

CLIMATE CHANGE

IN THE NORTHWEST TERRITORIES

Around the world, our climate is changing. Average global temperatures are rising - the 20th century was the warmest the world has seen in 1,000 years, and the 1980s and 1990s were the warmest decades on record.

Humans are changing the climate. Things we do every day like heating our homes, transporting goods, and using electricity, all release greenhouse gases like carbon dioxide into the air. These gases are causing the Earth to "heat up".

Climate change has already started to affect the Northwest Territories. In the last 40 years the Mackenzie River Basin has warmed by 1.5°C. Also during this time, the sea ice has been shrinking and the permafrost has been melting.

Scientists predict that by the end of the 21st century, temperatures in the Northwest Territories will be at least 5°C warmer than they are today. Changes to the environment

have already started taking place in the north. So this temperature increase will affect our daily lives and the northern environment in a major way.

Northern Landscapes

The melting permafrost is forcing up the cost of maintaining all weather roads. It also increases the risk of landslides and could cause structural damage to older buildings. Melting permafrost may also negatively affect water supplies and communities' waste disposal systems.

Warmer winters are causing problems for ice roads. They



are freezing later and melting earlier in the spring. This has made transporting goods to the communities and mines that depend on these roads more difficult. As the climate changes and temperatures rise, these problems are expected to get worse.

Life on the Land

Increased temperatures mean birds, mammals and insects are moving further north every year. Many Dene elders have reported seeing species of birds that have never come as far north before. Mammals, like moose, whitetail deer, coyotes, cougars, porcupines, beavers and otters also seem to be migrating north. The warming trend is allowing more species of insects



Climate Change. Are you doing *your bit*?

to survive further north, so that flies and mosquitoes are creating problems for both humans and animals.

The caribou are put at risk by the changing climate as well. Changing vegetation, snow conditions and an increase in insects are all affecting calving success.

The longer summers are also affecting polar bears. Warmer temperatures are causing more ice to melt, resulting in more open water and fewer seal pups surviving, so it is harder for the bears to catch the food they need to stay healthy all winter. This, scientists say, is causing bears to be skinnier than they were 30 years ago. This is also why polar bears are having fewer cubs now than in the past (one or two instead of two or three). If things get worse for the polar bear there is a chance they will disappear from the Hudson Bay area within 50 years.



Information in this fact sheet is derived from
**"Taking the Chill Off?:
Climate Change in the Yukon and
Northwest Territories"**
View online at
www.adaptation.nrcan.gc.ca/posters



Early melting of snow and spring rains can destroy seal pups' snow dens and expose them to predators such as polar bears. This, and earlier sea ice break-up has made it more difficult for aboriginal hunters to find and harvest seals.

Of Ice and Men

Climate change models are projecting major changes in northern sea ice. If they are right, most summer ice in the north will disappear by 2100. Early ice break-up or complete loss of ice would have a profound effect on northern lifestyle. Traditional knowledge is used to predict ice conditions and guide hunters in their travels and work. However, as temperatures increase and ice conditions change, this would make predictions more difficult and could make traveling more dangerous.

Communities along the Arctic Coast are experiencing problems because of lower winter ice levels. Open water in early winter is causing stormy waters to erode Tuktoyaktuk's coastline, causing buildings to be abandoned.

What can you do?

Did you know that on average, people's daily activities create 28% of Canada's greenhouse gas emissions? That equals almost 6 tonnes per person per year! Since we are part of the problem, we must be part of the solution. Just by reducing the amount of energy you use at home and on the road you can make a difference. Being energy efficient will save you money and reduce the amount of greenhouse gases that are released into the atmosphere. Even small actions will help. Try installing a low-flow showerhead, or stop idling your car and you will make a big impact.

Want to know more about climate change?

Visit the Government of Canada climate change Web site at:
www.climatechange.gc.ca
or call toll-free: **1 800 O-Canada**
(1 800 622-6232)
or TTY 1 800 465-7735 and ask for a climate change information kit.

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