Network for Business Sustainability

Business. Thinking. Ahead.

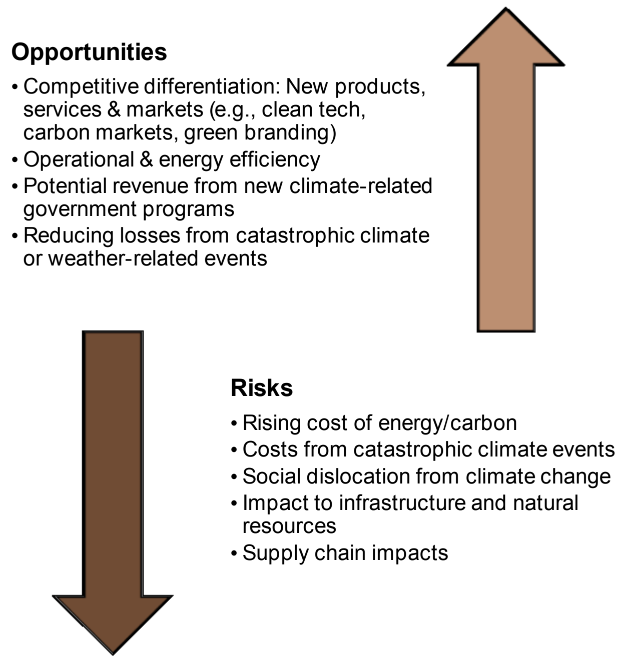
climate change primer

business and climate change. reducing greenhouse gases and helping organizations prepare for a changing climate

Climate change presents real and measurable risks to the social and ecological systems on which businesses depend. The natural resource-intensive Canadian economy – highly dependent on forestry, agriculture, Northern mining and development, energy, and water – is particularly vulnerable to changes in normal climate patterns. The Intergovernmental Panel on Climate Change (IPCC) indicates that global emissions must be reduced by 50 to 80% by 2050 to keep climate change under a 2°C threshold. Beyond this threshold, many IPCC scientists fear the impacts of climate change may be catastrophic. The 2006 Stern Review on the Economics of Climate Change found that the costs of reducing greenhouse gases are much less than the costs of inaction. The actions required to address climate change will require a fundamental transformation of how we produce and consume energy.

Why is Climate Change Important to Business?

Stakeholders and the public expect business to do its part to address climate change. Climate change creates risks for businesses that fail to adapt to changing circumstances, but opportunities for those businesses able to provide leadership and direction (see figure). Climate change will affect many aspects of organizations and will only increase in importance over time – it is already affecting natural resources, and governments are developing policies to reduce greenhouse gas emissions. Businesses will need to develop low-carbon products and services, reduce the carbon footprint of their operations, engage stakeholders, governments, and businesses throughout their supply chain to identify the actions needed, upgrade their infrastructure to be more resilient to a changing climate, and re-orient their long-term corporate strategy to integrate the emerging set of issues that climate change presents.



What Steps Can an Organization Take?

Climate-driven activities can be thought of as either *mitigation*, that is slowing climate change, or *adaptation*, that is preparing for a changing climate. While some organizations continue to maintain a "business as usual" approach in the face of climate change, others are finding ways to address and adapt to climate change. Organizations that are proactive on climate change are using a variety of best practices, such as the following:

- **Incorporate climate into strategic planning:** An integrated strategic framework for addressing climate change within an organization (and in partnership with other institutions) will include a

Business Need	Current Best Practices
Assessment of risks and opportunities	• Create greenhouse gas (GHG) inventories at the corporate, business unit, and site levels (this includes measurement, monitoring, verification) • Assess the impact of climate change on assets, revenues, and product and service design
Mitigation of climate change	• Develop short- and long-term strategies to reduce those GHG emissions generated by the firm and by its employees, suppliers and customers • Participate in voluntary and compliance-driven emissions markets to indirectly offset organizational emissions
Adaptation to climate change	• Understand climate vulnerability. Businesses have varying degrees of asset vulnerability and business disruption risk –the forestry, agriculture, and insurance sectors are particularly vulnerable. However, there are numerous adaptation strategies available to each sector. For example, agriculture is developing new crop varieties that thrive in warmer temperatures. See more best practices across sectors in the NBS Systematic Review on Business Adaptation to Climate Change
Engagement in societal discussions about climate policies	• Proactively engage stakeholders in a dialogue about risks, opportunities, roles and responsibilities for addressing climate change, at local, regional, national, and global levels • Collaborate with community organizations and even competitors to design proactive policies and technologies

portfolio of actions designed to maximize opportunities and minimize risks. These actions should emerge from an assessment of a firm's exposure to climate risk. For example, are there key revenue streams that are greenhouse gas intensive and would be affected by rising costs for carbon? Are there key business units that would be affected by changing precipitation patterns, storm intensity, or climate normals? Integrated climate strategies enable businesses to respond efficiently to international, national, and regional climate policies. They also build resiliency, enabling businesses to deal with climate and weather-related impacts to infrastructure and other assets. Proactive organizations can further strengthen their climate change strategies by gathering additional insight from stakeholders.

- **Measure your greenhouse gases**: Measuring and examining the carbon footprint of a business' operations, products and services are crucial to its value chain. Comprehensive greenhouse gas accounting systems include measurement, monitoring, and verification. Robust inventories can help managers identify priority areas for action. The Greenhouse Gas Protocol is an example of one leading initiative.

- **Disclose and report on your actions:** Transparent sharing of climate-related programs and action is increasingly common. The Carbon Disclosure Project is an example of a well-recognized climate reporting initiative.

- **Develop climate mitigation programs:** Organizations can undertake programs to *reduce greenhouse gases*. These can involve redesigning products and services to lower greenhouse gas emissions; developing and deploying green energy solutions; or designing processes to remove and sequester carbon already in the atmosphere. There is a tremendous need to transform technology and human behaviour – and business has a key role to play in both.

- **Develop climate adaptation programs:** Still other programs involve *adaptation through operations*. Adaptation includes preventing losses, sharing losses, changing products or services and changing the location of activities. Organizations prevent losses by being prepared for the worst and managing risks. They can share losses by acquiring insurance or by changing their product or service (e.g. turning a ski resort into a four-season facility).

- **Engage peers, the public and policy makers:** Business has a responsibility to engage in public dialogue on climate risk and the responses required at a societal level. What are the international, national, regional and local policies needed in the short and long term? How do we create the political will to implement these? Proactively and transparently communicating with the public, policy makers and corporate peers on these issues is part of leadership.

  Effective climate change programs also involve working with suppliers, customers, partners, industry associations, and environmentalists – to reduce greenhouse gases up and down the supply chain. There are no clear-cut solutions to climate change, so finding consensus requires real effort. Examples of multi-stakeholder groups include The Climate Group and Pew Centre's Business Environmental Leadership Council. As climate programs are often sector-specific, sharing best practices within an industry association is another sensible tactic.

For More Information

- Our Leadership Council of leading Canadian businesses creates a fresh list of their top sustainability issues each year. These have included culture, measuring ecological impacts, socially conscious consumerism, adaptation to climate change, valuing business sustainability, and engaging the community.
- Our Research Insights provide highlights from top-notch research articles chosen especially for managers.
- Our Systematic Reviews summarize what we know about a particular topic based on a thorough evaluation of research in that area.
- Our Member Directory lets you find NBS members interested in similar issues.

This Primer on business and climate change was developed by Dr. Stephen Hill, Assistant Professor of Environmental & Resource Studies at Trent University.

Case Study – Opportunities for Climate Action

DuPont

DuPont has become a leader on climate action by clearly enunciating its policy and position, redesigning its products and services to reduce greenhouse gases, and seeking opportunities to grow its business. Their sustainability report states: "*The business community has a critical role to play in developing and bringing to market the technologies and solutions that will make possible the transition to a low-carbon economy. This transition will provide new markets for innovative companies to prosper.*" Between 1990 and 2004, DuPont reduced their greenhouse gas emissions by 72% while growing their business and saving money. To learn more, see DuPont's latest report on sustainability.