of short duration.

The Cree note that snow cover duration in Southern James Bay is decreasing and that snow melt is earlier. According to scientists, snow cover may have declined by 25-45 days. By 2050, the territory's users could see up to 20 cm less snow and earlier thawing.

It is essential to work together now to develop climate change adaptation strategies.

Climate parameters must be measured and monitored so that action can be taken to ensure access to the territory, food security and its inhabitants' well-being.

