



*The lessons of the past
are less useful as a
guide for the future.*

The lives of many Canadians are closely tied to the land. This is especially true for aboriginal communities, who get much of their food from hunting and fishing and the harvesting of edible plants and berries. These traditional activities are also an important part of aboriginal culture, which contains a large amount of knowledge about climate and how it affects these activities and the environment that supports them.

The North's climate is changing, however, and it is changing faster than in most other parts of Canada. These changes are affecting many aspects of the northern environment, such as ice and terrain conditions and the supply of game, wild plants, and fresh water. As a result, native peoples are finding it harder to rely on the traditional knowledge and practices they have used for so long to survive in a region that is usually frozen for more than half the year.

FOCUS: Western Nunavut

Follow the line of the Alberta-Saskatchewan border north to the Arctic Ocean and you come to Coronation Gulf. The gulf and Bathurst Inlet to the east are the heart of a region known as West Kitikmeot. This region is home to the Bathurst caribou herd whose range extends across West Kitikmeot and south into the Northwest Territories.

In recent years, the Kitikmeot Inuit, who inhabit the region, have noticed dramatic changes in the local climate and environment. Winters and summers have become warmer, and sea and lake ice have been melting earlier in the spring. Fall freeze-up – an August or September event just a few decades ago – now happens mostly in October or November. The weather has also become more variable, and short-term temperature swings that cause repeated thawing and freezing have become more common. With a more variable climate, weather and ice conditions have become harder to predict, and that has made it more difficult and dangerous for hunters and others travelling on the land and ice.

The changing climate has affected plants and wildlife too. Summer vegetation is richer, and birds and animals rarely seen before are appearing more frequently. Because the Kitikmeot Inuit get much of their food from hunting, fishing, and sealing, they are affected by all of these changes.

They are particularly concerned, though, about the impacts on caribou. More plentiful vegetation can support a larger herd, but hotter summers put more stress on the animals, while the more rapid appearance of large expanses of open water in the spring forces them to alter their migration routes. More frequent thawing and freezing of the snow cover can result in starvation, because it leaves a thick layer of ice that the caribou can't dig through to reach the vegetation below. Thin ice is also a hazard. Two snowmobilers travelling in the Coronation Gulf area discovered stark evidence of this in 1996, when they suddenly encountered hundreds of antlers sticking through the ice – an "antler forest" that marked the site of a mass caribou drowning.



A caribou herd crosses an expanse of water.

THE BIGGER PICTURE

Climate change is a major concern throughout Canada's arctic and subarctic regions, and many communities have begun to record their observations of how it is affecting their environments and their lives. From the Yukon to central Nunavut most local observers agree that the climate is getting warmer. In eastern Nunavut, however, opinions are mixed as to whether it is warming or cooling, while in Nunavik (northern Quebec) residents have noticed warmer summers but more extreme cold in the winter. In northern Labrador, the perception is again one of general warming. In all regions, however, it is agreed

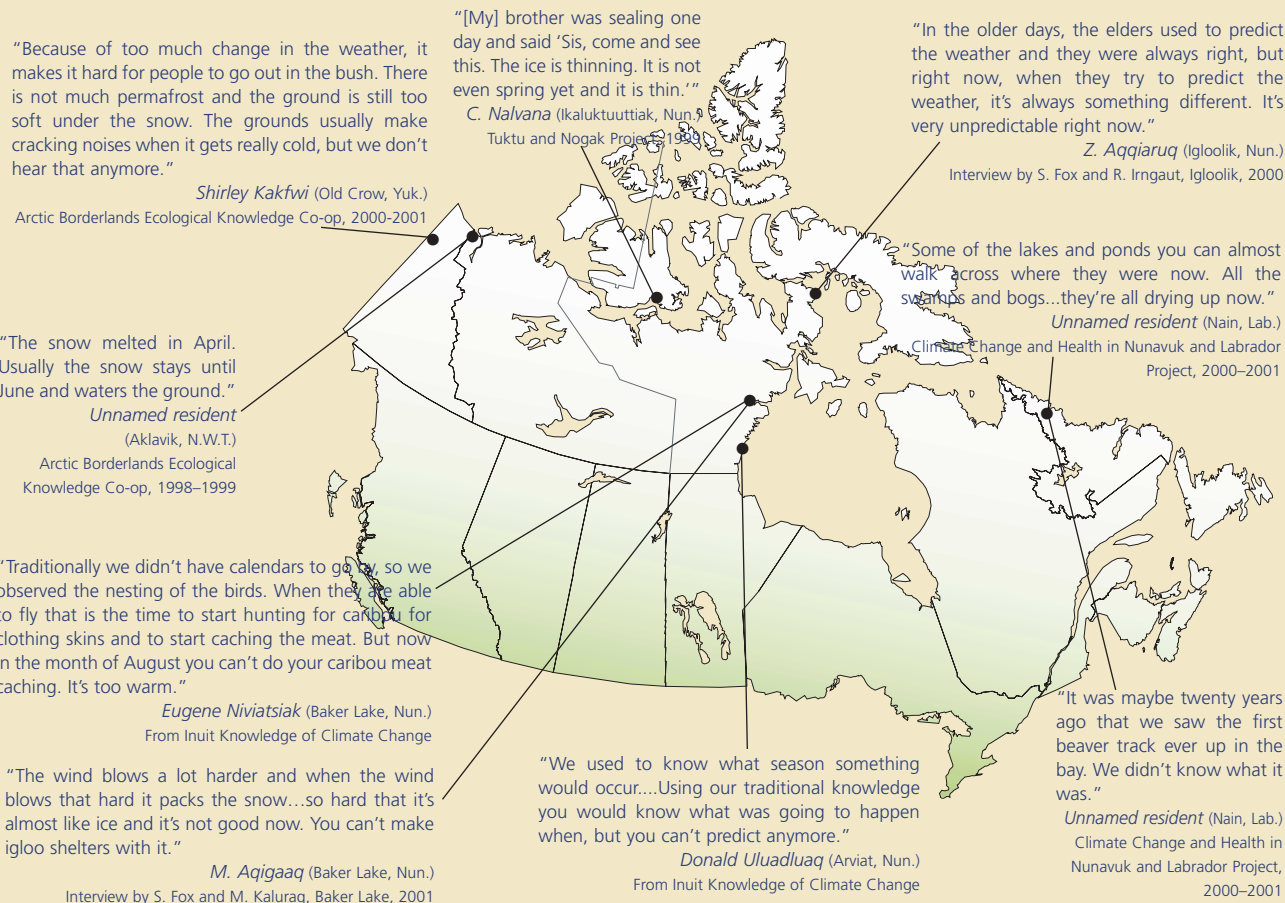
that the weather has become more variable, stormier, and harder to predict.

These observations generally agree with the scientifically measured trends, although the scientific record gives a stronger impression of cooling in the eastern Arctic than the reports of local observers do. This may be because local observers have given more emphasis to recent years, which have been unusually warm. The scientifically measured trends, on the other hand, cover a span of 50 years and include a greater number of cold years. But that

could be changing. Parts of northern Quebec, at least, have been warming since the mid-1990s.

As a result of changes in climate, familiar environments are becoming less familiar. As in Kitikmeot, people in most parts of the North are noticing the arrival of birds, fish, and animals that have not been seen in their regions before. They are also noticing more unusual weather and more storms. Thunder and lightning, once very rare in the Arctic, are now being experienced more often, and in 2001 the Mackenzie Delta got its first tornado warning.

CLIMATE CHANGE – THE NORTHERN EXPERIENCE



In coastal areas, people can no longer hunt, fish, or travel on the ice as often or as long as they used to, and thinning ice is making these activities more dangerous. Changing wind patterns are also making it more difficult to apply traditional navigational techniques like following the direction of snow drifts. Survival on the ice is more difficult as well, because stronger winds are often packing the snow harder and making it unsuitable for building igloos. Getting drinking water by melting sea ice is harder too, because old multiyear ice, which is mostly fresh water, is no longer as easy to find, and the more plentiful new ice is salty. In inland areas, problems such as melting permafrost and the drying of lakes and rivers are adding to the difficulties of tending traplines or travelling to hunting and fishing grounds in some areas.

Northerners are adapting to these changes in a number of ways – changing the timing of hunting and fishing activities, going to different locations, harvesting different types of fish and game, and being more cautious when travelling on the ice. Some changes also offer advantages. Extremely harsh winters are fewer and more time can be spent on the land in the summer. What is most endangered though is a way of life that has been based on a long relationship with the cold polar climate, a way of life that is very much a part of the identity of northern people.