CLIMATE CHANGE

IN QUEBEC

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.

Human activities are upsetting the balance of greenhouse gases, such as carbon dioxide, in our atmosphere. Our heavy use of fossil fuels for heating, transportation and industrial activity releases carbon dioxide and other greenhouse gases. These gases are accumulating in our atmosphere and causing the Earth to "heat up."

In coming decades, major temperature variations are expected in Quebec. In fact, recent models suggest that Quebec could warm by as much as 4-6°C by 2080. Such changes will be the largest and most rapid of the last 10,000 years and will have profound effects on our lives and the ecosystems that support us.

Our Health

More frequent and severe heat waves could lead to more deaths, and increase the risk of heat-stress related health problems, especially in the very young and the elderly. However, in the winter months, deaths from exposure to extreme cold and other winter hazards will be reduced.

Warmer daytime temperatures will likely increase the frequency and extent of "bad air days" in major centres. An increase in overnight temperatures during the summer will leave a large part of the population more uncomfortable. Furthermore, respiratory disorders and allergy problems may worsen, as temperature and humidity rise. Infectious diseases may extend their range northward into Canada, and opportunities for environmental contamination by bacteria, viruses and parasites may increase as well.

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Extreme Weather

In January 1998, half of the population of Quebec was left without power in the wake of an ice storm. The 1996 Saguenay flood caused $800 million in damages and resulted in 10 deaths. In the Montréal and Montérégie regions, over 20 events, including violent winds, torrential rains, flooding and hail, are reported each year. Although weather events such as these are natural phenomena, studies suggest that they could become more frequent as our climate changes.

Corbis/Magma

Ice Storm 1998

Climate Change. Are you doing your bit?

The St. Lawrence has its ups and downs

Low water levels are a particular concern for Montréal. From 1991-98, a drop of just 30 centimetres in the water level resulted in a 15 per cent decrease in tonnage handled by the port of Montréal. In future, water levels are projected to drop by over 1 metre. Increased dredging may be become necessary to allow ships to continue to navigate the river. Lower water levels would also reduce the amount of quality water for drinking, destroy wetland habitat and limit leisure activities.

In the estuary and the gulf, reduced inflow of colder fresh water from Labrador, and an increase in sea levels, will likely result from climate change. These changes could lead to increased coastal erosion to more sensitive waterfront property, loss of wildlife habitat and a change in the distribution of marine species.

Our Forests

In the long term, climate change is expected to push the tree line farther north, and gradually change the abundance and distribution of tree species. In the short term, climate change will present both challenges and opportunities to Quebec forests. While a warmer and more humid climate is expected to encourage forest growth, the reproduction of some species would be restricted. Increased precipitation may decrease the number of forest fires in the province, although a rise in the number of local and exotic forest pests (both insects and rodents) will likely offset any potential benefits. Furthermore, an increase in the frequency of extreme weather events would make forest ecosystems more vulnerable to pests and diseases.

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Our Farms

Climate change will affect agriculture by accelerating the maturation rate of plants and lengthening the growing season. Some crops may benefit from the changes, while others will suffer. For example, production of fruits and vegetables in southern Quebec could expand northward, if the soil is suitable for cultivation. However, other crops may be vulnerable to new pests and diseases. The volume of maple syrup produced may also be affected by climate change, as syrup production is closely linked to freeze-thaw cycles.

What can you do?

Actions by individuals account for 28 per cent of Canada's greenhouse gas emissions – that's almost six tonnes per person per year! If we're part of the problem, we can be part of the solution, too. By reducing the amount of energy you use at home and on the road, you can save yourself money and contribute to the global challenge of reducing greenhouse gas emissions. Small actions, like installing low-flow showerheads or not idling your car, can make a big difference.

Corbis / Magma

Information in this fact sheet derived from:
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View online at
www.adaptation.nrcan.gc.ca/posters

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.

Canada

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