Government of Canada | Gouvernement du Canada

ADAPTING TO OUR CHANGING CLIMATE IN CANADA

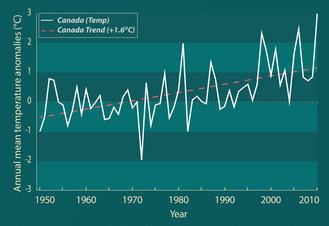
We have the knowledge to adapt now!

Canada's climate is already changing! Canada as a whole is warming at about twice the global average; the North even faster. There are more really hot days, sea ice is declining, glaciers are shrinking and sea level is rising in many areas. These changes are increasingly affecting our natural environment, economy and health.

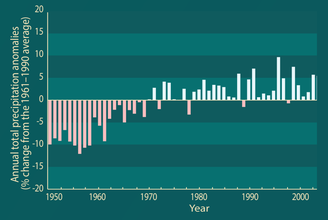
Further climate changes are inevitable. We must reduce greenhouse gas (GHG) emissions to limit the amount of change. However, even the most ambitious mitigation actions cannot stop our climate from changing. Therefore, adaptation is also critical.

Adaptation reduces the risks of climate change and increases our resilience. Protecting coastal communities from flooding, creating wildlife corridors to help species migrate, and redesigning cities to make them more comfortable and safe during heat waves, are all examples of adaptation.

While annual national temperatures fluctuate from year to year, the longterm trend is that Canada warmed by 1.6°C between 1948 and 2015.



Annual precipitation is also increasing, with Canada as a whole becoming wetter since 1948.

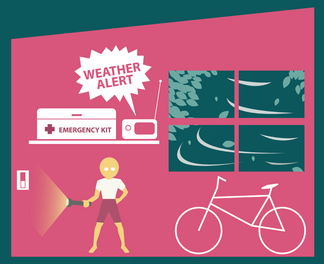


What are climate change impacts and adaptation?

Climate change refers to any change in climate over time. ***Impacts*** are the effects of climate change on natural and human systems. ***Adaptation*** is about adjusting our thinking, decisions and actions because of observed or expected changes in climate or their impacts, to reduce harm or take advantage of new opportunities.

What is the difference between climate change and changing weather?

Weather is the state of the atmosphere at a given time, and it changes with the passing of hours, days and seasons. ***Climate***, on the other hand, can be thought of as the average weather conditions over a long period of time (decades and longer).

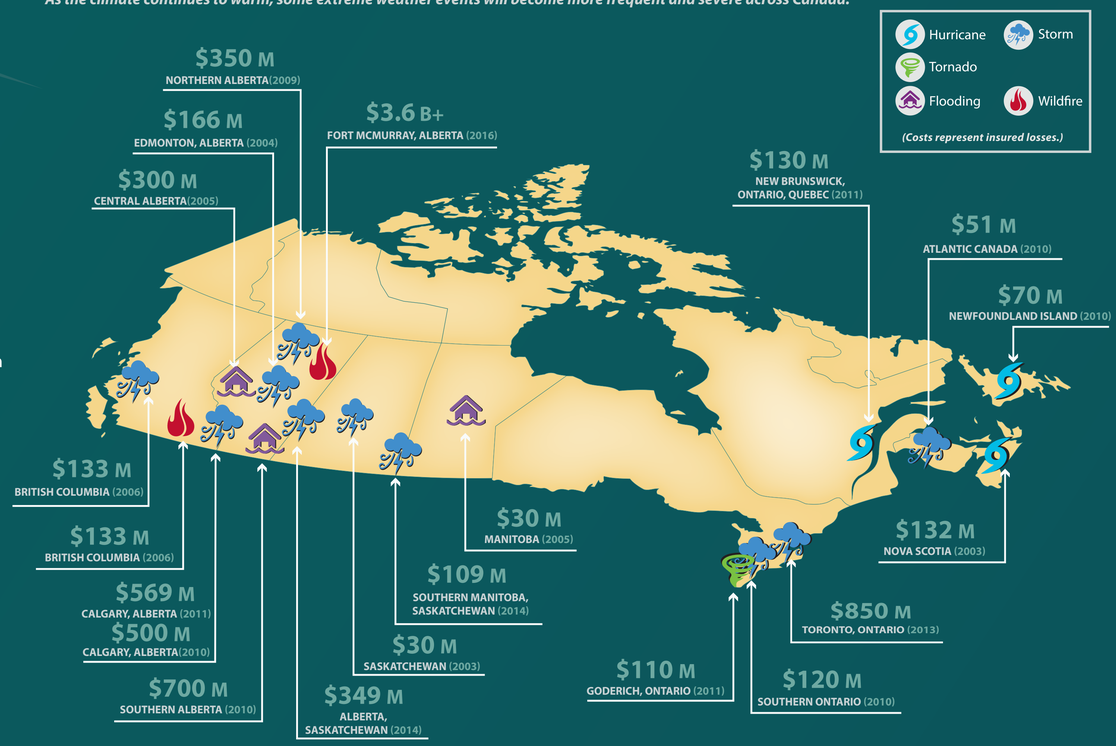


Adapting – There's a lot we can do!

There are many things that you can do to reduce your risks from a changing climate, such as listening for heat alerts and storm warnings and being prepared for extreme events by creating an emergency kit. ***Teachers***: Check out Climate Change Lessons at ontarioecoschools.org and cobwebsim.com.

EXTREME WEATHER EVENTS IN CANADA

As the climate continues to warm, some extreme weather events will become more frequent and severe across Canada.



DID YOU KNOW?

Climate change impacts on animal migration, range and reproduction affect access to, and reliability of, traditional foods that are essential to the health and culture of Canada's Indigenous peoples.

The frozen ground, called permafrost, in Canada's north is warming, which can cause the land to sink, damaging buildings, roads and other infrastructure.

Recent storm surges, coastal erosion and rising sea level are threatening important archeological sites in Atlantic Canada.

Conservation partners in southern Ontario are working to restore forests and the "corridors" between them by planting over 4.5 million trees.

Faced with a surplus of blue-stained wood from the Mountain Pine Beetle outbreak, the forest industry in British Columbia is making unique wood furniture to adapt.

Climate change poses health risks from poor air quality linked with natural disasters like wildfires and extreme heat waves. The Air Quality Index is a daily, public info tool to help protect Canadians' health.

HOW IS CANADA ADAPTING?

Adapting to increased risk of forest fire Climate change leads to longer growing seasons for trees, but may also increase the risk of fire, drought and insect infestations in Canada's forests. To help adapt to these risks, researchers study seedling growth for the effects of higher temperatures on the development of tree species.

Monitoring the effects of climate change on species As temperatures warm, the Pika is expected to move to higher elevations, where the temperatures are cooler. The next time you're in Banff, Jasper, Yoho or Kootenay national parks, be an amateur scientist – listen for the Pika's "PEEEP!" and share where you heard it with the Bow Valley Naturalists (HELS Project) bowvalleynaturalists.org.

Building a Canadian home to stand up to hurricanes The way we make our homes can reduce damage from extreme winds, as shown by the weatherproof "demonstration home," designed and built by the Institute for Catastrophic Loss Reduction and The Co-operators General Insurance.

Promoting safe travel in the North Changing sea-ice conditions pose safety risks for resource industries and marine shipping, as well as for the Inuit who rely on sea ice for travel. SmartICE (Sea-Ice Monitoring And Real-Time Information for Coastal Environments) is a pilot project for safer northern coastal communities.

Adapting to sea-level rise on Canada's coasts Sea-level rise is an important issue for many coastal communities across the country, presenting risks to property, transportation and health. To help reduce these risks, governments, industry, universities, planners, engineers and non-governmental organizations collaborated to develop a national *Sea Level Rise Primer*.

Protecting Canadian health from extreme heat With climate change, the number of extreme weather events, like heat waves, is expected to increase. Many Canadian communities are already experiencing a greater number of hot days. Extreme heat can impact health, causing illness and even death. Across the country, there are actions underway to reduce these risks by developing community heat warning systems and promoting health protection measures.

For more information, go to

adaptation.nrcan.gc.ca

Fight climate change by reducing GHG's emitted in your daily activities (mitigation). Learn how you can lighten your "carbon footprint." (See Top 10 Things You Can Do To Help at climatechange.gc.ca.)

Canada

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