

Section Five: Adaptation



British Columbians are already experiencing climate change and its impacts. Clearly, we need to take steps to ensure that we can adapt as the world around us changes and we see more extreme weather events.

As we move forward with the Climate Action Plan, the Province is also moving ahead with a range of co-ordinated actions to help B.C. adapt to climate change. These include:

▣ Investing in New Ideas and Solutions

- With Budget 2008, the Province invested \$94.5 million to assist B.C.'s research intensive universities undertake research and generate solutions to key climate action questions and challenges.

The Pacific Institute for Climate Solutions brings together experts from the University of Victoria, University of British Columbia, Simon Fraser University and the University of Northern B.C. Based at UVic, the Pacific Institute for Climate Solutions will partner with governments, the private sector, other researchers and civil society, in order to undertake research on, monitor, and assess the potential impacts of climate change and to assess, develop and promote viable mitigation and adaptation options to better inform climate change policies and actions.

One key element of the Institute is the continuation of the vital climate modelling work being conducted by The Pacific Climate Impacts Consortium, a partnership between UVIC, BC Hydro, Environment Canada and the B.C. government. A unique opportunity to apply academic expertise to practical problems, the Pacific Institute for Climate Solutions will help position British Columbia as an important international site for climate change knowledge.

- The Province has also invested \$3 million to test the feasibility of new technology designed to capture the carbon emissions from oil and gas production and permanently sequester them underground. The research will be done at a natural gas plant in the North.
- A new **Bioenergy Network** will encourage valuable research and development in areas such as wood-waste cogeneration, biofuel production and wood pellet production. The network will also be responsible for directing research and initiating projects that promote the development and use of fuel from organic resources.
- An **Innovative Clean Energy (ICE) Fund** will also provide funding to help clean energy technology to move towards commercialization and to encourage the development of the clean energy sector in British Columbia.
- As we work to reduce greenhouse gas emissions in British Columbia, it is imperative that we have reliable models to help predict the outcomes of our actions – and to measure our progress going forward. B.C. is making significant investments in this area as well, with new funding dedicated to



developing models and other tools that enhance our ability to measure and forecast the impacts of GHG reduction strategies.

“The Pacific Institute for Climate Solutions holds enormous promise for British Columbia. It will provide a valuable resource to government and to the private sector—a single window to access the considerable intellectual capacity found in British Columbia’s research-intensive universities.

“With an advisory board of industry leaders and senior government officials, the Institute will be in an unprecedented position to frame questions and provide answers on immediate technological, economic, regulatory and public-policy challenges. [It will] play a key role in positioning British Columbia as an international leader in climate-related research; in finding and designing climate change solutions; in capitalizing on opportunities for positive adaptation; and in establishing a vibrant, innovative low-carbon economy.”

*Dr. David Turpin
President, University of Victoria*



■ Protecting our forests

Since 2001, the Province has committed more than \$600 million to mitigate the impacts of the pine beetle infestation in Interior pine forests, and to support economic diversification among affected communities.

The pine beetle epidemic has been directly linked to climate change. Beetle populations, normally controlled by sub-zero temperatures, exploded after a series of warmer than usual winters.

As part of this Climate Action Plan, the Province will continue implementation of the 2006 – 2011 Pine Beetle Action Plan, which sets out a vision for what Interior

British Columbia has two ocean observatories that will use the Internet to continuously feed data, sounds and images from the ocean depths to laboratories, classrooms, science centres and homes around the world. Scientists will gather continuous information on ocean change, seismic activity, fish and marine mammal movements, and seafloor ecology.

The NEPTUNE Canada (North-East Pacific Time-series Undersea Network Experiments) observatory, will lay 800 km of fibre optic cable and instruments off the outer coast of B.C. A sister observatory, VENUS (Victoria Experimental Network Under the Sea), is laying a total of 43 km of cable and instruments in two locations off the south coast of B.C.

By monitoring our oceans closely, we will be able to protect this incredible resource for generations to come.

forests, communities and industry could look like with increasing innovation and adaptation. For details on the Pine Beetle Action Plan, go to www.gov.bc.ca/for/

The Province is also implementing Forests for Tomorrow, which is designed to adapt forest and range management to a changing climate. This will involve planting an additional 60 million seedlings over the next four years.

In addition, the Province will reforest areas of Crown land that were affected by the catastrophic wildfires of 2003 and 2004 and by the mountain pine beetle that would otherwise remain unplanted.

■ Protecting our water

B.C.'s water, energy, and climate are intimately linked. Waterpower helped build our province and remains an important clean energy option today and for the future. Energy is necessary to move water through local supply systems, make it potable, and remove waste from water. In areas like the Okanagan, the hot, dry summer months that often lead to low water supplies coincide with times of high energy demands for cooling homes and businesses and for pumping irrigation water.

With climate change potentially increasing the magnitude and frequency of floods and droughts, the patterns of water supply for hydroelectricity will also be altered. Water conservation and efficiency are therefore even more important. Not only do they reduce water and energy use, but they may also better prepare us for adapting to the unavoidable impacts of climate change.

To support water conservation and efficiency, the B.C. government has introduced *Living Water Smart: British Columbia's Water Plan*, outlining how water will be protected in our province. Some measures being taken include:

- A new 10-year commitment to flood prevention, including \$100 million for flood protection to help communities manage flood loss.
- A conservation target that ensures that 50 per cent of new municipal demand is met via conservation by 2020.



- Increasing the number of water monitoring stations in the Province and making information on our drinking water more publicly accessible. Government will publish a report on the state of our water by 2010 and every five years after that.

The province is also working in partnership with the Pacific Coast Collaborative to protect our oceans. Investment in ocean observatory projects, like Project Neptune and Venus, demonstrates the provincial commitment to protecting our ocean resources.



■ Building Carbon Smart communities

Climate change increases the likelihood of severe weather events, which can undermine the safety and security of communities. To help our communities adapt to climate change, the Province is:

- Ensuring that all new development on flood plains will be flood-proofed to provincial standards
- Recognizing climate change impacts in awarding infrastructure grants through the B.C. Ministry of Community Services
- Developing a comprehensive plan for green community development for British Columbia
- Ensuring that community development strategies recognize the importance of streams, rivers, and the areas that surround them.

Weather related devastation across British Columbia

From fires in the Okanagan, to severe wind and rain storms on the west coast and Vancouver Island, to flooding in Squamish, British Columbians are seeing increasing evidence of how weather change can adversely affect their lives.