

Preparing for Climate Change: British Columbia's Adaptation Strategy

British Columbia will need to adapt to the unavoidable impacts of climate change, as well as to reduce greenhouse gas (GHG) emissions. Because of the historical and continuing rise in global GHGs, the Earth will continue to warm for decades to come. We can expect more long-term warming, more extreme weather, changes to precipitation patterns, and rising sea levels. The Government of British Columbia will increasingly need to consider climate change as it continues to protect health and safety, maintain public infrastructure, manage natural resources, and achieve environmental, social and economic sustainability.

Climate change impacts present risks and opportunities in B.C.'s transition to a green economy. Climate variability and extreme events have already affected B.C.'s natural resources and environment, and B.C. has begun to address these adverse impacts. For example:

- The mountain pine beetle infestation, triggered by warmer winters, impacted more than 14.5 million hectares of forest in B.C. between 1990 and 2008, having profound effects on ecosystems, community economic viability and the provincial economy. The Mountain Pine Beetle Action Plan coordinates all levels of government, communities, First Nations, industries and other partners working to minimize the impact of the infestation.
- The seasonal droughts of 2003 and 2009 demonstrated the vulnerability of community and irrigation water supplies. Projections indicate B.C. can expect more droughts and a reduction in summer water supplies. The B.C. Inter-Agency Drought Working Group is developing a Drought Response Plan in collaboration with stakeholder groups. This plan will outline actions at both the local and provincial level to manage water in times of drought.
- During 2003 and 2009 we experienced the most dangerous and expensive wildfire seasons on record. Climate projections point to longer and more intense wildfire seasons. B.C.'s Fire Smart initiative helps homeowners reduce the risks of loss, damage or injury due to wildfires.

Anticipated climatic changes will have real impacts on infrastructure and the costs of construction, maintenance and replacement.

- Provincial and Federal governments jointly fund disaster relief programs. The projected increases in the frequency of extreme precipitation events and in sea levels increase the risk of flooding.
- Building codes and standards reflect historical experiences; therefore some B.C. infrastructure may require repairs, retrofits and upgrades to ensure that initial investments are resilient to climate change.

Preparing effectively for climate change will require decisions based on an understanding of future climate, not just the climate of the past. Smart investments that consider current climatic hazards and future climate risks will reduce long-term costs for infrastructure, and contribute to the maintenance and protection of societal goods and services.

As it moves forward with the Climate Action Plan, the Province has also identified a range of coordinated actions to help B.C. adapt to climate change. This new Adaptation Strategy builds on the considerable efforts on adaptation already undertaken, and provides a solid framework for future adaptation.

Vision:

British Columbia is prepared for and resilient to the impacts of climate change.

Defining Positions:

To achieve our vision, we need to:

1. ***Build a strong foundation of knowledge and tools*** to help public and private decision-makers across British Columbia prepare for a changing climate.
2. ***Make adaptation a part of the Government of British Columbia's business***, ensuring that climate change impacts are considered in planning and decision-making across government.
3. ***Assess risks and implement priority adaptation actions in key climate sensitive sectors.***

Strategic Approach:

Strategy 1: Build a strong foundation of knowledge

Decision-makers need support when interpreting complex and uncertain climate projections. Government has taken substantial action to provide knowledge and tools to help decision-makers. This effort needs to be sustained and augmented. Decision-makers include provincial ministries, local governments, private industry and other stakeholders. On-going monitoring provides an important feedback to guide decisions in a changing climate. Observational data are also needed to assess climate model projections. Capacity building initiatives also provide a foundation of experience, tools and information to inform future adaptation decisions.

Core Deliverables

Engage climate science:

- Continue engaging with the research institutions Pacific Institute for Climate Solutions (PICS), Pacific Climate Impacts Consortium (PCIC) and other research centres to ensure they produce high quality applied science information that decision-makers need.

Continue building robust observation networks:

- The Ministries of Environment, Forests and Range, and Transportation and Infrastructure will jointly develop a long-term climate related monitoring program to optimize the value of existing data and networks in partnership with PCIC.
- Explore opportunities to gather climate change observations in other vulnerable sectors, such as health, agriculture and ecosystems.

Develop adaptation planning tools for decision-makers:

- Promote and support the development of tools that can be used by a broad range of decision-makers taking adaptation actions. Such tools could include: guides for local government, and climate change assessment methods for identifying and evaluating adaptation options.

Continue knowledge transfer and outreach activities:

- Continue supporting existing organizations that work with decision-makers to help them prepare for climate change.
- Work with PICS to develop a continuing education program on climate change impacts and adaptation for professionals (e.g. engineers) and decision-makers (e.g. local government).
- Incorporate, where appropriate, adaptation concepts and actions into provincial climate change outreach programs.

Strategy 2: Make adaptation part of Government's business

Climate change adaptation will be integrated government-wide into planning and program implementation. While there is uncertainty regarding the details of future climate change and impacts on government responsibilities, there is enough information for B.C. Ministries to begin planning and take early actions now.

Core Deliverables

Consider adaptation in planning:

- Ministries will consider climate change impacts by incorporating adaptation in Ministry Service Plans and business planning, where relevant.

Integrate adaptation into B.C. Government policies, legislation and regulations:

- Ministries will consider climate change impacts and adaptation when drafting new or amending existing legislation and regulations.
- Identify approvals that are sensitive to climate by determining whether climate change impacts will be significant over the life of a decision and, where possible, incorporate consideration of climate change impacts into the approvals process.

Implement through a coordinated approach:

- Strengthen cross-government coordination to ensure that Ministries share experiences, have access to the same information and work towards common goals.
- Engage and work with partners in other levels of government, the private and non-profit sectors and other jurisdictions.
- Integrate adaptation into the strategies for building B.C.'s Green Economy.

Strategy 3: Assess risks and implement priority adaptation actions in sectors

Sector Working Groups will be tasked with identifying projected bio-physical, social and economic impacts and opportunities, summarizing gaps in knowledge, estimating costs and benefits of action, and identifying initial priorities for action. This will provide the B.C.

Government, local government and non-government stakeholders with information to guide planning, program design and resourcing decisions. Some ministries have already begun this process to varying degrees; their experience will help inform the other sectors.

Core Deliverables

Assess risks and implement actions:

- Conduct climate change assessments for sectors known to be sensitive to climate change.
- Establish Sector Working Groups with government and stakeholder co-chairs to lead the process. The assessment will be supported by appropriate social and natural science experts from the Pacific Institute for Climate Solutions.
- Review and update, through the assessment process, existing B.C. Government policies, strategies and operational activities to ensure that they will deliver the desired objectives for their sectors in a changing climate.

Implementation of sector assessments will be a staged process, beginning with one or two key sectors.

Partners:

As with mitigation, Provincial goals related to adaptation cannot be accomplished exclusively through Provincial action but will require collaboration. The B.C. Government will work with local and federal governments, First Nations and other stakeholders, including research institutions, non-governmental organizations, and professional associations, to implement specific core deliverables.