



CLIMATE CHANGE

CANADA'S ACTION ON CLIMATE CHANGE

Climate change is one of the most important environmental issues of our time, requiring urgent action on the part of all governments and citizens. That is why the Government of Canada is taking action at home and abroad to reduce greenhouse gases and air pollution.

At Home

The Government of Canada supports an approach to climate change that achieves real environmental and economic benefits for all Canadians. Canada is committed to reducing our total greenhouse gas emissions by 17% from 2005 levels by 2020, and to working with the United States on our respective climate and energy policies.

The North American economy is integrated to the point where it makes absolutely no sense to proceed without harmonizing with the United States and aligning a range of principles, policies, regulations, and standards.

Industry and transportation are the biggest sources of greenhouse gas emissions in Canada. That is why the Government is working with industry and the transportation sector to introduce cleaner technologies and reduce greenhouse gas emissions. We will also improve transportation efficiency and introduce cleaner transportation technologies. For example, we recently published new draft regulations to limit greenhouse gas emissions from the automotive sector.

We are also committed to leading the world in clean electricity generation as part of our overall strategy to combat climate change and promote clean air. We will continue to support biofuels, wind and other energy alternatives. In support of these goals, we are investing

In Canada greenhouse gas emissions come from a broad range of sources including:

30% energy-intensive industries

27% transportation

17% electricity

11% buildings

10% agriculture

5% other sources



\$795 million over five years in the Clean Energy Fund for clean energy research and demonstration projects, including carbon capture and storage.

These goals and investments will help set us on the path to reduce greenhouse gas emissions and achieve our national target.

The provinces and territories are also taking action on climate change. Many have set their own targets. Their work includes projects in the areas of electricity generation, building codes, urban planning and transportation. To date, more than 200 provincial initiatives have been announced.

We are also leading by example and stepping up our fight against climate change by investing \$86 million over four years to help Canadians adapt to a changing climate.

Environment Canada, in collaboration with Natural Resources Canada, Indian and Northern Affairs Canada, Health Canada and the Public Health Agency of Canada, will implement several new programs as part of the Government of Canada's adaptation plan. New initiatives will enhance the scientific knowledge and tools needed to take further action against climate change and reduce the risks to Canadians.

International Action

Climate change is a global problem that requires a global solution, and Canada is an active partner in many international initiatives.

- Canada continues to play a constructive role in UN negotiations on climate change, and we will work constructively in 2010 to implement the Copenhagen Accord and to complete the negotiations under the United Nations Framework Convention on Climate Change for a comprehensive, legally binding post-2012 agreement.
- In July 2008, Canada and other G8 countries adopted a long-term global goal of reducing greenhouse gas emissions by at least 50% by 2050.
- Canada and the United States have agreed to establish a clean energy dialogue to collaborate on the development of clean energy science and technologies that will reduce greenhouse gases and combat climate change.
- We are also working with the U.S. to develop a coordinated approach that will advance our respective environmental and energy objectives and renew the North American economy at the same time.
- In 2007, Canada allocated \$20 million over four years to support Canada's participation in the Asia-Pacific Partnership on Clean Development and Climate, \$15.5 million of which is supporting clean technology projects in partnership with the Canadian private sector. Canada's projects are primarily in China and India, and are focused

WHAT IS CLIMATE CHANGE?

Climate change is a long-term change in weather over time. Scientists measure it by monitoring changes in temperature, rainfall, snowfall, wind, snow cover and other weather conditions. It has a wide impact, affecting our infrastructure, weather patterns, wildlife and the way we use our land.

The effects of climate change can be felt in all regions across the country. For example, the pine beetle infestation has ravaged our boreal forests, melting permafrost in the north has destabilized the foundations of homes; and an increase in extreme weather events.

Canada boasts one of the cleanest electricity systems in the world with three-quarters of our electricity supply emitting no greenhouse gases.

90%

clean sources



on reducing greenhouse gas emissions; delivering economic benefits for Canadians; and accelerating the development and deployment of cost-effective, clean energy technologies and energy-efficient practices.

- Together with other industrialized countries, Canada will provide funding to help developing economies reduce their emissions and adapt to climate change.

Causes of Climate Change

Changes in our climate are caused by many factors. They include natural processes, such as changes in the intensity of the sun and the amount of volcanic dust in the atmosphere. Human activities, such as the way we use our land and create energy, also contribute to climate change.

In the last century, large increases in population around the world have changed the way we use land. Wilderness areas have been converted to farming. New cities have sprung up and others have grown, using up green spaces. Large jungles and forests have been cut or burned. These changes affect our climate.

For centuries, people have burned large amounts of biomass such as wood and other combustible agricultural products for heating and cooking. However, during the last 150 years the combustion of fossil fuels (such as oil, natural gas and coal) has become central to almost all modern economic activity. It has also become the signature feature of human interference with the climate system.

Environmental Impacts

Every region in Canada is feeling the effects of the changing climate. In the Arctic, snow cover and sea-ice has decreased. Glaciers and ice-caps are retreating. In the south, winter snow is melting earlier. Water levels in the Great Lakes are dropping. Sea levels are rising. Plants are developing earlier and growing seasons are longer because of warmer temperatures. Average temperatures in the Northern Hemisphere over the past half-century are higher than at any time in the last thousand years.

The changing climate is also causing an increase in extreme weather events such as heat waves, droughts, floods, forest fires, storm surges and coastal erosion. These hazards can be costly and dangerous.



FOSSIL FUELS CONTAIN LARGE AMOUNTS OF CARBON

When fossil fuels are burned, carbon dioxide is released into the atmosphere. About half of it is absorbed by plants or dissolved in the ocean. The rest remains in the atmosphere. This increases the concentration of greenhouse gases and contributes to global warming.

Human activities generate many other greenhouse gases, including methane and nitrous oxide. They build up in our atmosphere and contribute to a warming climate. The build-up also produces other effects including the thinning of the ozone layer, an increase in pollution and reduced air quality.

THE GREENHOUSE EFFECT

Greenhouse gases in the atmosphere act as a blanket to insulate our planet from heat loss. Like a greenhouse, they allow most sunlight to pass through the atmosphere and heat the planet while absorbing much of the outgoing heat and radiating it back to the surface. The rise in greenhouse gas concentration thickens this blanket, warming the planet and affecting wind patterns, precipitation and storm events.



Health Impacts

Scientists have found that climate change will trigger events that could affect the health of Canadians. They include:



- more smog and extreme heat events
- the spread of infectious diseases as insects move farther north



- a decline in the quality and the quantity of drinking water in some areas because of drought

To learn more about the Air Quality Health Index, visit www.ec.gc.ca/cas-aqhi.



Small actions can make a big difference!

- Unplug appliances.
- Turn down the thermostat at night.
- Hang laundry up to dry.
- Recycle and repurpose.
- Use compact fluorescent lightbulbs.

WHAT CAN I DO?

Everyone needs to get involved to tackle climate change. The good news is there is a lot you can do to help!

1

You can start by finding out what your impact on the environment actually is by using the water and carbon footprint calculators, also available in kid-friendly versions, at www.ec.gc.ca/education. Once you know what your impact is, you can track your progress as you take steps to reduce it.

2

Make your home or place of business more energy efficient: the ecoENERGY Retrofit program provides financial support to implement energy-saving projects for homes, commercial and institutional buildings, and industrial facilities. Visit www.ecoaction.gc.ca to learn more.

3

Save money while you save the environment: a wide variety of incentives and rebate programs are available across the country to help Canadians use less energy, switch to renewable energy and produce less waste. Environment Canada has a searchable database to help you quickly discover incentives and services for which you may be eligible. Visit www.ec.gc.ca/incitatifs-incentives.

4

Want to do something bigger? Start a project in your community. The EcoAction Community Funding Program helps local communities work together to tackle climate change. Visit www.ec.gc.ca/ecoaction for tips, application forms and success stories.

5

Take public transit. You will help reduce pollution and urban congestion. If you buy transit passes, you can also save money by claiming the public transit tax credit. Visit www.transitpass.ca for more information.

Retire Your Ride

Canada's Vehicle Recycling Program

DID YOU KNOW THAT CARS MADE IN 1995 AND EARLIER PRODUCE 19 TIMES MORE SMOG-FORMING POLLUTANTS THAN NEWER, POST-2004 MODELS?

If you are driving an older car, consider scrapping it with the Retire Your Ride program. Your car will be recycled in a responsible way, and you can qualify for great environmentally friendly incentives like public transit passes and memberships in car-sharing programs.

**WWW.RETIREYOURRIDE.CA
1-877-773-1996**

For more information on climate change, visit: www.climatechange.gc.ca
To learn about more energy-saving ideas, visit: www.ec.gc.ca/education