

# Working towards a Water Strategy for New Brunswick:

## Climate Change



### What is Climate?

Climate is the average weather conditions experienced by a region over a period of time including temperature, precipitation, sunshine, humidity and wind.

### What is Climate Change?

Climate change refers to a change in global or regional weather patterns, particularly apparent from the mid to late 20<sup>th</sup> century onwards.

Climate change is caused by increased levels of heat-trapping greenhouse gases (GHGs), including carbon dioxide, methane and others. These are released into the Earth's atmosphere when fossil fuels (such as coal, gasoline, heating oil and natural gas) are used.

### What are the Contributing Factors?

A variety of human activities are a growing source of GHG emissions. Some examples include:

- carbon dioxide emissions from burning fossil fuels for

- transportation and energy generation;
- methane emissions from animals, agriculture, decomposition and natural gas fugitive emissions;
- clearing of carbon-storing forests in an unsustainable manner;
- nitrous oxide emissions from chemical processes and fertilizers; and
- the release of Hydrofluorocarbons (HFCs); the substitute for (CFCs) used for refrigeration and a variety of other purposes.

### How is Climate Change Affecting New Brunswick?

The effects of climate change are increasingly clear in New Brunswick.

The frequency of winter thaws and the intensity of precipitation events have increased. The average accumulation of snow has decreased by 25 percent in the north and by 50 percent in the south.

In the past 100 years, the sea-level has risen by approximately 30 cm in New Brunswick. A further rise of 50-60 cm is anticipated by 2100.

The effects of sea-level rise, coastal erosion and storm surge events can be observed predominantly within New Brunswick communities and on businesses in coastal areas. However, in-land communities and businesses are also experiencing effects such as flooding and ice jams.

The province can expect an elevated risk of heat related health concerns; new pests and invasive species; flood damage; impacts from extreme winds; and icing of trees and power lines.

Ambitious efforts to reduce GHG emissions are needed to prevent the average global temperature from rising more than 2°C, which would result in irreversible and catastrophic impacts. Because of regional climate patterns, impacts are expected to be felt 2-3 times faster in northern regions of the globe, including Canada. New Brunswick is already experiencing this climate trend and therefore must take measures to adapt to the effects of climate change.

### **Adaptation to Climate Change**

Climate change adaptation involves making adjustments in our thinking, decisions and activities, as a result of observed or expected changes in climate.

People in New Brunswick are already adapting to existing and anticipated effects of climate change. Here are some examples of what is being done:

- protecting or moving buildings to avoid flood damage;
- installing barriers and using other erosion-control methods;
- removing and trimming trees next to power lines;
- reducing time spent in the sun and wearing sunscreen;

- purchasing generators and supplies in case of storms and power outages; and
- designing storm water systems in communities and on highways to handle increased precipitation.

### **New Brunswick Climate Change Action Plan**

New Brunswick's Climate Change Action Plan communicates the province's long-term commitment to doing its part in achieving provincial, regional and national GHG reduction targets. The action plan also contains Climate Change Adaptation Strategies supported by actions to build resilience into our communities, businesses, infrastructure and natural resources. Acting early and adapting to the changing climate is far more effective and lower cost than dealing with climate impacts after they have occurred.

New Brunswick has achieved considerable success in its efforts to fight climate change. Since 2001, total greenhouse gas emissions in the province have declined by 35 percent.

A changing climate presents both risks and opportunities for New Brunswick's communities and resource sectors. In order to reduce the risks and take advantage of the opportunities, we must fully understand the challenges posed by a changing climate and present realistic approaches to addressing them.

For more information contact the:

New Brunswick Climate Change  
Secretariat,  
Environment and Local Government,

PO 6000, Fredericton NB, E3B 5H1

Web Site: [www.gnb.ca/climatechange](http://www.gnb.ca/climatechange)

Tel.: (506) 453-2690