CLIMATE CHANGE

IN ONTARIO

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.

Hydro One

Ice Storm 1998

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 electricity, releases carbon dioxide and other greenhouse gases. These gases are accumulating in our atmosphere and causing the Earth to "heat up".

Scientists estimate that Ontario will warm an average of 2°C to 5°C within the next 75 to 100 years. The winter months are projected to warm faster than the summer months, and extreme events, such as floods, droughts, and storms will likely become more common and severe. These changes will have severe consequences for our lives and the ecosystems that support us.

Our health

Global climate models suggest that over the next 50 years, heat waves will increase in frequency, intensity, and duration in southern Ontario. There are likely to be as many as 30 days over 30 degrees Celsius each summer, instead of the current average of 10 days. An increase in very hot days (over 35°C) could increase the risk of heat-stress-related health problems, especially in the very old, the very young, and those with chronic lung diseases, such as asthma. Higher temperatures would increase the number of "bad air days". A warmer climate and longer frost-free seasons may also permit the spread of diseases such as Lyme disease.

Managing extremes

Small changes in average climate conditions are expected to generate large changes in extreme events. For example, experts predict that extremely hot days, severe thunderstorms, and freezing rain events will all increase in frequency due to climate change. Extreme weather events, such as these, have been shown to increase deaths, injuries, and stress-related disorders. However, it is also likely that the number of extremely cold days will decrease, which could have an impact on cold-weather mortality rates.

Climate Change. Are you doing your bit?

The Great Lakes

Global climate models project that by 2050, lake levels will be lower than they are now, perhaps by more than one metre. Models also suggest a smaller and earlier spring runoff. This will impact:

- Hydroelectricity: Lower water levels and flows will result in less hydropower production.
- Recreational boating: Lower water levels create problems for launching, hauling out, and boat operation in shallow areas.

- Water supply: Higher water temperatures reduce water quality by creating a more favourable environment for microbes and algae blooms, while lower water levels can affect the ability of intakes to draw water.
- The environment: Shoreline wetlands and other critical habitats may suffer from extended periods of low lake levels.

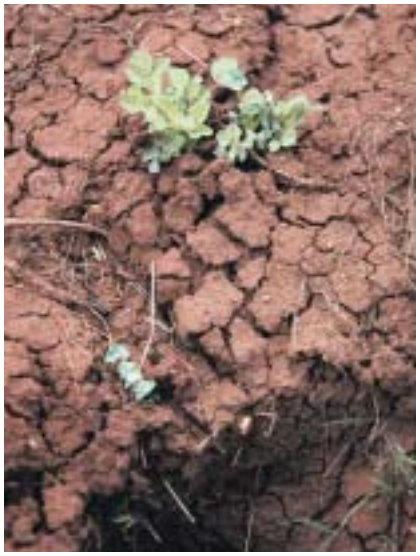
Our farms

Warmer temperatures and earlier and longer frost-free periods (longer by as much as five weeks) will extend the grazing season and increase the potential yield of heat-loving crops such as corn, soybeans, and tomatoes. It is also possible that farmers may cultivate these crops farther north, depending on the suitability of the soil and the frequency and severity of droughts. In southern Ontario, the potential for growing specialty fruits and vegetables may increase.

However, less rainfall at different times could increase the need for irrigation in southwestern Ontario, particularly on drought-prone soils, and for shallow-rooted crops, such as potatoes. In some areas, milder winters and less consistent snow cover are likely to increase injury damage to over-wintering crops.

Our forests

Forests will suffer from greater stress due to drought, and more frequent and extreme storms, wind damage, fires, and insect outbreaks. However, where drought is not a limiting factor, marginal soils may become more productive, as warmer temperatures



cause plant debris under trees to decompose and add nutrients to the soil more quickly.

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.

Information in this fact sheet is derived from "Weathering the changes: Climate Change in Ontario" 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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