Environment Canada

2005–2006

Departmental Performance Report

Rona Ambrose
Minister of the Environment

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I – OVERVIEW

SECTION I

OVERVIEW

Minister's Message

I am pleased to submit Environment Canada's *Departmental Performance Report* for the period ending March 31, 2006.

The year 2005–2006 was a year of accomplishment and challenge for Environment Canada. It was a period of transformation as the Department worked to implement a new approach to sustainability and to transform its management structure and processes.

In 2005–2006, Environment Canada focused on

- protecting Canadians and their environment from domestic and global sources of pollution;
- conserving biodiversity in healthy ecosystems; and
- helping Canadians adapt to their environment in ways that safeguard their health and safety, support economic performance and enhance environmental quality.

As part of this work, the Department provides a broad range of services to Canadians across the country, 24 hours a day, 365 days of the year. Just a few examples of these services include public weather forecasts, conducting inspections under our environmental laws, managing wildlife habitat, monitoring environmental conditions and carrying out scientific research through 15 research institutes and labs.

Our experience over the past year has served to confirm how important and complex environmental issues are, both globally and locally. Progress has been made in reducing pollution and protecting species and habitat, but much more needs to be done.

In the *Speech from the Throne* in April 2006, Canada's New government committed to taking measures to achieve tangible improvements in our environment, including reductions in pollution and greenhouse gas emissions. In *Budget 2006–Focusing on Priorities*, we stated our commitment to take actions that will lead to a cleaner, healthier environment.

The Government has implemented several recent initiatives to deliver its new direction, including the tabling of *Canada's Clean Air Act* and the publication in the *Canada Gazette* of the Notice of Intent to develop and implement regulations and other measures to reduce air emissions, taking a comprehensive approach to reducing air pollution and greenhouse gases. It proposes a regulatory framework that will include clear targets and timelines for key economic sectors.

All of us must work together to build a new environmental agenda for a cleaner Canada. We need "made-in-Canada" solutions for clean air and clean water, so we can all be a part of preserving and protecting the natural beauty that surrounds us.

As we work to develop Environment Canada's new agenda, it is essential that we measure our progress. This report gives us a baseline for doing so. It lets Canadians know what they can expect of Environment Canada. It sets out a clear framework of accountability and increased transparency and oversight for the Department's operations.

The Department's task is large; so is its vision. In the coming years, Environment Canada will work to meet the challenges at hand and to become a world leader in achieving environmental progress.

We will continue to work with Canadians and with Canada's international partners so that we can build a healthy and a sustainable future for our environment, for ourselves and for future generations.

A healthy environment and healthy Canadians—that is our goal.

Rona Ambrose
Minister of the Environment

Management Representation Statement

I submit for tabling in Parliament, the 2005–2006 *Departmental Performance Report* (*DPR*) for Environment Canada.

This document has been prepared based on the reporting principles contained in the *Guide for the Preparation of Part III of the 2005–2006 Estimates: Reports on Plans and Priorities and Departmental Performance Reports*:

- It adheres to the specific reporting requirements outlined in the Treasury Board of Canada Secretariat (TBS) guidance;
- It is based on the Department's approved Program Activity Architecture (PAA) structure as reflected in its Management, Resources and Results Structure (MRRS);
- It presents consistent, comprehensive, balanced and reliable information;
- It provides a basis of accountability for the results achieved with the resources and authorities entrusted to it; and
- It reports finances based on approved numbers from the Estimates and the *Public Accounts of Canada*.

Michael Horgan
Deputy Minister of the Environment

Summary Information

Reason for Existence: The legislation and regulations that provide Environment Canada with its mandate and allow it to carry out its programs can be found at: http://www.ec.gc.ca/EnviroRegs.
Under the *Department of the Environment Act*, the powers, duties and functions of the Minister of the Environment extend to and include matters relating to:
- the preservation and enhancement of the quality of the natural environment (including water, air and soil quality);
- renewable resources, including migratory birds and other non-domestic flora and fauna;
- water;
- meteorology;
- enforcement of any rules or regulations made by the International Joint Commission relating to boundary waters; and
- coordination of the policies and programs of the Government of Canada respecting the preservation and enhancement of the quality of the natural environment.

($ millions)	Planned Spending	Total Authorities	Actual Spending
Financial Resources	1,002.9	1,085.9	1,041.5

(Full Time Equivalents)	Planned	Actual	Difference
Human Resources	5,662	6,463	801

Departmental Priorities

($ millions)

Government of Canada Outcome: (Economic— A Clean and Healthy Environment)			
Environment Canada Strategic Outcome: Protection from domestic and global sources of pollution			
Environment Canada Priority: Environmental sustainability assessment; Climate change; Environmental conservation and protection			
Expected Results	Performance Status	Planned Spending	Actual Spending
Reduced greenhouse gas emissions	New approach being developed	54	76
Improved air quality	New approach being developed	253	241
Reduced risk from toxics and other substances of concern	Long-term / On track	193	191
Totals		500	508
Environment Canada Strategic Outcome: Conservation of biodiversity in healthy ecosystems			
Environment Canada Priority: Environmental conservation and protection			
Expected Results	Performance Status	Planned Spending	Actual Spending
Biological diversity is conserved	Long-term / On track	116	127
Clean, safe and secure water for people and ecosystems	Long-term / On track	65	72
Priority ecosystems are conserved and restored	Long-term / On track	73	64
Totals		254	263
Environment Canada Strategic Outcome: Canadians adapt to their environment in ways that safeguard their security, health and safety, support economic performance and enhance environmental quality			
Environment Canada Priority: Weather and environmental services			
Expected Results	Performance Status	Planned Spending	Actual Spending
Reduced impact of weather and related hazards	Long-term / On track	156	186
Adaptation to environmental changes	Long-term / On track	93	84
Totals		249	270

Overall Departmental Performance

PROGRESS AND PERFORMANCE HIGHLIGHTS

For 2005-2006, Environment Canada's activities were carried out within the framework of its Program Activity Architecture (PAA), guided by three strategic outcomes:

1. Protection from domestic and global sources of pollution
2. Conservation of biodiversity in healthy ecosystems
3. Canadians adapt to their environment in ways that safeguard their security, health and safety, support economic performance and enhance environmental quality

In the context of the changing operating environment, the department is revising its strategic outcomes and PAA to reflect the Government's priorities and directions.

For 2005–2006, the Department had identified the following priority areas to contribute to its strategic outcomes:

Priority: Environmental Sustainability Assessment

Environment Canada must work to ensure that its investment in science supports departmental services and policies and decision making by providing a comprehensive picture of the environment. The Department must demonstrate national consistency and leadership on science-based methods for environmental measurement, assessment and management and for reporting on the state of the environment. It must also create a comprehensive environmental prediction system in Canada, by bringing together predictive capabilities in air, water and ecosystem disciplines.

To follow through on this priority area for 2005–2006, Environment Canada planned to focus on

- developing an integrated research agenda for the Department;
- working cooperatively with our international partners to identify and address global environmental concerns;
- undertaking integrated environmental assessments with consideration of natural, social and economic science assessments;
- increasing capacity across the Department for environmental prediction to address priority issues; and
- developing a national assessment, monitoring, and reporting program that is integrated and sustainable.

Performance Highlights

- The Department's Science and Technology Branch was formed in September 2005. While previously scientific research was dispersed throughout the Department and served organizational units, now much of it is centralized in the Science and Technology Branch and it is being better aligned to Department priorities.

- Work began on the Department's first Science Plan, which is intended to ensure that Environment Canada's science is positioned to support the Department's evolving policy, program, and service needs. The Science Plan will clarify how Environment Canada's science can be integrated internally, and where the Department can collaborate, partner, and foster science integration within and outside the federal government. A Technology Plan is to follow.
- In 2005–2006, Environment Canada led the completion and submission of Canada's National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (including a national action plan on unintentionally produced POPs).
- Health Canada and Environment Canada worked to complete the systematic categorization of approximately 23 000 chemicals on the Domestic Substances List as required by CEPA 1999 to determine which substances pose a risk to human health and/or the environment. With its completion, Canada has become the first country in the world to have developed an information base on all the chemicals in commerce in order to determine the next priorities.
- A quantitative study of 25 years of international, peer-reviewed journal publications in environmental research showed that Environment Canada's position in environmental research is very strong. Environment Canada is in fact the top Canadian institution among the 50 most productive institutions in environmental research in the world, ranking seventh, and the top collaborator of 10 of the 14 other most productive Canadian institutions—making it the central hub of the Canadian network in environmental research.

Priority: Environmental Conservation and Protection

Despite many environmental accomplishments on a number of fronts (e.g. reducing the release of toxic pollutants and the use of harmful, ozone-depleting substances) there remain significant problems that have an impact both on the health and quality of life of Canadians and on the state of our environment.

Protecting the Canadian environment from pollutants and enhancing the country's natural capital are increasingly becoming the key to Canada achieving a competitive and environmentally sustainable economy. Major industrial sectors are demonstrating that the improvement of efficiencies and reduction of waste provide a competitive advantage, while enhancing environmental protection.

To do this, Environment Canada planned to concentrate its efforts in 2005–2006 on:

- levering the forces of the economy and competitiveness through sector sustainability tables to achieve environmental results;
- creating a clear and predictable environmental protection regime, which encourages and enables sustainable production and consumption;
- moving to halt/reduce the rate of decline in biodiversity;
- developing a more encompassing framework to serve broader conservation and resource management goals; and

- integrating resource-based, species-based management and conservation of habitat and protected areas using an ecosystem-based approach.

Performance Highlights

- The Canada-Quebec Agreement on the St. Lawrence 2005–2010 was signed on November 28, 2005. The fourth such agreement, the St. Lawrence Plan for Sustainable Development undertakes the concerted implementation of actions designed to conserve, protect and restore the ecosystem and recover uses. The Canadian and Quebec governments will provide funding of $80.8 million and $33.4 million respectively, over five years.
- In July 2005, the List of Wildlife Species at Risk under the Species at Risk Act (SARA) was amended to include 39 new species.
- Recovery strategies were prepared for species listed as extirpated, endangered and threatened. Six strategies were posted on the SARA Public Registry. In addition, over 200 strategies are in late stage development.
- Legislative amendments to CEPA 1999 and the *Migratory Birds Convention Act, 1994* (MBCA 1994) came into force in June 2005. Environment Canada focused on improved surveillance, closer interdepartmental cooperation for enforcement and, for migratory birds, improving our scientific understanding of marine bird populations.
- The Habitat Stewardship Program (HSP) for Species at Risk contributed $9 million towards 152 projects. This leveraged an additional $21 million investment from recipients for habitat conservation for 300 terrestrial and aquatic species at risk, as designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), in all provinces and one territory. Through HSP's 2005–2006 activities, 19 343 hectares of habitat were protected through long-term agreements and 138 538 hectares through temporary protection measures, and 4915 hectares of habitat were improved.
- In 2005–2006, 50 gifts of ecologically sensitive land worth $26.5 million were conserved through the Ecological Gifts Program. This represents an additional 6041 hectares of private land that have been protected for conservation purposes.
- Canada continues to meet all of its obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer. Since the inception of the Protocol, Canada has reduced its consumption of ozone-depleting substances by over 98 percent, reporting a further drop in its remaining consumption from 602.8 ODP tonnes in 2004 to 594.3 ODP tonnes in 2005. The phasing out of consumption of methyl bromide began on January 1, 2005.
- Environment Canada has adopted several regulations that play an important role in ensuring that Canadians have clean fuels. Compliance promotion served to inform and educate the regulated community on these CEPA 1999 air-related regulations. The combined efforts of Environment Canada's Fuel Program, compliance promotion and enforcement have resulted in a very high rate of compliance with regulations on substances of concern found in fuels and the *Sulphur in Diesel Fuel Regulations*.

- Canada's international obligations are met through the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* which were published in the *Canada Gazette*, Part II, on June 1, 2005, and came into force on November 1, 2005. The Regulations incorporate new authorities under CEPA 1999 and align with evolving international obligations under both the Basel Convention and Organisation for Economic Co-operation and Development (OECD) Council decisions.
- New regulations on polychlorinated biphenyls (PCBs) will consolidate the current *Chlorobiphenyls Regulations* and the current *Storage of PCB Material Regulations*.
- The Department established or initiated four Sector Sustainability Tables (SSTs)—Mining, Energy, Forestry, Cross-cutting Issues—for engaging key stakeholders from industry, civil society, Aboriginal peoples and provincial/territorial governments to provide advice on improving performance in a way that strengthens long-term competitiveness.

Priority: Climate Change

Addressing climate change will require significant reductions in greenhouse gas (GHG) emissions and adaptation actions over the long term. Environment Canada has been working to develop the strategic framework necessary to set and meet both near-term and long-term goals. Despite efforts to date, the most recent data indicates that GHG emissions in Canada have increased by 34.6 percent above the Kyoto target. **(**Canada's National Greenhouse Gas Inventory 1990-2004**)**

The Government is committed to addressing climate change, and is currently developing new policies and measures to address GHG emissions. These policies and measures will focus on achieving sustained reductions in emissions in Canada and transforming our economy for the long term. Canada has ratified the Kyoto Protocol and is looking at all means to achieve tangible, long-term reductions in GHG emissions.

In October 2006 the New Government announced *Canada's Clean Air Act*, the central component of its environmental Agenda. The Act and subsequent Notice of Intent to regulate demonstrate a clear commitment to the establishment of short-, medium- and long-term industrial air pollution and greenhouse gas emission targets. The proposed regulations would set realistic emission targets designed to reduce air pollutant and GHG emissions across the country. Short-term intensity-based GHG reduction targets would be set in consultation with provinces and territories and all affected industry sectors. Over the longer term, the Government is committed to achieving an absolute reduction in GHG emissions between 45 and 65 percent from 2003 levels by 2050.

For 2005–2006, the Department had planned to

- reframe and refine the climate change plan to address climate change over the long-term and to meet our Kyoto targets;
- work to ensure that the post-Kyoto international climate change regime meets Canada's interests; and

- help Canadians adapt to the effects of a changing climate.

Performance Highlights

- The Department developed a number of measures and proposals related to the implementation of the government's climate change plan that was in existence at the time.
- Canada successfully hosted the first meeting of the Parties of the Kyoto Protocol in Montreal in late 2005, where it was agreed that discussions on the form and function of a future climate change agreement for developing and developed countries alike would begin in 2006. Canada is an active participant in these discussions and is working towards an agreement that will result in real emissions reductions while considering national circumstances.
- In light of the change in direction and policy of the new government, earlier proposed program measures were not implemented and the Department has focused on developing a new approach on GHG emissions and air pollution.

Priority: Weather and Environmental Services

Whether speaking of water quality, species at risk, the perceived increase in severe weather, or poor air quality, changing weather patterns and environmental conditions can have a significant impact on the lives of Canadians and the environment around them. Subsequently, Canadians have come to depend on timely and reliable information regarding the weather and their external environment in order to make informed decisions during their day-to-day activities. Environment Canada is committed to providing the best possible weather and environmental services to safeguard the environment and the social and economic well-being of Canadians.

For 2005–2006, Environment Canada planned to focus on

- improving the accuracy and timeliness of environmental information and warnings;
- improving service and quality management so that the service is clearly based on the needs of users;
- developing new environmental products and tools to better respond to clients' changing needs;
- increasing partnerships in order to better leverage scarce resources and to facilitate private sector development; and
- providing Canadians with the information and tools they need to make better environmental and socio-economic decisions.

Performance Highlights

- In 2005–2006, the National Pollutant Release Inventory (NPRI) collected and made publicly available information from over 8000 industrial facilities on their 2004 releases, disposals and recycling of over 300 pollutants (including many toxic substances). The NPRI also published in the *Canada Gazette* the notice for 2006 reporting, which removes the mining exemption and adds a variety of substances, to bring the NPRI list to 341 substances. Efforts to continuously improve data quality, through compliance promotion, guidance to reporters and streamlined and integrated reporting, continued during 2005–2006.
- An Air Quality Index (AQI), used as the mechanism to communicate the air quality, is more intuitively understood by the public than actual concentrations of pollutants. The newly developed Air Quality Health Index (AQHI) is on the cutting edge of science and its presentation and format have been developed based on a significant body of public opinion research to ensure that the new index is easy to understand.
- In addition, to assist Canadians to better understand and be aware of air quality issues Environment Canada improved access to air quality information by upgrading Environment Canada's weather information website.
- Launched in June 8, 2005, Clean Air Online (CAOL) provides Canadians with information and tools that support action to reduce air emissions, illustrate the links between air emissions and health as well as environmental impacts, and broaden the understanding of sustainable community development issues (e.g. health and energy).
- Air quality conditions are forecast daily to 75 percent of the Canadian public and provide individual Canadians and institutions with the information required for decision making. The Air Quality Advisories/Warnings, which include INFO SMOG in Quebec, are issued jointly with provincial environment and health authorities and include health messages and mitigation action information. Canadians can follow these advisories/warnings to protect their health and that of their families in the same way that Canadians use the UV Index to protect themselves from the harmful effects of too much sun.
- The RésEau prototype portal has been completed and delivered. Through RésEau, water data are now accessible online through one portal which includes both federal government monitoring programs for water quality and quantity, as well as programs on groundwater availability, groundwater contamination, water use, and water and human health (disease outbreaks).
- Environment Canada participates in the Canada 511 Consortium with provinces and private companies to increase the availability of phone services related to weather and road conditions.

Priority: Departmental Transformation

In order to better contribute to the Government of Canada's Environmental Agenda and to achieve its strategic outcomes, the Department planned to also transform its approach to doing business in 2005–2006.

Performance Highlights

Policy Framework

- The ongoing development of the Competitiveness and Environmental Sustainability Framework has been an important step in changing the way Environment Canada and others think about environmental policy. It moves beyond previous thinking that sustainability is in conflict with economic growth toward a more complex and accurate vision in which environmental quality, human health and the competitiveness of our economy reinforce one another.
- The Framework, along with work on national environmental objectives and a natural capital approach to ecosystem management, as well as the implementation of sector sustainability tables, has the potential to fundamentally change the way people think about and address environmental challenges.

Results-based Management

- To deliver citizen-driven results, a new management model was needed in order to build and sustain the capacity to deal with cross-cutting issues that require collaboration within Environment Canada, across departments, with other levels of government, and with external partners. The new management model provides policy coherence, systematic clustering of capacity and more efficient use of resources focused on results.
- Similarly, a "one-department" management model for Environment Canada ensures that the Department is in the best position to coordinate a government-wide agenda, that the Department's accountabilities within that agenda are clearly understood, and that its resources, capacity and expertise are integrated and aligned to deliver policy outcomes.
- Environment Canada has used the planning and reporting tools that are available to all departments to align its activities and resources to the delivery of its policy framework. The Department has also developed additional tools to enhance results management capabilities and financial information related to results.
- Ongoing management within a results context requires an effective interface of oversight and direction from the senior management structures with the focus on delivery of results. Regular reporting on progress, supported by decision- and performance-related information and systems, will be key to keeping on track.
- The governance structure will make use of the built-in capacity to be flexible and nimble in terms of responding to changes in priorities. This will include the ability to make real-time reallocation of resources. A multi-year departmental work plan, based on the *Report on Plans and Priorities* and linked to expected results, will be a key instrument in setting and maintaining an integrated strategic and operational agenda to guide the work of the Department.
- The new governance and management structure implemented at Environment Canada provides for strong integration of policy and management, providing policy direction to drive management decisions, and a management system for delivery of policy outcomes. It also promotes policy coherence, by allowing the Department to work much more collaboratively to integrate policy.

Further information on Environment Canada's progress on all of the priorities noted above is included in sections II and IV of this report.

INDICATORS OF ENVIRONMENTAL SUSTAINABILITY

Indicators of long-term progress in the areas of a clean and healthy environment are reported in the annual report of the President of the Treasury Board *Canada's Performance 2005: The Government of Canada's Contribution*. The following indicators were displayed in the 2005 report:

Trend	Indicator	Performance Highlight
—	Air quality	Levels of several air pollutants have decreased since the mid- to late 1980s. Fine particulate matter concentrations have shown incremental increases since 2000. Also, the peak levels of ground-level ozone have remained relatively stable.
—	Water use	In 2001, average residential water use per person was 335.0 L per day—an increase of 8.0 L from the lowest rate in 1996, though an improvement over the previous survey results from 1999.
▼	Biodiversity	As of May 2005, the status of 147 species previously determined to be at risk had been reassessed. Of these, the status of 42 species worsened (28.6 percent) whereas 25 species (17.0 percent) were determined to be no longer at risk or placed in a lower risk category.
▼	Climate change	Canadian greenhouse gas emissions increased by 3.0 percent between 2002 and 2003 and by 24.0 percent since 1990. Furthermore, secondary energy use increased by 4.0 percent between 2002 and 2003, and by 22.0 percent since 1990.

In December 2005, the first version of an annual report on Canadian Environmental Sustainability Indicators was issued. These indicators respond to the May 2003 recommendation of the National Round Table on the Environment and the Economy that the federal government establish a small set of easily understood environmental and sustainable development indicators to track factors of importance to Canadians. The goal of these new national indicators of freshwater quality, air quality and greenhouse gas emissions is to provide Canadians with more regular and reliable information on the state of their environment and how it is linked with human activity. Environment Canada, Statistics Canada and Health Canada are working together to develop and communicate these indicators, with the cooperation and input of the provinces and territories.

The report showed that trends for air quality and greenhouse gas emissions both deteriorated between 1990 and 2003. It also showed that water quality pollutant guidelines for aquatic life are being exceeded, at least occasionally, at most of a selected number of monitoring sites across the country, as described in the following extracts from the report.

> **Air quality**: The air quality indicator presented in this report focuses on human exposure to ground-level ozone, a key component of smog. Ground-level ozone significantly harms human health and the quality of the natural environment.

Using observations from 79 primarily urban monitoring stations across Canada, this indicator presents a seasonal average concentration, adjusted for the number of people living near the monitoring stations. The national concentration of ground-level ozone increased 16 percent from 1990 to 2003. Stations in Southern Ontario had the highest average concentrations in 2003 and the most rapid rise from 1990.The pollutants that lead to ground-level ozone (nitrogen oxides and volatile organic compounds) are emitted primarily during fossil fuel combustion mainly in and around urban areas, especially by motor vehicles and thermal-electric power plants. Weather conditions—especially hot, stagnant air—and the movement of pollutants from other urban regions in Canada and the United States can boost the observed concentrations. This indicator will be complemented by a measure of fine particulate matter in future reports. Health Canada will evaluate how measurements of the different air pollutants can be combined to produce an integrated air health indicator.

Greenhouse gas emissions: The greenhouse gas indicator presented in this report focuses on total emissions of greenhouse gases countrywide. Emissions rose 24 percent from 1990 to 2003, and in 2003 were 32 percent above the target set by the Kyoto Protocol for 2008 to 2012. Thermal-electric power generation, motor vehicle use and fossil fuel production were the principal sources of the emissions increase. In contrast, while total emissions rose, emissions per unit of gross domestic product fell 13 percent from 1990 to 2003. The expansion of the Canadian economy, however, more than offset gains in emissions efficiency, resulting in a net increase in total emissions. Greenhouse gas emissions also grew faster than the Canadian population over the same period, resulting in a rise in emissions per person.

Freshwater quality: Good quality water is fundamental to ecosystems, human health and economic performance. The preliminary water quality indicator presented in this report focuses only on the ability of Canada's surface waters to support aquatic life over the period 2001 to 2003. For the 345 sites selected across the country, water quality was rated as "good" or "excellent" at 44 percent of the sites, "fair" at 31 percent and "marginal" or "poor" at 25 percent. Water quality in Canada is under pressure from a range of sources, including agriculture, industrial activity and human settlements. [1]

[1] http://www.statcan.ca/english/freepub/16-251-XIE/16-251-XIE2005000.pdf

Taking into account updated data and information, recent figures on GHG emissions, and an improved indicator of air quality, revised reporting information presented in the Canada's Performance reporting format will indicate the following:

Trend	Indicator	Performance Highlight
▼	Air quality	At the national level, the population weighted, warm season average of ground-level ozone increased 16 percent from 1990-2003. Ground-level ozone is a key component of smog and one of the most harmful air pollutants to which people are exposed. Ozone is an important indicator of air quality as there are currently no established thresholds below which it does not pose a risk to human health.
—	Water use	In 2001, average residential water use per person was 335.0 L per day—an increase of 8.0 L from the lowest rate in 1996, though an improvement over the previous survey results from 1999.
▼	Biodiversity	As of May 2006, the status of 163 species previously determined to be at risk had been reassessed. Of these, the status of 48 species worsened (29.4 percent) whereas 27 species (16.6 percent) were determined to be no longer at risk or placed in a lower risk category.
▼	Climate change	Canadian GHG emissions increased by 0.6 percent between 2003 and 2004 and by 26.6 percent since 1990. The increase in emissions was spurred by an economic growth of 47.8 percent between 1990 and 2004 but was mitigated by an increase in the level of energy efficiency in Canada of 13.6 percent during that timeframe.

These indicators will provide a useful basis for the Department's consideration of its programs and activities and setting future directions. Environmental issues are complex and making progress requires solutions that are delivered with commitment, collaboration and a long-term perspective. Transparency and accountability for results are also key.

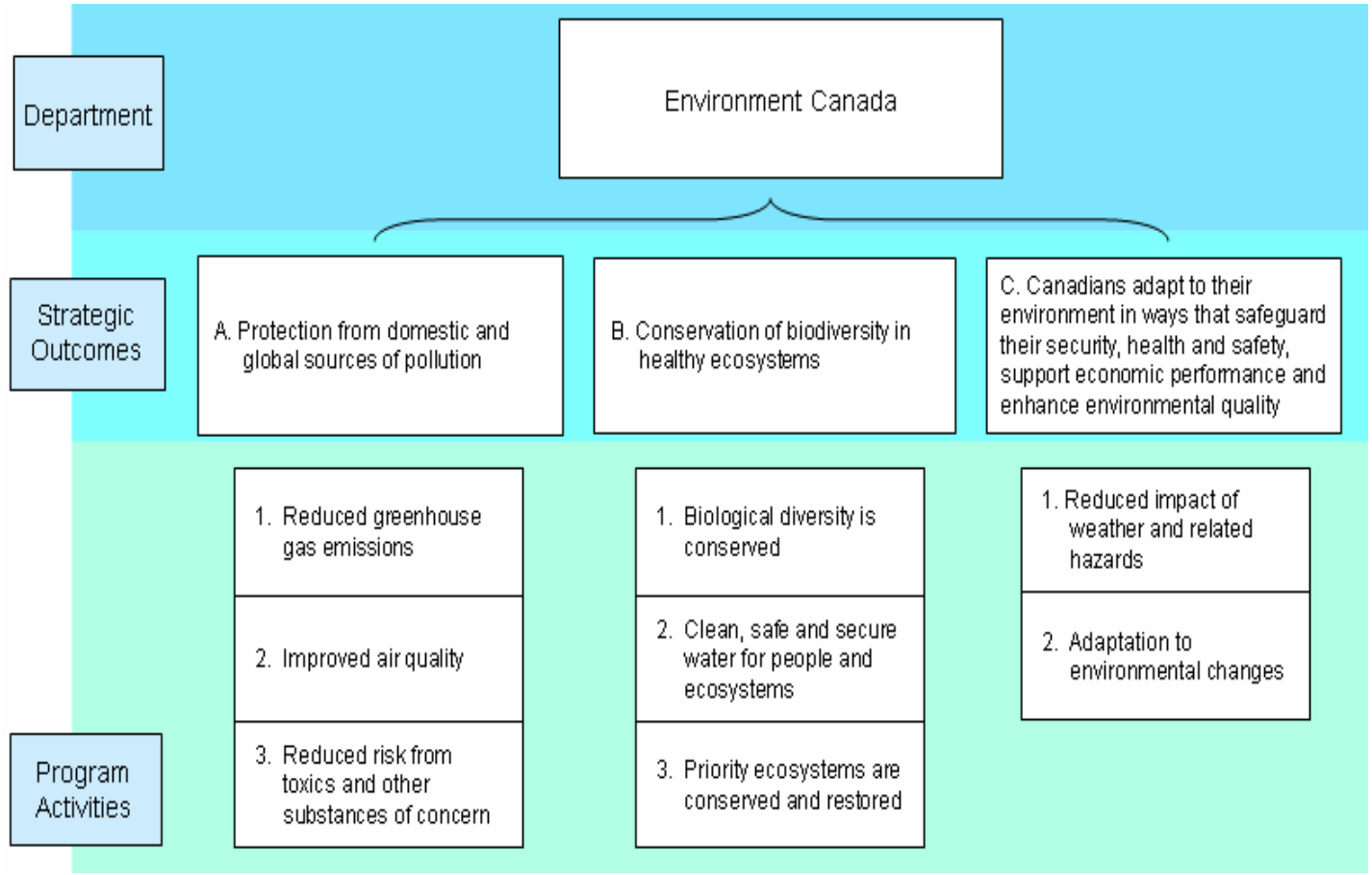
The following sections of the Departmental Performance Report provide detailed information about the activities and achievements of Environment Canada over 2005-2006 to address the priorities stated in its Report on Plans and Priorities for 2005-06 and to deliver on its mandate.

SECTION II

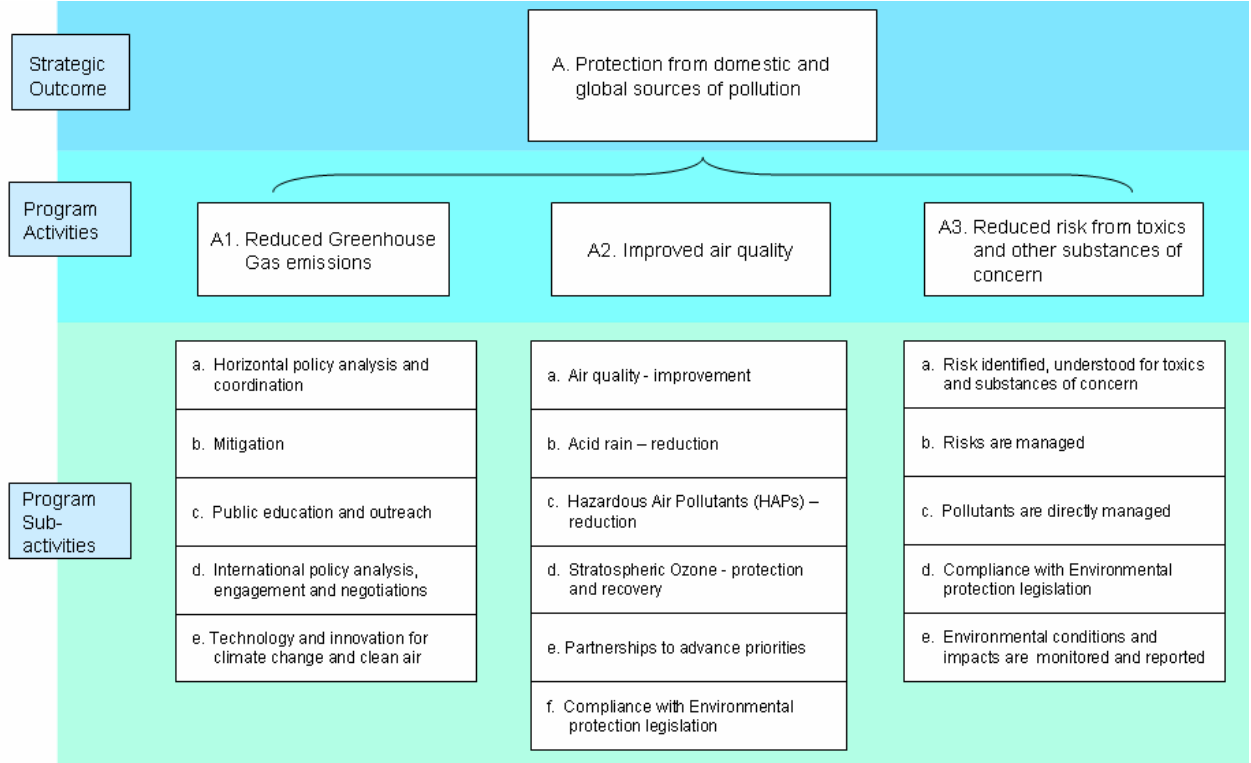
ANALYSIS OF PROGRAM ACTIVITIES BY STRATEGIC OUTCOME

Environment Canada's Program Activity Architecture

This section provides detailed information on departmental achievements for 2005-2006 according to its PAA, as displayed below.



Protection From Pollution Strategic Outcome



What is the issue?

Scientific research shows that human activities (particularly the use of fossil fuels and the clear-cutting of forests) are accelerating the concentration of greenhouse gases in the atmosphere. As a result, the earth's average temperature is getting warmer. This could have far-reaching environmental, social and economic consequences.

There are strong links between air pollution and health problems – especially for the elderly, children and for those with respiratory and cardiac problems. A large number of studies show that air pollution can lead to premature death, increased hospital admissions, more emergency room visits and higher rates of absenteeism.

There is some evidence that some chemicals are accumulating in humans and in our ecosystems—in lakes, rivers, wildlife and in the North.

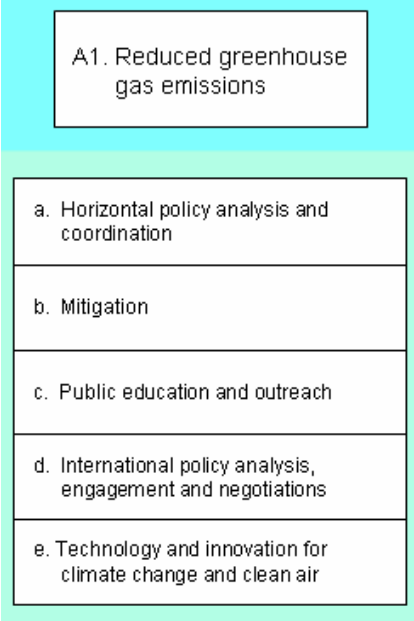
What are we doing about it?

Environment Canada has a role to play both in cleaning up the results of past contamination and in preventing more pollution. Experience has shown that the cost of cleaning up past contamination is much greater than the cost of preventing pollution in the first place. Our focus is therefore on prevention. We act on three fronts to protect Canadians and the environment from domestic and global sources of pollution. We seek to

- reduce greenhouse gas emissions;
- reduce the impact of human activity on the atmosphere and air quality; and
- prevent and reduce risks posed by toxic substances and other substances of concern to the environment and to human health.

Investment

Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
Reduced greenhouse gas emissions	54	84	76	137	263	127
Improved air quality	253	254	241	567	533	-34
Reduced risk from toxics and other substances of concern	193	201	191	1,331	1,533	202
Totals	**500**	**539**	**508**	**2,035**	**2,329**	**295**



Reduced greenhouse gas emissions

What are we doing about it?

Environment Canada has been part of global efforts to understand the science and impacts of global climate change since the mid-1970s. Working on the development of policies and plans to reduce greenhouse gas emissions has been a departmental priority since the late 1980s.

Are we succeeding?

The Department conducted evaluations of three climate change programs, namely the One-Tonne Challenge (OTC), the Pilot Emission Removals, Reductions and Learnings (PERRL) Initiative and the Opportunities Envelope (OE). These programs were selected because of the central role played by Environment Canada in shaping and implementing them and because they help Environment Canada to address its broader priorities by fostering multi-jurisdictional collaboration, enabling sound decision making, and empowering citizens to make informed decisions, and because of the need to respond to program-specific risks and issues.

The evaluations' findings and lessons learned were rolled up under common broad themes, including the following: greenhouse gas measurement is a young and complex area of activity; there is a need for clearer alignment between tools/approaches used and desired outcomes; overall certainty and coordination is needed when implementing initiatives. Learnings from these evaluations will be taken into account in the development of any future and relevant programs. A recent report of the Commissioner of the Environment and Sustainable Development also indicated the need to improve the management and coordination of climate change programming across government and to establish clear and measurable targets for GHG reductions.

Despite efforts to date, the most recent data indicates that GHG emissions in Canada have increased by 34.6 percent above the Kyoto target. **(**Canada's National Greenhouse Gas Inventory 1990-2004).

The Government is committed to addressing climate change, and is currently developing new policies and measures to address GHG emissions. These policies and measures will focus on achieving sustained reductions in emissions in Canada and transforming our economy for the long term. Canada has ratified the Kyoto Protocol and is looking at all means to achieve tangible, long-term reductions in GHG emissions.

In October 2006, the New Government announced *Canada's Clean Air Act,* the central component of its environmental Agenda. The Act and subsequent Notice of Intent to regulate demonstrate a clear commitment to the establishment of short-, medium- and long-term industrial air pollution and greenhouse gas emission targets. The proposed regulations would set realistic emission targets designed to reduce air pollutant and GHG emissions across the country. Short-term intensity-based GHG reduction targets would be set in consultation with provinces and territories and all affected industry sectors. Over the longer term, the Government is committed to achieving an absolute reduction in GHG emissions between 45 and 65 percent from 2003 levels by 2050.

Major programs and initiatives

In 2005–2006, the Department's policy and program strategies to reduce GHG emissions were focused on the design and development of a national climate change plan in cooperation with provinces/territories and stakeholders.

A proposed regulatory framework for GHG emissions from industrial sectors was elaborated in the Notice of Intent to Regulate Greenhouse Gas Emissions by Large Final Emitters, published in the *Canada Gazette*, Part I, on July 16, 2005. Detailed discussions were undertaken with individual sectors to define emission intensity targets to be set out in sectoral regulations.

On November 21, 2005, the Final Order to add greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride) to Schedule 1 of CEPA 1999, was published in the Canada Gazette, Part II.

Canada hosted the Eleventh Conference of the Parties (COP 11) to the United Nations Framework Convention on Climate Change in Montréal from November 28 to December 9, 2005. The meeting marked the beginning of discussion among countries to determine the longer-term global approach to climate change after 2012.

<table>
<tr><td colspan="2">Program Area: Reduced greenhouse gas emissions</td></tr>
<tr><td colspan="2">Activities: Help Canada implement near-term and enduring emission reductions, set long-term goals to make the deep emission reductions needed to successfully address climate change and start working towards these goals.</td></tr>
<tr><td colspan="2">Indicators: Carbon dioxide concentrations and global GHG emissions.</td></tr>
<tr><th>Expected Results</th><th>Progress</th></tr>
<tr><td>Sustainable electricity production and use.</td><td rowspan="4">A new plan to achieve reductions in both air pollutants and GHG emissions is being developed and implemented.</td></tr>
<tr><td>Sustainable transportation.</td></tr>
<tr><td>Clean and efficient industry.</td></tr>
<tr><td>Sustainable cities.</td></tr>
</table>

Program Area: Reduced greenhouse gas emissions	
Activities: Provide leadership in bridging to a new sustainable global climate change regime.	
Indicators: Canada's level of progress in implementing the Kyoto Protocol and level of progress in developing a sustainable post-Kyoto climate change framework.	
Expected Results	**Progress**
Continue to make progress in international implementation of key provisions in the Kyoto Protocol.	Canada continues to participate in negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, working to advance its positions while collaborating with the other Parties to the UNFCCC to resolve blockages on key issues.
A framework for a new sustainable international climate change framework that includes all industrialized countries and key developing countries and has commitments and time frames based on the long-term transformative changes that are required globally.	Canada successfully hosted the first meeting of the Parties of the Kyoto Protocol in Montréal in late 2005, where it was agreed that discussions on the form and function of a future climate change agreement for developing and developed countries alike would begin in 2006. Canada is an active participant in these discussions and is working towards an agreement that will result in emission reductions while considering national circumstances.
Bilateral agreements with key developing countries.	Canada continues to engage key countries in both a strategic policy dialogue on post-2012 international cooperative actions under the UNFCCC, as well as on results-oriented cooperation on other ongoing initiatives to reduce GHG emissions. The Canada-China Co-operation on Wind Energy Science Agreement is successfully ongoing on wind energy mapping and implementation of WEST software activities.

Program Area: Horizontal policy analysis and coordination	
Activities: Leadership and coordination of: domestic policy for developing and implementing a national climate change plan together with Natural Resources Canada and including collaboration with other government departments, provinces, territories, municipalities, academics and the private sector; modelling and analysis; climate change communications; strategic coordination of clean-air co-benefit analysis, options analysis and development.	
Indicators: Canada's level of progress in implementing the Kyoto Protocol and level of progress in developing a sustainable post-Kyoto climate change framework.	
Expected Results	**Progress**
Development of a clear strategy to drive the transformational change needed across the Canadian economy to move towards Kyoto and be firmly grounded in the long-term objective.	A new plan to achieve reductions in both air pollutants and GHG emissions is being developed and implemented.
Transformative technologies are available.	
The full suite of policy instruments is used.	
Provinces and territories are better engaged.	

Program Area: Mitigation	
Activities: Work related to the realization of GHG emission reductions and removals from many sectors including built environments, industry, transportation and other energy-intensive sectors.	
Indicators: Canadian fossil fuel consumption and secondary Canadian energy use.	
Expected Results	**Progress**
Industries, the transportation sector and Canadian cities accelerate their efforts to reduce GHG emissions to assist in meeting Canada's Kyoto Protocol objectives.	A new plan to achieve reductions in both air pollutants and GHG emissions is being developed and implemented.

Program Area: Public education and outreach	
Activities: Activities to help individual Canadians to do their part in meeting the climate change challenge.	
Indicators: Average level of GHG emissions produced by individual Canadians.	
Expected Results	**Progress**
Canadians are actively engaged in the One-Tonne Challenge and in emission reduction actions.	The One-Tonne Challenge program undertook a number of joint promotions with retailers and utilities to encourage consumers to make informed decisions and purchases. Community challenges were supported in approximately 40 Canadian communities. In addition, individuals could access tips, and information was provided through print and Web-based products. The One-Tonne Challenge program was operational for the fiscal years 2004–2005 and 2005–2006. This program has been terminated.
Canadians take energy efficiency/conservation considerations into account in their purchasing, use and lifestyle decisions.	

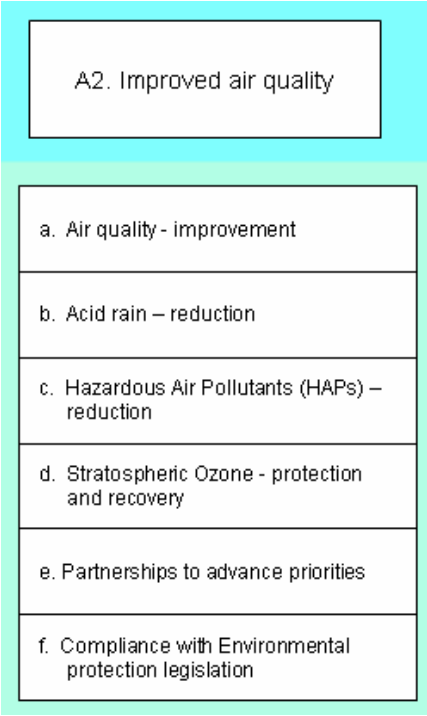
Program Area: International policy analysis, engagement and negotiations	
Activities: Leadership of Canada's participation in the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol processes and in the negotiation of a post-2012 climate change regime.	
Indicators: Canada's level of progress in developing a sustainable post-Kyoto climate change framework.	
Expected Results	**Progress**
Establish bilateral action plans with key countries on climate change cooperation beyond 2012, and begin discussions on the form a post-2012 agreement will take.	Canada participates in multilateral fora both within and outside the United Nations climate change process and is actively collaborating with other key countries to create opportunities and develop solutions that will reduce the emission of GHGs.
In collaboration with key international partners, develop options for a sustainable international climate change post-Kyoto framework that includes all industrialized countries and key developing countries. Advance the policy framework for this new agreement by leveraging our bilateral agreements.	Canada actively engaged all key Parties to the United Nations Framework Convention on Climate Change (UNFCCC) on the design of an effective long-term climate change agreement in preparation for the first meeting of the Parties to the Kyoto Protocol in Montréal in late 2005. As a result, consensus was reached to begin discussion in 2006 on the form and function of an agreement that will deliver deeper global reductions of GHG emissions.

Program Area: Technology and innovation for climate change and clean air	
Activities: Advancing the research, development, demonstration and deployment of innovative climate-friendly technologies for realizing GHG reductions, through project support programs and the assessment of ancillary technology benefits such as clean air.	
Indicators: Level of deployment and commercialization of innovative climate-friendly technologies.	
Expected Results	**Progress**
Advancing most promising innovative and climate-friendly technologies through research and development (R&D), demonstrations and environmental assessments; or accelerating those technologies in advanced stages of development, as identified through the existing climate change technology R&D work (1998–2005), for enhanced commercialization and deployment through various existing or new mechanisms.	A new plan to achieve reductions in both air pollutants and GHG emissions is being developed and implemented.
Accelerated R&D, demonstration and deployment of innovative climate change technologies, domestically and internationally, for enhancing GHG reductions, clean air benefits and other environmental benefits.	

For more information

Arctic Climate Impact Assessment	http://www.acia.uaf.edu/
Greenhouse Gas Reporting Site	http://www.ghgreporting.gc.ca
Greenhouse Gas Sources and Sinks	http://www.ec.gc.ca/pdb/ghg/ghg_home_e.cfm
Intergovernmental Panel on Climate Change	http://www.ipcc.ch/
Pilot Emission Removals, Reductions and Learnings Initiative	http://www.ec.gc.ca/PERRL/home_e.html
United Nations Framework Convention on Climate Change	http://unfccc.int/2860.php

Improved air quality



What is the issue?

Clean air is essential to both human and ecosystem health. Most air pollutants come from the combustion of fossil fuels in motor vehicles, factories, industrial or thermal power plants, home furnaces and wood-burning fireplaces. Some of the main air pollutants in Canada are sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), airborne particles (also known as particulate matter or PM) and carbon monoxide (CO). Volatile organic compounds and nitrogen oxides react in the presence of sunlight, heat and stagnant air to form ground-level ozone (O_3), which leads to the creation of smog. Air pollution knows no borders; air pollutants in Canada come from significant sources within Canada as well as from other countries.

Smog is a noxious mixture of ground-level ozone and fine particulate matter that can often be seen as a haze in the air. It aggravates respiratory ailments and increases the occurrence of cardio-respiratory diseases. The finer particles—those with diameters equal to 2.5 micrometres ($PM_{2.5}$) or less—pose the greatest threat to human health because they can travel deepest into the lungs. Particularly vulnerable to smog are people with heart or lung disease, the elderly and small children. The air pollutants SO_2 and NO_x also cause acid rain, which continues to severely stress ecosystems through the acidification of forests, wetlands, lakes, rivers and streams.

Air quality is measured by the concentration of pollutants in the air. Concentrations of O_3 and PM are among the pollutants measured by monitoring networks in Canada.

What are we doing about it?

Ongoing activities include air quality monitoring, forecasting and reporting; producing year-round air quality forecasts; delivering summer smog forecast programs in collaboration with provinces and municipalities; developing *Canadian Environmental Protection Act, 1999* (CEPA 1999) regulations for the VOC content of three major product categories; and developing voluntary instruments such as Environmental Performance Agreements with two major user sectors.

Plans and priorities over the three-year planning period included continuing to implement the federal 10-year Agenda on Cleaner Vehicles, Engines and Fuels (2001–2011) and the federal Agenda for the Reduction of Volatile Organic Compound (VOC) Emissions from Consumer and Commercial Products (2004–2010) (with Health Canada); updating national environmental codes of practice for the iron and steel sector to include emission limits for smog precursor gases (in 2006–2007); exploring the potential to establish codes of practice for additional industrial sectors (by 2006–2007); completing the two-year Joint Canada-U.S. projects on air quality in the Georgia Basin-Puget Sound and the Windsor-Detroit area (in 2006) and extending the adoption of PM into provincial air quality indices across Canada.

Internationally, Canada is committed to reducing transboundary sources of air pollution through international agreements such as the Canada-United States Air Quality Agreement, the United Nations Economic Commission for Europe's Convention on Long-range Transboundary Air Pollution, the Stockholm Convention on Persistent Organic Pollutants (POPs), and the United Nations Environment Programme's Mercury Programme.

Are we succeeding?

Air pollution represents a serious threat to human health, the environment and the competitiveness of Canada's economy. Accordingly, the Government of Canada is committed to protecting our country's air quality. Federal actions on air have combined numerous approaches to achieve success in the following areas: transboundary air pollution, transportation emissions, major industrial emissions, scientific advancement and public engagement.

To support air quality improvement, data and targets have been continuously improved. Environment Canada has provided data analysis products and scientific advice to track and understand changes in atmospheric composition, and to monitor the effectiveness of air quality policies, regulations and standards. Since the signing of the Ozone Annex to the Canada-United States Air Quality Agreement, for example, data shows that transboundary flows of powerplant NO_x emissions in the Eastern United States and in Ontario have decreased substantially (by 50 percent in the U.S. between 2000 and 2004, and by almost 50 percent in Ontario between 1990 and 2005).

Reductions in emissions, including VOCs, from vehicles, engines and fuels are being furthered through regulatory amendments. These regulations are part of a series of regulatory actions taken by the Government of Canada in recent years that have contributed to a reduction in emissions from vehicles, engines and fuels. Additional emission reductions were also achieved by providing funding for the retrofitting of heavy-duty vehicles, such as transit and school buses, with advanced emission control technologies. Funding was also provided to accelerate vehicle scrappage programs aimed at retiring older, high-emissions automobiles from the roads and replacing them with more sustainable transportation. In industrial and other sectors, successful provincial negotiations will lead to a reduction in mercury emissions from coal-fired electricity generation and to new approaches to reducing emissions from the petroleum refining sector.

Canadians will also be better equipped to understand air quality information and to take appropriate actions. The newly developed Air Quality Health Index is on the cutting edge of science and its unique, easy-to-understand presentation format was developed with a significant body of public opinion research. Clean Air Online, a one-stop Government of Canada Web portal on air issues, was launched on June 8, 2005.

Environment Canada continued to address acid rain by working with provinces and territories to implement the Canada-Wide Acid Rain Strategy for Post-2000 and through international collaboration. Overall, the levels of sulfate in precipitation are declining (however the environment is not recovering as quickly as anticipated). Canada is meeting all of its national and international commitments to reduce emissions of acidifying pollutants.

Concerning the protection and recovery of stratospheric ozone, Canada has reduced its consumption of ozone-depleting substances by over 98 percent—and reported a drop in production from 602.8 ODP tonnes in 2004 to 594.3 ODP tonnes in 2005.

Compliance and environmental protection legislation are important elements of Environment Canada's success. The Department actively promotes environmental laws, informs and educates the regulated community, and conducts enforcement activities. Initiatives such as vehicle inspections address many of these activities simultaneously; during 2005–2006, 9669 inspections were conducted under CEPA 1999 and the pollution prevention provisions of the *Fisheries Act*.

Environment Canada will be conducting an evaluation focused on the regulation of smog-causing emissions in transportation sector.

Major programs and initiatives

<table>
<tr><td colspan="2">Program Area: Air quality improvement</td></tr>
<tr><td colspan="2">Activities: National Air Pollution Surveillance (NAPS) Network; Canadian Air and Precipitation Monitoring Network; National Air Quality Prediction Program; INFO-SMOG; National Pollutant Release Inventory (NPRI); national comprehensive air pollutant emissions inventories; Clean Air Day; Commuter Challenge; vehicle scrappage program; Canada-wide standards for PM and O_3; reduction of air pollutants from industrial sectors; residential wood heating; CEPA 1999.</td></tr>
<tr><td colspan="2">Indicators: Trends in peak levels of ground-level ozone and annual average concentrations of various air pollutants (such as NO_X, VOC, SO_2 and $PM_{2.5}$).</td></tr>
<tr><th>Expected Results</th><th>Progress</th></tr>
<tr><td>Targets are continuously improved.</td><td>Environment Canada made significant progress over the past five years in strengthening ambient air quality monitoring, emissions reporting and scientific research in support of national air quality efforts.

Since 1991 annual concentrations of VOCs from urban monitoring stations have decreased by 50 percent; NO_2 by 28 percent; NO by 50 percent; and SO_2 by 47 percent (up to 2003). Annual $PM_{2.5}$ concentrations decreased 35 percent between 1990 and 2003. Over the past 15 years the fourth daily maximum 8-hour ozone concentrations have remained unchanged.

Environment Canada also provided data analysis products and scientific advice to aid in tracking and understanding changes in atmospheric composition in order to monitor the effectiveness of air quality policies, regulations and standards (e.g. analyses and products for the Canada-Wide Standard, keeping-clean-areas-clean programs, and continuous improvement initiatives)

In the Great Lakes Basin and other Canadian ecosystems, Environment Canada completed acid deposition and critical loads exceedance products, and analysis products for mercury in air and precipitation.

For the Canadian Air and Precipitation Monitoring Network and the Canadian Atmospheric Mercury Measurement Network, Environment Canada made publicly available annual quality-controlled data sets acquired for air quality ozone, SO_x, NO_x, primary and secondary particulate matter, and metals (mercury).</td></tr>
</table>

Reduced transboundary flows of air pollution.	In 2005, three Canada-U.S. reports were released that explored transboundary airsheds and caps and cross-border emission trading in the electricity sector: *Canada-United States Emissions Cap and Trading Feasibility Study*; *Great Lakes Basin Airshed Management Framework Pilot Project*; and *Maintaining Air Quality in a Transboundary Air Basin: Georgia Basin-Puget Sound*. Taken together, the three joint projects advanced the common understanding of the air quality issues in these two airsheds and their possible solutions and of the possibilities that emission caps and cross-border emission trading could have for improving air quality in Canada. The *Canada-United States Transboundary PM Science Assessment* provided evidence that transboundary PM is an issue of concern. A recommendation was endorsed in 2004 by U.S. and Canadian environment ministers to work toward a decision to address PM under the Canada-United States Air Quality Agreement.
Reduced emissions from vehicles, engines and fuels.	Environment Canada continued to make regulatory progress, including work on the following legislation: - Amendments to the *Off-Road Compression-Ignition Engine Emission Regulations*—anticipated publication in the *Canada Gazette*, Part I, in February 2007 - *Marine Spark-Ignition Engine and Off-road Recreational Vehicle Emission Regulations*—anticipated publication in the *Canada Gazette,* Part I, in fall 2006 Environment Canada and the Canadian Urban Transit Association have partnered to achieve real and quantifiable benefits toward clean air by retrofitting urban transit buses with diesel oxidation catalysts. Environment Canada has undertaken a number of regional initiatives to address marine vessel emissions, include the following: - requiring vessel emission mitigation as part of the *Canadian Environmental Assessment Act* process for marine terminal projects, such as the Deltaport Third Berth - demonstrating emission control technology on BC Ferries' *Queen of New Westminster* - developing "Best Emission-Reducing Practices for New and Existing Marine Container and Bulk Terminals" - compiling estimates of ship and port emissions in the Lower Fraser Valley Environment Canada has also led or participated in land-side emission reduction projects in the Pacific and Yukon Region with a primary goal of reducing health impacts from diesel engines. These projects include the following: - Retrofitting 550 school buses throughout British Columbia with emission reduction devices - Retrofitting municipal vehicles such as garbage trucks and street sweepers to reduce diesel emissions - Encouraging the use of biodiesel through trials based in Victoria and Vancouver - Developing a calculator tool to educate fleet managers and governments on how best to reduce diesel emissions from their particular engines - Hosting workshops to inform fleet managers of the impacts of diesel emissions and methods to reduce these emissions

Reduced emissions from industrial and other sectors.	A revised version of Environment Canada's Protocols and Performance Specifications for Continuous Monitoring of Gaseous Emissions from Thermal Power Generation, Report EPS 1/PG/7 was published in November 2005: http://www.ec.gc.ca/cleanair-airpur/CAOL/electricity_Generation/protocols_performance/toc_e.cfm. Environment Canada obtained approval-in-principle from Ministers of the environment on a Canada-wide standard to reduce mercury emissions from coal-fired electricity generation, and began development of the complementary monitoring protocol. The Canadian Council of Ministers of the Environment's National Framework for Petroleum Refinery Emission Reductions was released in May 2005. The Refinery Framework has been developed as a new approach to reduce emissions from the petroleum refining sector in Canada and is expected to lead to significant reductions of criteria air contaminants and benzene. A strategy on residential wood burning for 2005-2010 was approved by the Department in January 2006. Environment Canada continued to implement the national action plan for residential wood combustion with the publication of a model municipal by-law, and an ongoing outreach campaign. The Department continued to chair the Intergovernmental Working Group on Residential Wood Combustion. It initiated a process to update the CSA B415-1 standard on residential wood burning appliances.
Public engagement to reduce air pollution.	Support was provided to Canadian organizations that work toward reducing air pollution. These included Pollution Probe for the development of a green power procurement guide and other related activities, and the Canadian Solar Industries Association for the provision of information on the environmental attributes (e.g. life cycle costs) of solar technologies. The 6th annual Clean Air Day was celebrated across Canada and tens of thousands of Canadians were engaged in activities to improve air quality and reduce greenhouse gas emissions. Environment Canada sponsors Clean Air Day along with environmental non-governmental organizations, the private sector, other government departments and other levels of government. The Department contributed to activities like the Canadian Urban Transit Association's sustainable transportation awareness campaign (delivered in 65 communities), Go for Green's Commuter Challenge, and many local events that provide information on air quality issues and encourage personal actions.
Canadians understand how to interpret air quality information and are aware of actions they can take.	An Air Quality Index, used as the mechanism to communicate the air quality, is more intuitively understood by the public than actual concentrations of pollutants. The newly developed Air Quality Health Index (AQHI) is on the cutting edge of science. Its presentation and format have been developed based on a significant body of public opinion research to ensure that the new index is easy to understand. In addition, to assist Canadians to better understand and be aware of air quality issues, Environment Canada improved access to air quality information by upgrading the Meteorological Service of Canada website. An internal smog day count was created to provide quick access to enquiries by the media and others on smog events. Extensive internal training was provided to warning preparedness meteorologists to enhance outreach to Canadians on air quality. In collaboration with Environment Canada's Environmental Protection Service an air quality advisory service was developed for Government of Canada staff in the Ottawa area with expansion expected in following years.

	Launched on June 8, 2005, Clean Air Online provides Canadians with information and tools that support action to reduce air emissions, illustrate the links between air emissions, health and environmental impacts, and broaden the understanding of sustainable community development issues (e.g. health, energy).
Canadians take action to reduce air pollution.	Air quality conditions are forecast daily to 75 percent of the Canadian public and provide individual Canadians and institutions the information required for decision making. Air quality advisories/warnings, including Info-SMOG in Quebec, are issued jointly with provincial environment and health authorities. These warnings include health messages and mitigation action information Canadians can follow to protect their health and that of their families, and work in much the same way as the UV index that helps protect Canadians from the harmful effects of too much sun. Environment Canada currently provides funding through contribution agreements to seven programs operated by local grassroots organizations across Canada. Voluntary accelerated on-road vehicle scrappage programs are designed to improve air quality by permanently removing older, high-emitting vehicles from the roads. Owners of vehicles who qualify can choose to scrap their vehicle in exchange for one of the incentives offered in their localities. These may include a transit pass, a rebate toward the purchase of a new or newer vehicle, or a rebate toward the purchase of a new bicycle.
The science and modelling related to particulate matter is improved and particulate matter is included in the national air quality forecasting program.[SDS1.1.3]	Knowledge of the fate and transport of particulate matter (PM) has been improved through Canadian participation in international activities to measure and predict PM. Predictions of PM have been included in the air quality forecasting program. The PM component of Environment Canada's Unified Regional Air Quality Modelling System has been evaluated and improved with data from the ICARTT (International Consortium for Atmospheric Research on Transport and Transformation) and prAIRie 2005 field studies. The improved model is to be used in the next generation air-quality forecast system, GEM-MACH.
A Canada-wide health-risk-based air quality index is developed in partnership with the medical community, non-governmental organizations (NGOs) and provinces/territories and disseminated within a daily air quality forecasting program across Canada.[SDS1.3.1]	Environment Canada and Health Canada have been collaborating with provincial health departments, local health agencies and NGOs to develop a national Air Quality Health Index. The new index is a personal health protection tool that, when implemented, will provide Canadians with a more accurate description of the health risk associated with real-time and forecasted air quality conditions in their communities. Development of the tool has matured to the point where it is undergoing operational testing in British Columbia (summer 2005 and summer/fall 2006) and Nova Scotia (summer 2006). The intent is to make the index ready for adoption by the provinces and municipalities in the spring of 2007. Border Air Quality Strategy field study measurements were made in British Columbia and Ontario to define exposure, sources and receptors of pollutants.

Program Area: Acid rain reduction	
Activities: Continue working with provinces and territories through the Canadian Council of Ministers of the Environment to implement the Canada-Wide Acid Rain Strategy for Post-2000; conduct ecosystem monitoring; publish acid rain science assessment (in 2005).	
Indicators: Emissions of sulphur dioxide and nitrogen oxide emissions; size of area receiving wet sulphate deposition in excess of critical load; size of areas receiving total acid deposition in excess of critical load.	
Expected Results	**Progress**
Continued national, bilateral and multilateral progress on acid rain.	Environment Canada completed the *Canadian Acid Deposition Science Assessment* in 2005. It provides continuing justification for implementation of the Canada-Wide Acid Rain Strategy for Post-2000. Jointly with the U.S., Canada is working towards securing further reductions in transboundary flows of acidifying pollutants. Collaboratively with provinces and territories, critical loads for acid deposition are being developed for regions of western Canada because of concerns of potential acidification as emissions increase. National science and monitoring priorities are being identified because ecosystems are not recovering as expected in response to decreasing emissions, and current programs are inadequate to track changes in ecosystem response to emission reductions. Environment Canada maintained chemical and biological monitoring of selected aquatic ecosystems in southeastern Canada to assess their responses to reduced acid rain and to evaluate the adequacy of SO_2 and NO_X emission reduction programs. The Department initiated lake surveys in western Canada to define which regions are most sensitive to acid rain and quantify the level of acid input they can tolerate without experiencing ecological damage. Environment Canada participates in international programs with U.S. and European partners to assess broad regional effects of air pollution and acid rain on surface waters, e.g. continuing acidification or recovery. Canada is meeting all of its national and international commitments to reduce emissions of acidifying pollutants.

Program Area: Hazardous air pollutants reduction	
Activities: Active participation in fora such as the Stockholm Convention on Persistent Organic Pollutants (POPs) and the United Nations Economic Commission for Europe POPs and heavy metals protocols; support international control regimes for POPs and heavy metals; implement Canada-wide standards for mercury emissions and products.	
Indicators: Atmospheric deposition of POPs and mercury into Canada's ecosystems; participation in and implementation of international agreements and programs.	
Expected Results	**Progress**
Continued national, bilateral and multilateral progress on hazardous air pollutants (HAPs).	Environment Canada has advanced international actions to control emissions of mercury, cadmium and lead. In 2003, the Heavy Metals Protocol to the Convention on Long-range Transboundary Air Pollution entered into force. Environment Canada leads Canada's participation in this forum. During 2005–2006, Environment Canada continued to lead Canada's participation in the Mercury Programme of the United Nations Environment Programme (UNEP).

	In 2005–2006, Environment Canada led the completion and submission of Canada's National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (including a national action plan on unintentionally produced POPs). In 2005–2006, Environment Canada also continued to lead international efforts to control POPs by lending its scientific, technical and legal expertise on international POPs work. The Department also actively participated in the successful second meeting of the Conference of the Parties to the Stockholm Convention in May 2006, where it advanced Canada's priorities. Environment Canada supported the Stockholm Convention by leading the implementation of a global POPs sampling program, thereby improving understanding of the global distribution of POPs. The Department initiated Canada's participation in a UNEP partnership on the fate and transport of mercury. Canada met its reporting obligations under the POPs and Heavy Metals Protocols for the 2004 reporting year. The Canadian delegation to the Arctic Council, led by the Minister of the Environment, focused on key environmental issues in the Arctic, including health impacts of airborne hazardous air pollutants.

Program Area: Stratospheric ozone protection and recovery	
Indicators: Annual production and consumption of controlled ozone-depleting substances (ODSs) in Canada and globally.	
Expected Results	**Progress**
Continued national, bilateral and multilateral progress on stratospheric ozone protection and recovery.	Canada continues to play an active role in the work of the Montreal Protocol by developing multilateral measures and policies; by participating in technical, scientific and policy committee work; by participating in the management of the Multilateral Fund (MLF) and by conducting bilateral assistance projects with key developing countries. Scientific contribution is being made to the UNEP *Scientific Assessment of Ozone Depletion* (e.g. an Environment Canada scientist was commissioned as a lead author in the assessment).
Continue to meet obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer.	Canada continues to meet all of its obligations under the Montreal Protocol. Since the inception of the Protocol, Canada has reduced its consumption of ozone-depleting substances (ODSs) by over 98 percent, reporting a further drop in its remaining consumption from 602.8 ODP tonnes in 2004 to 594.3 ODP tonnes in 2005.
Continue implementation of the domestic ODS program.	Consumption of methyl bromide has been phased out starting January 1, 2005.
Provide assistance to developing countries in meeting their Montreal Protocol obligations.	The Department led Canada's participation in three Montreal Protocol MLF Executive Committee meetings in 2005–2006. Over 270 new projects were reviewed and approved by the Executive Committee to phase out ozone-depleting substances (ODSs) in developing countries. As documented by the MLF Secretariat, in 2005, 62 460 ODP tonnes of ozone-depleting substances were phased out as a result of MLF projects. Under Environment Canada's Montreal Protocol Bilateral Program, ten bilateral projects were being implemented in 2005–2006 and three new bilateral projects were developed. All projects are being successfully implemented.

	Project activities have changed participants' behaviours regarding ODS use, often leading directly to reductions in the consumption of ODSs in developing countries.

Program Area: Partnerships to advance priorities	
Activities: Increasing the number of environmental and related human health problems that are addressed by establishing partnerships focused on corrective action, e.g. the delivery of EcoAction 2000 projects.	
Indicators: Number of new community projects and international partnerships.	
Expected Results	**Progress**
Community-based partnerships—EcoAction: Greehhouse gas (GHG) emissions are reduced in support of the One-Tonne Challenge initiative.	Seventy new projects were initiated in 2005–2006 that aimed to reduce GHG emissions from transportation, home energy use, purchasing decisions and other sources. Many of these GHG projects also benefited air quality. In total, with all EcoAction priorities combined, 185 projects were initiated.
Community-based partnerships—EcoAction: Community projects are funded in support of water and air quality objectives.	Thirty-five new projects were initiated in 2005–2006 that aimed to improve water quality through efforts such as water conservation and diversion of hazardous household wastes. Two new projects worked to improve air quality, such as reducing emissions that contribute to smog. The total number of projects initiated for all priorities combined was 185.
International-based partnerships: International partnerships to promote international environmental policies are developed and implemented.	In September 2005, Canada became a participant in the Implementing Agreement for Renewable Energy Technology Deployment of the International Energy Agency. This Agreement oversees international collaborative activities seeking to advance renewable energy technology improvement and cost reduction for all renewable energy technologies. As part of continued implementation of the Canada-China Framework Statement for Cooperation on Environment into the 21st Century, the Joint Committee on Environment Cooperation, discussed: environmental impact assessments, emergency preparedness and response, Green Olympics 2008, cooperation with the environmental protection industry, green procurement and environmental labelling. As part of the Canada-Korea Free Trade Negotiations, Environment Canada has co-led the negotiations of the Canada-Korea Environmental Cooperation Agreement (ECA), which sets out a list of cooperative activities in which the two countries may wish to engage. Environment Canada was the Canadian executive agency for the delivery of the Canada-India Environmental Institutional Strengthening Project. The main goal of the project was to strengthen India's capacity to tackle pressing environmental issues, such as air quality, hazardous waste and toxic substances.
International-based partnerships: The objectives of the North American Agreement on Environmental Cooperation are implemented.	Environment Canada provided expert advice and analysis for the development of the Commission for Environmental Cooperation's (CEC) report entitled *Children's Health and the Environment in North America: A First Report on Available Indicators and Measures* that was released on January 26, 2006. This report provides decision makers and the public with information on the status of key parameters related to children's health and the environment in North America. The report presents national data on thirteen indicators in three general areas: asthma and respiratory disease, the effects of lead and other toxics (including pesticides), and waterborne disease.

	The renewable energy program was initiated in 2005 with the establishment of a Renewable Energy Advisory Committee, comprised of multi-stakeholder experts from Canada, Mexico and the U.S. Since its inception, the program has successfully implemented several projects aiming to address barriers to renewable energy deployment in North America. The results from these projects are posted on the CEC website. For example in *Project 3: Enhancing North American Air Management*, Environment Canada continued its support for the sustainable infrastructure plan for emissions inventories and reporting in Mexico. The goal was to develop and implement a communications strategy to disseminate the results of the Mexico National Emissions Inventory to decision makers and the public. This project is expected to be completed in the fall of 2006.

Program Area: Compliance with environmental protection legislation	
Activities: Informing and educating the regulated community about environmental laws and securing its commitment to compliance. Compliance is achieved through compliance assurance, compliance promotion, and enforcement activities.	
Indicators: Level of regulated communities' compliance with CEPA 1999 air-related regulations.	
Expected Results	**Progress**
Compliance promotion—Regulated community is informed of and educated on CEPA 1999 air-related regulations.	Compliance strategies have been developed for Environment Canada risk management tools, which include regulations and other non-enforceable instruments. A three- to five-year approach outlined in the strategy feeds directly into the development of compliance promotion plans and associated compliance promotion activities. These activities ensure that the persons subject to the risk management tools are informed and educated on the requirements. During this fiscal year, six strategies were implemented for newly published tools, and several others are being drafted. Environment Canada has adopted several regulations that play an important role in ensuring that Canadians have clean fuels. Compliance promotion served to inform and educate the regulated community on these CEPA 1999 air-related regulations. The combined efforts of Environment Canada's fuel program, compliance promotion and enforcement have resulted in a very high compliance rate for regulations on substances of concern found in fuels, and for fuels-reporting regulations. Environment Canada receives emissions information from facilities emitting 100 000 tonnes of carbon dioxide equivalent (100 kt CO_2 eq.) or more of greenhouse gases (GHG). The total GHG emissions from these reporting facilities represent just over one-third of Canada's total GHG emissions. Compliance promotion activities that were aimed to inform and educate these reporters included the publication and distribution of a technical guidance manual, a direct mail campaign, and information sessions held across Canada. These compliance promotion activities contributed to a successful first year of GHG reporting. The data are published on the GHG Program website at: http://www.ec.gc.ca/pdb/ghg/inventory_e.cfm.

Enforcement—Compliance with CEPA 1999 air-related regulations by persons covered by these regulations is secured.	Environment Canada works to secure compliance of the regulated community through inspections, investigations and intelligence gathering. In 2005–2006, the Enforcement Branch completed the following activities to secure compliance of the regulated community subject to air-emissions regulations under CEPA 1999: - 812 inspections of air-emissions regulations under CEPA 1999 - 33 enforcement actions (including written warnings, tickets and environmental protection compliance orders)

For more information

Air Quality Forecasts and Advisories	http://www.msc-smc.ec.gc.ca/aq_smog/aqforecasts_e.cfm
Canada's National Implementation Plan under the Stockholm Convention on Persistent Organic Pollutants	http://www.pops.int/documents/implementation/nips/submissions/canada/20060523_nip_with_cover_en.pdf
Canada's Performance (environment chapter)	http://www.tbs-sct.gc.ca/report/govrev/05/cp-rc_e.asp
Commission for Environmental Cooperation	http://www.cec.org/energy http://www.cec.org/news/details/index.cfm?varlan=english&ID=2728
Criteria Air Contaminants Emission Summaries	http://www.ec.gc.ca/pdb/cac/cac_home_e.cfm
National Pollutant Release Inventory	http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm
Transboundary Air website	http://www.ec.gc.ca/cleanair-airpur/Pollution_Issues/Transboundary_Air-WS587B56F8-1_En.htm

Reduced risk from toxics and other substances of concern

What is the issue?

Addressing the problem of substances that may pose a risk to the environment or human health is complex. These substances can be released from many industrial, domestic and international sources. Once released into the environment, they can be dispersed to remote regions in air and water currents, and may accumulate in sediments, soil and organisms. The substances can be dangerous in and of themselves (such as polychlorinated biphenyls and mercury) or they can combine with other substances to contaminate air, water or soil.

The *Canadian Environmental Protection Act, 1999* (CEPA 1999) defines a substance as toxic if it enters or may enter the environment in a quantity or concentration that has, or may have, a harmful effect on human life or health, the environment and its biological diversity or the environment on which life depends.

While toxic substances can affect all Canadians, the greatest health risk is for susceptible populations such as young children and the elderly. Some toxic substances persist in the environment and, while present in only small amounts, can affect many species and ecosystems. These substances build up in the tissues of living organisms such as the fish and wildlife that many Canadians consume. Aboriginal peoples, Inuit and others who consume these foods on a regular basis are also particularly vulnerable.

What are we doing about it?

CEPA 1999 provides the legislative framework for preventing and managing the risks posed by toxic substances, chemicals, polymers and animate products of biotechnology. The Act recognizes the contribution of the management and control of toxic substances and hazardous waste to reducing threats to Canada's ecosystems and biological diversity. Environment Canada has primary responsibility for the implementation of CEPA 1999 and jointly administers the research, assessment and management of toxic substances with Health Canada.

Environment Canada and Health Canada jointly administer the *New Substances Notification Regulations* (NSNR) under CEPA 1999. The regulation and provisions of CEPA 1999 play an integral role in the government's approach to pollution prevention by helping to identify and avoid environment and human health risks before they arise. Under these regulations, notification of any new substance, chemical, polymer or animate product of biotechnology is required prior to import or manufacture. All substances are assessed to determine if there is a risk to the environment or human health. If a substance is suspected of being toxic, conditions may be imposed on its use, or it may be prohibited from import or manufacture.

Canada is also addressing the potential risks posed by substances that were in use prior to introduction of the NSNR. Environment Canada and Health Canada were legislatively required under CEPA 1999 to categorize or sort, by September 2006, all of the approximately 23 000 substances on Canada's inventory of existing commercial chemicals according to characteristics of inherent toxicity, persistence, bioaccumulation and greatest potential for human exposure. Substances that meet the categorization criteria under this process then undergo a screening level risk assessment to determine if they are toxic according to CEPA 1999 and require risk management measures.

Are we succeeding?

Environment Canada and Health Canada worked through the year towards the completion of the systematic categorization of approximately 23 000 chemicals on the Domestic Substances List, as required by CEPA 1999 to determine which substances pose a risk to human health and/or the environment. With its completion, Canada becomes the first country in the world to have developed an information base on all the chemicals in commerce or used for commercial manufacturing purposes in order to establish the next priorities. Results indicate that approximately 4300 substances are identified as requiring further action. Substances meeting the categorization criteria have now been grouped into high, medium and low priorities. The upcoming action plan will provide for aggressive action on those substances identified as high priorities. Environment Canada and Health Canada continue to use the best science available and to work with chemical producers and users, health and environmental groups, and other partners domestically and abroad, to ensure the utilization of the best approach possible to protect the health of Canadians and our environment.

Environment Canada and Health Canada have developed an evaluation framework to assess the effectiveness and alignment of any of its programs to the departmental strategic outcomes. In testing the integrity of this framework, an evaluation is being conducted using the Environmental Emergencies Program as a case study.

Major programs and initiatives

Activities related to reducing the risk from toxics and other substances of concern can best be explained in terms of an ongoing cycle that starts with identifying and assessing the risk to both the environment and human health. These activities are managed through developing risk management strategies and measures, ensuring compliance with these measures, monitoring, reporting on progress, and continually improving science. The program areas that support reducing risks from toxics and other substances of concern are outlined below.

Program Area: Risks are identified and understood for toxics and substances of concern	
Activities: Risk assessment—risks posed by toxic substances are understood and substances requiring management are identified under the implementation of CEPA 1999 and the New Substances Program (NSP).	
Indicators: Quality of information on categorization of commercial chemicals; number and quality of risk assessments; number of substances meeting the toxic definition; percentage of new substances notifications that are annually assessed within regulatory time frame; regulatory instruments in place to more efficiently address products of biotechnology; identification of emerging issues.	
Expected Results	**Progress**
The risks posed by toxic substances are understood and substances requiring risk management are identified.	Preliminary categorization results have been released quarterly, and stakeholders have engaged in improving the database on properties of existing substances. Approximately 20 larger data submissions have been received as well as 375 individual studies addressing the properties of the substances. The following assessments were completed in 2005–2006: Draft – Chlorinated Paraffins (June 2005) Final – Polybrominated Diphenyl Ethers (July 2006) Final – Perflurooctane sulphonates (July 2006) Final – Release of Radionuclides from Nuclear Facilities (September 2006) During the year, the NSP received approximately 600 notifications and published in the *Canada Gazette*, Part I, 7 conditions and 9 Significant New Activity notices for new substances suspected of being toxic under CEPA 1999. Major data gaps resulting from categorization have been identified.
Priority will be given to developing research and science strategies for emerging issues, including endocrine-disrupting substances, persistent organic pollutants, animate products of biotechnology, products of nanotechnology and pharmaceuticals.	**Review of the *New Substances Notification Regulations (Organisms)*** A discussion document was developed on potential amendments to the *New Substances Notification Regulations (Organisms)*. One of the objectives of these amendments is to update the notification requirements to better reflect current scientific knowledge. http://www.ec.gc.ca/substances/nsb/eng/consultations_e.shtml#bio **Environmental assessment regulations for *Food and Drug Act* substances:** On March 29–30, 2006, Health Canada and Environment Canada hosted a consultation on the development of environmental assessment regulations for substances contained in products registered under the *Food and Drug Act* in Ottawa, Ontario. Environment Canada played an active role in the development of the proposed action plan. http://www.hc-sc.gc.ca/ewh-semt/contaminants/person/impact/consultation/index_e.html **Perfluorocarboxylic Acids (PFCAs) Action Plan** Perfluorinated Carboxylic Acids (PFCAs) and Precursors: An Action Plan for Assessment and Management was developed and posted on the Web. This action plan addresses risk assessment, risk management and research needs for this category of substances. http://www.ec.gc.ca/nopp/DOCS/consult/PFCA/EN/actionPlan.cfm

	Strategic Regulatory Approach for Products of Nanotechnology Nanotechnology is an emerging technology. The NSP has initiated the development of a strategic approach to nanomaterials to ensure appropriate risk assessment and management under CEPA 1999.
Unauthorized use of new substances prevented.	The following regulatory instruments were published in the *Canada Gazette*, Part II: - Amendments to *New Substances Notification Regulations (Chemicals and Polymers),* - *New Substances Notification Regulations (Organisms)* - *New Substances Fees Regulations*. A slight decrease in enforcement activities has been observed due to the coming into force of the three regulations mentioned above. However, there was an increase in compliance promotion activities. For example, mail-outs were sent to regulatees informing them of these new regulations and a biotechnology workshop was held to inform regulatees about the scope and requirements of the *New Substances Notification Regulations (Organisms).*
Develop an assessment priority setting framework for substances that have met categorization criteria**.**	Information used to set priorities is being monitored through seven mechanisms: (1) categorization, (2) new substances notification, (3) regulatory decisions in other countries, (4) international risk assessment activities, (5) information submitted by industry, (6) information submitted by the public, and (7) new science and monitoring. Substances have been grouped into high, medium and low priorities for consideration. An action plan is currently being developed to aggressively address the high-priority substances. A survey of industrial activities was conducted on perfluoroalkyl substances to determine the risk assessment strategy and the results were compiled. A survey was conducted on 500 substances used in industrial activities and identified as priorities for action as a result of categorization. Results will be used to develop the action plan.

Program Area: Risks are managed	
Activities: Risk management to address toxic substances and other substances of concern through the implementation of CEPA 1999 and the Toxic Substances Management Policy, jointly administered by Environment Canada and Health Canada.	
Indicators: Number of domestic releases of toxic substances for which control measures (e.g. regulations or voluntary instruments) are in place; number of substances identified as toxic listed on Schedule 1 under CEPA 1999; the number of children admitted to hospital due to respiratory illness.	
Expected Results	**Progress**
Risk management actions to address sources of greatest concern for those substances added to Schedule 1.	Risk management strategies for existing substances: Environment Canada began work on a risk management strategy for products containing mercury, to develop and implement appropriate management measures. The Department also continues to promote actions to reduce harm from mercury through outreach to municipalities, dental associations, etc. across Canada. Final Pollution Prevention Plan Notice for Wood Preservation (November 2005): Specific facilities (listed by name) are targeted in relation to wood preservation activities that use preservatives containing inorganic arsenic compounds, hexavalent chromium compounds, polychlorinated dibenzodioxins, polychlorinated dibenfurans and hexachlorobenzene, singly or in combination.

	Final Pollution Prevention Plan for Base Metal Smelters (April 2006): Specific facilities (listed by name) are targeted in relation to specified toxic substances released from base metal smelters and refineries and zinc plants. Guidelines and Codes of Practice: Environment Canada continued development, through a multi-stakeholder consultation process, of the draft *Second Edition Environmental Codes of Practice for the Iron and Steel Sector* that will include recommended emission standards as well as practices to protect human health and the environment. Consultations were initiated in 2004, and the Code of Practice is scheduled to be finalized in 2006–2007. On April 29, 2006, a Notice of Availability of the *Environmental Code of Practice for Base Metals Smelters and Refineries* was published in the *Canada Gazette*, Part I. Environmental Performance Agreements: Environment Canada undertook the renegotiation of an agreement with manufacturers and processors in the refractory ceramic fibre industry (November 2005). This agreement sets emissions levels for refractory ceramic fibre, establishes maintenance, monitoring and reporting requirements, and implements a product stewardship program. Renewal of a Memorandum of Understanding (MOU) with the Canadian Chemical Producers Association (CCPA) (November 2005): The previous agreement expired on December 31, 2005, and the objective of the new MOU, like the previous one, is to reduce the release of chemical substances through voluntary, non-regulatory action under the CCPA Responsible Care® program. Signatories to this new proposed MOU include the CCPA, Environment Canada, Health Canada, Industry Canada and the provinces of Alberta, Ontario and British Columbia. This agreement includes all CCPA member companies. Canada-Wide Standards: Environment Canada participated with other jurisdictions through the Canadian Council of Ministers of the Environment (CCME) in the review of the *Canada-wide Standards for Dioxins and Furans* and led the review of the *Canada-wide Standards for Dioxins and Furans from Waste Incineration*. Innovative risk management and voluntary approaches: Environment Canada continues to develop and promote the implementation of innovative risk management measures (e.g. Extended Producer Responsibility (EPR) and life cycle management). Environment Canada worked collaboratively through the CCME to develop a task group on EPR. It has already developed Canada-wide principles for EPR and guidelines on when and for which products to best use EPR. It has initiated a study of the impact of “free riders” on the effectiveness of EPR approaches. Environment Canada continues to work with the provinces on the design and implementation of EPR programs for electronics, and it chairs and hosts meetings of the National Steering Committee on Electronics Recycling as a vehicle to engage industry and provinces on e-waste issues, and encourage the expansion of provincial e-waste collection programs. The Department directed the development of Eco-Logo^{M} certification criteria under the Environmental Choice Program, and directed the Government of Canada’s eco-labelling program for notebooks and desktop computers.

	Environment Canada has successfully supported the establishment and funding, through the North American Commission for Environmental Cooperation, of the Clean Electronics Pollution Prevention Partnership (CEP3). The CEP3 is designed among other things to promote the harmonization of standards for toxics use reduction in electronics across North America and consistency with regulated standards in Europe and elsewhere. Environment Canada and Natural Resources Canada co-manage an interdepartmental committee on life cycle management (LCM) to develop tools and instruments to facilitate the use of LCM across federal departments and to assist industry. This committee is considering the requirement for a Canadian life cycle inventory to provide data for life cycle impact assessments that would support industry, especially small and medium enterprises, policymakers and experts, in the selection of sustainable materials and processes. International leadership and cooperation: The Department continues to participate in the development of international environmental standards through the International Electrotechnical Committee and the International Standards Organization. Environment Canada worked on the characterization of environmental impacts including emissions of air pollutants from the Portland cement manufacturing sector, abatement technologies in use in Canada and technologies and standards employed in other jurisdictions. This work will serve as the basis for assessing the need for additional action that addresses the impacts of the sector and subsequent options analysis and includes stakeholder consultation. Outreach: Environment Canada's Canadian Pollution Prevention Information Clearinghouse (CPPIC) website (http://www.ec.gc.ca/cppic/en/index.cfm) was re-launched with a new design in April 2005. CPPIC is an online pollution prevention database and comprehensive resource for pollution prevention practitioners throughout Canada. A status report on Environmental Performance Agreements was published on the program website (http://www.ec.gc.ca/epa-epe/en/agr.cfm). This report will allow the general public to track progress of individual agreements. The information on the site will continue to be updated on an annual basis. Final Order adding substance to Schedule 1 of CEPA 1999: - pentachlorobenzene (September 2005) - tetrachlorobenzenes (September 2005)
Releases to the environment of persistent, bioaccumulative, toxic and anthropogenic substances are virtually eliminated.	The proposed *Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005 (2-Methoxyethanol, Pentachlorobenzene and Tetrachlorobenzenes) were published* in the *Canada Gazette*, Part I, on July 9, 2005 for a 60 day public comment period. Pentachlorobenzene and tetrachlorobenzenes are persistent, bioaccumulative, toxic and anthropogenic substances. The addition of these substances to the Regulations will prohibit their manufacture, use, sale, offer for sale and import

International obligations are met with respect to transboundary movements of hazardous waste and hazardous recyclable materials and with respect to polychlorinated biphenyls (PCBs).	Canada's international obligations are being met through the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* which were published in the *Canada Gazette*, Part II, on June 1, 2005, and came into force on November 1, 2005. The Regulations incorporate new authorities under CEPA 1999 and align with evolving international obligations under both the Basel Convention and Organisation for Economic Co-operation and Development (OECD) Council Decisions. New *PCB Regulations* will consolidate the current *Chlorobiphenyls Regulations* and the current *Storage of PCB Material Regulations*. These Regulations further contribute to the protection of the environment and human health and are in line with Canada's national commitment to manage toxic substances under CEPA 1999 and international commitments to end the use of PCBs and to destroy them by specified deadlines.
Risks associated with the discharge of inadequately treated wastewater effluents are reduced over time.	In 2005, Environment Canada launched a multi-stakeholder project to provide recommendations on ways to improve the effectiveness and efficiency of the Pulp and Paper Environmental Effects Monitoring Program under the *Pulp and Paper Effluent Regulations*. This group identified opportunities to deliver economic benefits through more targeted spending of industry resources, as well as opportunities to achieve environmental benefits through a strong commitment to address effects. As a result of the recommendations, Environment Canada has proposed amendments to the *Pulp and Paper Effluent Regulations*. Working with provinces and territories through the Canadian Council of Ministers of the Environment, the Department is on track to develop a Canada-wide Strategy for the management of municipal wastewater effluents. The Department's perspective is that this approach will lead to a risk management framework for the wastewater sector that has been agreed upon by all parties. The subsequent development of a wastewater effluent regulation under the *Fisheries Act* is a key element to resolve the performance and governance issues.

Program Area: Pollutants are directly managed	
Activities: Pollutants posing environmental and related human health risks are directly managed through direct action such as issuing ocean disposal permits; providing expert advice on project-specific environmental assessments and strategic environmental assessments; environmental emergency planning; advancing the research, development, demonstration and deployment of prevention and control technologies; and federal contaminated site remediation.	
Indicators: Number of permits and environmental assessments; progress in remediation of contaminated sites by custodial departments; number of new technologies advanced and deployed for reducing pollutants; quality of environmental assessments (project-specific and strategic).	
Expected Results	**Progress**
Improved ability to directly manage pollutants through the development and implementation of risk management tools and strategies.	Further to the passage of the *Environmental Emergency Regulations* under CEPA 1999 in 2003, 2419 industrial or commercial facilities have been identified as being required to prepare and implement an environmental emergency plan. Of this total, 2270 have filed the required declaration of preparation (94 percent compliance) and 2195 have filed the required declaration of implementation (91 percent compliance). Environment Canada's Disposal at Sea Program, in cooperation with Methods Development and Environment Canada labs, continues work on a means of assessing fertilization and development in marine sediments, to set management levels. Research progressed on a method for PCB assessment in marine sediments. Progress was made towards a decision-making workshop on the management of contaminated dredged material, to be completed in 2006.

	By contributing scientific and technical expertise to the environmental assessment of over 2000 projects, including several major project reviews at the comprehensive study and panel review levels, Environment Canada informs decision making related to pollution management. Through an extensive network of government, financial, industry and academic contacts, the Canadian Environmental Technology Advancement Centres (CETACs) have assisted small and medium-sized enterprise clients in building strategic partnerships and gaining access to financing from public and private investors and funding available through domestic and international public policy initiatives (e.g. through Technology Early Action Measures, Industrial Research Assistance Program, Sustainable Development Technology Canada, Federation of Canadian Municipalities, United Nations Environment Programme, and the Canadian International Development Agency). In 2005–2006, the CETACs helped secure funding and helped organize 14 technology demonstration projects for a total of $56.7 million, of which $29.7 million was public investment and $27 million was private-sector investment. Environment Canada stimulates the advancement of environmental technology innovation and infrastructure projects and practices that reduce, manage and prevent pollution of Canada's air, water, soil or climate, through the oversight of foundations such as Sustainable Development Technology Canada (SDTC) and the Green Municipal Funds (GMF). The Department oversees the operations of these foundations to ensure their compliance with the respective funding agreements, including the completion of performance evaluations and financial audits, submission of annual reports and corporate plans and the fulfillment of government requirements through the provision of strategic guidance. Further information on these foundations, and on Environment Canada's role, can be found in Table 10.
Prevention of the negative impacts of land-based activities to coastal and marine environments.	Environment Canada continued to lead the implementation of Canada's National Programme of Action for the Protection of the Marine Environment from Land-based Activities. In 2005–2006, in partnership with other federal and provincial departments, as well as non-governmental and Aboriginal organizations, several projects were initiated for the protection of the marine environment. Environment Canada's Disposal at Sea Program continued to control the disposal of wastes at sea through a permit system that involves environmental assessment and disposal site monitoring. About 100 permits are issued annually and 7–17 disposal sites are monitored. International treaty negotiations also occurred through the London Protocol to reduce marine acidification and greenhouse gases. This treaty is one of two global treaties controlling ocean disposal. A change to the Protocol is planned for the fall of 2006. In November 2005, Environment Canada joined the National Marine and Industrial Council (NMIC), a consultative forum examining federal policy direction. NMIC includes deputy ministers representing five departments, and nine executives from Canada's marine shipping industry. The Council is currently examining the environmental footprint of the marine industry, with Environment Canada playing a key role.
Prevention of soil and groundwater contamination from petroleum products and allied petroleum products storage tank systems of the Federal House and on Aboriginal lands.	Development of the *Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum Products on Federal Lands Regulations* under Part 9 of CEPA 1999, is ongoing. Final consultations with the regulated community were conducted in 2005–2006. Pre-publication of the proposed regulations in the *Canada Gazette*, Part I, is targeted for December 2006.

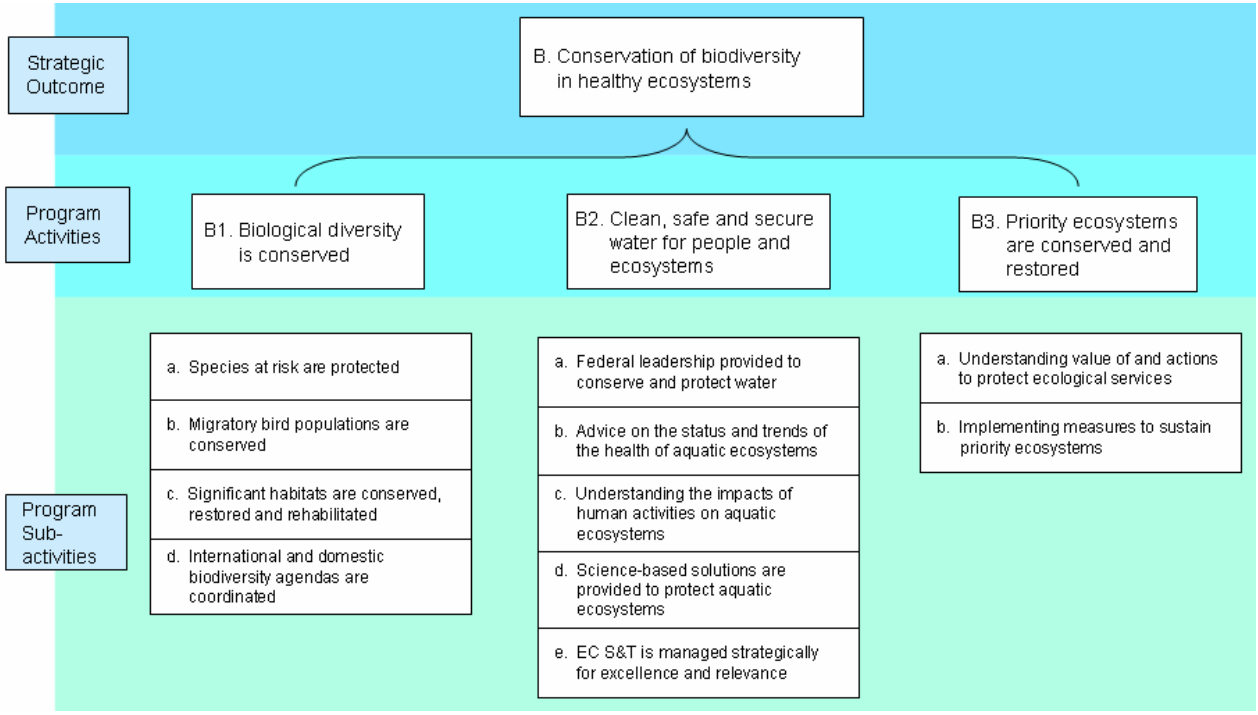
Program Area: Compliance with environmental protection legislation	
Activities: Informing and educating the regulated community on environmental laws CEPA 1999 and ss. 36(3) of the *Fisheries Act* and securing compliance with these laws. Compliance is achieved through compliance assurance, compliance promotion and enforcement activities.	
Indicators: Level of the regulated communities' compliance with CEPA 1999 regulations and other risk management tools, and the pollution prevention provisions of the *Fisheries Act*.	
Expected Results	**Progress**
Compliance promotion—Regulated community is informed of and educated on CEPA 1999 and ss. 36(3) of the *Fisheries Act*.	Compliance strategies have been developed for Environment Canada risk management tools, which include regulations and other non-enforceable instruments. A three- to five-year approach outlined in the strategies feeds directly into the development of compliance promotion plans and associated compliance promotion activities. During this fiscal year, six strategies were implemented for newly published tools, and several others are being drafted. Compliance promotion was essential in informing and educating road authorities about the *Code of Practice for the Environmental Management of Road Salts*. This CEPA 1999 risk management tool is designed to help municipalities and other road authorities better manage their use of road salts in a way that reduces the harm they cause to the environment while maintaining road safety. As part of this voluntary risk management tool, organizations that use 500 tonnes or more of road salts are asked to voluntarily develop and report on a management plan. In 2005, Environment Canada received 229 reports from provincial ministries of transportation and other authorities representing 89 percent of the population, excluding Quebec.
Enforcement—Compliance with CEPA 1999 and ss. 36(3) of the *Fisheries Act* is secured.	The Enforcement Branch works to secure compliance of the regulated community through inspections, investigations and intelligence gathering. In the 2005–2006 fiscal year the Enforcement Branch completed the following activities: – 9669 inspections under CEPA 1999 and the pollution prevention provisions of the *Fisheries Act* – 2462 enforcement actions (including tickets, written directives, written warnings, injunctions, ministerial orders, environmental protection compliance orders and charges)

Program Area: Environmental conditions and impacts are monitored and reported	
Activities: Monitoring and reporting; pollutant release information collection and public dissemination through the National Pollutant Release Inventory (NPRI), making information available to Canadians through the CEPA Environmental Registry and other avenues.	
Indicators: Quantity and quality of information reported out and contained in the NPRI and CEPA Environmental Registry; use of information in departmental decision making.	
Expected Results	**Progress**
Improve monitoring and reporting in order to inform future government, business and citizen action on pollution prevention and control by collecting and providing information through the NPRI, CEPA Environmental Registry and other avenues.	In 2005–2006, the NPRI collected and made publicly available information from over 8000 industrial facilities on their 2004 releases, disposals and recycling of over 300 pollutants (including many toxic substances). The NPRI also published in the *Canada Gazette* the notice for 2006 reporting, which removes the mining exemption and adds a variety of substances, to bring the NPRI list to 341 substances.Efforts to continuously improve data quality, through compliance promotion, guidance to reporters and streamlined and integrated reporting continued during 2005–2006.

For more information

CEPA Environmental Registry	http://www.ec.gc.ca/CEPARegistry/default.cfm
National Pollutant Release Inventory	http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm
New Substances Program	http://www.ec.gc.ca/substances/nsb/eng/home_e.shtml

Biodiversity Conservation Strategic Outcome



What is the issue?

Canada is recognized around the world for its natural wealth, including its wildlife, forests, water and protected areas. Canada is home to over 71 500 known species of wild animals, plants and other organisms including 200 species of mammals, 400 species of birds, 1100 species of fish and 4000 species of plants. From a global perspective Canada has 20 percent of the world's remaining wilderness, 7 percent of the world's renewable freshwater, 25 percent of the global wetlands, 10 percent of its forests and the longest coastline in the world.

Despite this apparent abundance of resources, Canada's natural capital is at risk. Human induced pressures are contributing to significant declines in many species of animals and plants. Urbanization, agricultural intensification, forest harvesting and other resource extraction industries are increasingly leading to habitat loss and fragmentation. The long-term effects of acid rain, expanding use of pesticides and other toxic chemicals, and the threat of global climate change exacerbate this situation. Finally, increased international human movement and trade have led to new threats to wildlife and their habitat from introduced diseases and invasive alien species. Addressing these issues requires an integrated approach that involves other federal agencies, provincial and territorial governments, Aboriginal organizations and other stakeholders.

Clean, safe and secure water for people and ecosystems continues to be a shared vision for governments domestically and internationally. In Canada, water quality, quantity and use issues are complex, and multi-jurisdictional. Water is a life-sustaining part of our ecosystems. It is critical not only to human health and well-being but also to sustainable growth and biodiversity. There are unique pressures that face both the water supply and water quality in parts of Canada.

The federal government has numerous direct roles to play with regard to management of water, including drinking water, on federal lands and in federal facilities. At least 19 federal departments are in some way implicated in the management of water. As a result, this provides a significant horizontal management challenge within the federal house. In addition, close collaboration with provincial, territorial and municipal governments is essential since they bear the most responsibility for the day-to-day management of water.

What are we doing about it?

Environment Canada's programs, services and initiatives to conserve biological diversity (biodiversity) in healthy ecosystems involve building shared strategies and partnerships for conserving Canada's wildlife, ecosystems, freshwater and wetland resources; protecting wildlife under federal jurisdiction, such as migratory birds and species at risk; contributing to the scientific understanding of ecosystems; establishing science and technology practices; and developing partnerships to improve the health of nationally significant ecosystems. Activities under this strategic outcome are grouped into the following program areas:

- Biological diversity is conserved;
- Clean, safe and secure water for people and ecosystems; and
- Priority ecosystems are conserved and restored.

Investment

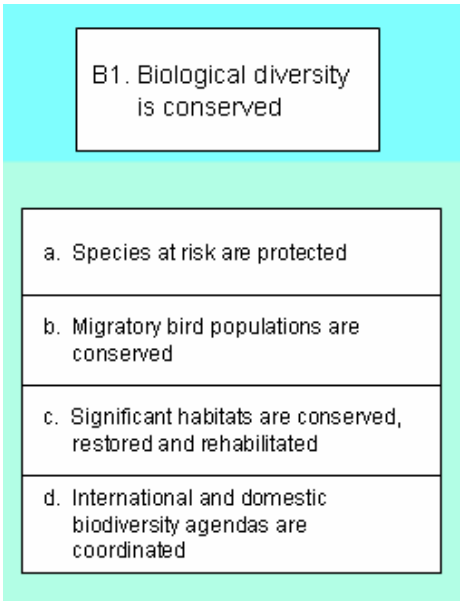
Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
Biological diversity is conserved	116	126	127	677	790	113
Clean, safe and secure water for people and ecosystems	65	74	72	485	634	149
Priority ecosystems are conserved and restored	73	65	64	400	399	-1
Totals	**254**	**265**	**263**	**1,562**	**1,823**	**261**

Biological diversity is conserved

What is the issue?

The most significant threat to biodiversity lies in the loss, degradation and fragmentation of the habitats that animals and plants need to survive. While parks and protected areas help protect natural habitats, they are scattered throughout the country with, in some areas, only limited natural linkages between them. There is a need to broaden the traditional role of protected areas in conservation with an emphasis on achieving ecosystem integrity. Beyond parks and protected areas, there is growing recognition of the need to increase conservation efforts on working landscapes such as agricultural land, recreational areas, and areas of high natural resource use. Targeted habitat stewardship initiatives across the country are also critical to ensuring that habitats are conserved and are an integral part of efforts to protect species at risk.

Invasive alien species (IAS), including plants, animals and other organisms (e.g. microbes), are the second-largest threat to biodiversity. In addition to environmental harm, they can also cause economic harm or harm to human health. Human actions are the primary means of invasive species introductions.



For nature conservation to be a success in Canada, we need to broaden our focus from simply protecting areas of land and water to managing the full continuum of ecosystems including wilderness, parks, working landscapes and urbanized areas. By working in partnership with private and public land users on the landscape, governments can strengthen their habitat conservation efforts. More needs to be done to influence a wider range of private and public lands by engaging networks of stakeholders in habitat conservation strategies.

Conserving biodiversity will require not only that we maintain healthy populations of wild species, but also that we protect and recover species that have become threatened or endangered. We also need to ensure that the use of wildlife is sustainable.

To secure our essential life support systems and our economic prosperity we need to ensure that the continued use of our lands, waterways and oceans do not undermine the overall ability of ecosystems to function properly.

What are we doing about it?

In 2005–2006, Environment Canada continued to emphasize a natural capital approach to how it develops public policy and delivers programs for protecting and conserving our natural environment. A natural capital approach considers not only land and water resources but also the fact that ecosystems produce ecological goods and services that are essential to support life-sustaining processes. The latter are integral to cleansing air and water, reinvigorating soil, and contributing to a predictable and stable climate. Securing Canada's natural capital is essential to ensure Canada's long-term competitiveness and environmental sustainability. Environment Canada plays an important role in conserving biodiversity, which is integral to sustaining the health of living ecosystems.

According to legislation, the particular focus of Environment Canada's conservation efforts is on migratory birds, species at risk and their habitats. Environment Canada's network of 143 protected areas across Canada has been established under the *Canada Wildlife Act* and the *Migratory Birds Convention Act, 1994*. Habitat stewardship conservation efforts, which are enabled by the *Species at Risk Act* and the *Income Tax Act*, allow Environment Canada to partner with private landowners, non-governmental organizations, provincial and municipal governments and Aboriginal groups.

Environment Canada maintains 143 National Wildlife Areas (NWA) and Migratory Bird Sanctuaries (MBS). The 11.8 million hectare NWA/MBS system contributes to the conservation of biological diversity in Canada, including species at risk recovery. The Department continues to work closely with other government departments and national non-government organizations (NGOs) to expand the network and to improve the management of existing protected areas.

The Department's Habitat Stewardship Program (HSP) for Species at Risk helps to maintain and restore habitat critical to species at risk throughout Canada by encouraging the implementation of conservation projects by community groups, private landowners, First Nations and local governments. The Program was launched in 2000 and has invested approximately $52 million in 830 projects, leveraging an additional estimated $127 million from project participants, in the form of cash and in-kind contributions.

The Ecological Gifts Program provides income tax incentives to donors of ecologically sensitive land and conservation easements. Since 1995, 499 ecogifts have been donated to environmental charities and governments across Canada. The ecogifts total more than 45 000 hectares worth more than $153 million.

In Canada, collaborative action related to biodiversity is guided by the Canadian Biodiversity Strategy (CBS). The strategy was developed to support the implementation of the Convention on Biological Diversity (CBD) and it was endorsed by federal/provincial/territorial governments in 1996.

Since September 2001, Ministers of Fisheries and Aquaculture, Forestry and Wildlife have been working together to advance work on four cross-cutting CBS implementation priorities: stewardship, science and information, monitoring and reporting on biodiversity status and trends, and invasive alien species.

In October 2005, the federal, provincial and territorial Ministers of the Environment requested the development of a companion outcomes framework to the Canadian Biodiversity Strategy with a particular focus on improving implementation and reporting.

As part of its efforts to encourage sustainable environmental best practices on working landscapes, Environment Canada has been working in partnership with Agriculture and Agri-Food Canada, to develop science-based standards under the National Agri-Environmental Standards Initiative (NAESI). Under this collaborative program, Environment Canada is providing the scientific benchmarks related to pesticides, water quality, water conservation, air quality and biodiversity that will assist Agriculture and Agri-Food Canada and other resource managers in their decisions about environmental management in agricultural areas.

Are we succeeding?

Through legislative tools such as the *Species at Risk Act* (SARA), Environment Canada continues to protect species at risk, through assessment, listing and recovery. During 2005–2006, the Committee on the Status of Endangered Wildlife in Canada provided 51 species assessments under SARA. In July 2005, the List of Wildlife Species at Risk under SARA was amended to include 39 new species.

The *Species at Risk Act* has also established the requirement for recovery strategies and action plans for all species listed as threatened or endangered. The first recovery strategies under SARA were delivered in 2006. Over 200 other recovery strategies are under late-stage development and it is anticipated that several of these will be completed over the coming year. The Department is developing and approving action plans, which will result in even more recovery actions and have the overall benefit of conserving Canadian biodiversity. Implementation policies are being developed and put into place. Cooperation with provinces and territories has continued, including the development of bilateral agreements. The first of these bilateral agreements was signed in April 2005 with British Columbia.

It is recognized that migratory bird populations are indicators of ecosystem change. Environment Canada has worked to optimize the population levels of a number of bird species, including those that exhibit persistent, long-term declines and those that face overabundance. Specific population objectives have been established for some migratory bird species, notably waterfowl species. International objectives were also established in the North American Waterfowl Management Plan. To support these objectives, Environment Canada has maintained a wide range of survey programs, including population monitoring and avian influenza research, and has continued to promoted compliance with the *Migratory Bird Regulations*, particularly with respect to hunting regulations.

The priority that Canada gives to a renewed focus on implementing the Canadian Biodiversity Strategy (CBS) and our efforts to meet our commitments under the Convention on Biological Diversity make Canada a recognized world leader. Through our collaboration with the Ministers responsible for Forests, Wildlife, Endangered Species and Fisheries and Aquaculture, Canada has produced two significant national products: Canada's Stewardship Agenda in 2003 and the Invasive Alien Species Strategy for Canada in 2004.

Environment Canada is working with provinces and territories towards the development of a biodiversity outcomes framework for the CBS as requested by the federal, provincial and territorial ministers accountable for the CBS. However, challenges remain for meeting the 2010 global target to significantly reduce the loss of biodiversity and more effort is needed to learn about the extent of our own biodiversity and to understand the critical importance of biodiversity for our health, well-being and economic prosperity.

The amount of strictly protected areas in Canada has increased from approximately 40 million hectares to 98 million hectares between 1992 and 2005. This area represents 7.6 percent of Canada's total land area. Environment Canada continues to implement its Protected Areas Strategy in collaboration with other key departments. The Habitat Stewardship Program for Species at Risk and the Ecological Gifts Program protect additional ecologically-sensitive land through long-term agreements and temporary protection measures.

Through its efforts to address working landscapes, in particular agricultural lands, Environment Canada has made important progress in 2005–2006. In its work under the National Agri-Environmental Standards Initiative (NAESI), Environment Canada has made progress in the understanding of the local, regional, and national impacts of agriculture on the environment with respect to several priority areas, most notably, biodiversity.

Furthermore, NAESI has made advances in ensuring that agriculture in Canada is environmentally sustainable. Protocols to develop the standards were finalized this year and the first draft standards were completed in several areas.

Working with other key federal departments under the Oceans Action Plan in 2005–2006, Environment Canada has advanced a federal strategy for Marine Protected Areas which will contribute to the conservation of Canada's marine life.

Environment Canada, in partnership with Fisheries and Oceans and Parks Canada, conducted a formative evaluation of the Federal Species at Risk Programs to assess and determine the federal government's progress in delivering the agreed outputs and achieving the anticipated results of the SARA over the two-year period from June 2003 through December 2005.

While the evaluation demonstrates important progress by all three implementing departments/agencies, it identifies significant management weaknesses within Environment Canada, the lead department.This report shows that not all obligations as outlined in theTreasury Board submission were being met. Governance was found to be a key weakness with insufficient senior management oversight of this program.

There are 17 recommendations; seven are addressed to the three organizations collectively, six are specific to the SARA Assistant Deputy Ministers Committee, one is directed to the SARA Deputy Ministers and three are directed to Environment Canada. An action plan addressing these recommendations is being developed for fall 2006.

Major programs and initiatives

<table>
<tr><td colspan="2">Program Area: Species at risk are protected</td></tr>
<tr><td colspan="2">Activities: Assessing whether species are at risk; protecting and recovering species at risk and their habitats; preventing species from becoming at risk; and ensuring that Canada's trade in non-endangered species is sustainable.</td></tr>
<tr><td colspan="2">Indicators: Change in status of reassessed species at risk; number of endangered and threatened species, sub-species and populations in each of Canada's ecozones; amount of habitat for species at risk that is effectively protected.</td></tr>
<tr><th>Expected Results</th><th>Progress</th></tr>
<tr><td>The National Strategy for the Protection of Species at Risk and Species at Risk Act (SARA) are implemented.</td><td>In order to implement SARA and facilitate cooperative activities under the Act, the Canada-British Columbia Agreement on Species at Risk was signed in April 2005. Bilateral agreements with all other provinces and territories are in development and well advanced.</td></tr>
<tr><td>Species are assessed or reassessed through the formal processes of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).</td><td>The Committee on the Status of Endangered Wildlife in Canada completed 51 assessments for a variety of organisms ranging from a tiny lichen to two species of whales.
In addition, a workshop on assessing risk of extinction in marine fishes was held, new procedures were developed to identify priority species for assessment, and a protocol to allow people to request assessments and/or to submit unsolicited reports was finalized.</td></tr>
</table>

Species are listed under SARA and other regulations are developed as required to implement the Act.	In July 2005, the List of Wildlife Species at Risk under SARA was amended to include 39 new species.
Implementation policies and guidelines for SARA are developed/approved.	Draft policies and guidelines are continuing to be developed for a variety of issues related to SARA implementation, including listing/delisting, recovery, critical habitat, permitting, enforcement and environmental assessments.
The National Aboriginal Committee on Species at Risk (NACOSAR) is established and Aboriginal people are engaged in SARA implementation.	The National Aboriginal Council on Species at Risk (NACOSAR) held its inaugural meeting with the Minister of the Environment in September 2005 and presented the Minister with a work plan and budget for the fiscal year 2005–2006. A SARA workshop for Aboriginal peoples was also held in March 2006. The workshop explored the engagement of NACOSAR in the Minister's Round Table preparations, ecosystem initiatives, and in listing decisions, policy development and recovery planning.
Recovery strategies are prepared for species listed as extirpated, endangered and threatened.	Six strategies were posted on the SARA Public Registry. In addition, over 200 strategies are in late stage development.
Provincial and territorial governments and Aboriginal organizations are engaged.	Provinces and territories, as well as all affected Aboriginal organizations, are cooperating in SARA implementation, including listing and recovery efforts.
Stakeholder consultations contribute to desired results and NGOs and industry are engaged in protection and/or recovery.	The Species at Risk Advisory Committee (SARAC), composed of representatives from industry, environmental non-governmental organizations, and members serving in their individual scientific capacity, met four times in 2005–2006, and provided advice on policy initiatives and the administration of the Act.
Enforcement capability for species at risk is established.	Enforcement capability will evolve with the definition of critical habitat for listed species and implementation of the permit system. Environment Canada enforces SARA in partnership with Fisheries and Oceans Canada and Parks Canada. Trained officers have been deployed in support of the enforcement of SARA. Between April 1, 2005, and March 30, 2006, Environment Canada wildlife enforcement officers responded to six occurrences and undertook four investigations under SARA.
International obligations related to species at risk are met and compliance with the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* (WAPPRIITA) is promoted.	The *Wild Animal and Plant Trade Regulations* were amended in 2005 to incorporate changes in listed species, resulting from the 13th Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP13), ensuring compliance with CITES and its implementing legislation, the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* (WAPPRITTA). In 2005, CITES authorities, in consultation with provinces, territories and other federal departments, agreed on a process for, and started the development of a national non-detriment finding documents for Canadian species subject to international trade. In addition, the development of an online permit issuance system was initiated. In June 2005, Canada participated in the CITES Standing Committee meeting as the North American region representative. Canada also participated in the meetings of the CITES scientific committees in May 2005, and is a member of various intersessional working groups.

Program Area: Migratory bird populations are conserved	
Activities: Sustaining migratory bird populations through finalization of the Canadian Wildlife Service (CWS) migratory bird program plan, continued development of partnerships under the North American Bird Conservation Initiative, update and enforcement of migratory bird regulations, outreach activities, and Aboriginal cooperative management.	
Indicators: Percentage of threatened and endangered species of migratory birds with stable or increasing populations; population levels of targeted migratory bird species and other wildlife under federal jurisdiction.	
Expected Results	**Progress**
Knowledge of the status of migratory bird populations is acquired and conservation measures undertaken.	Environment Canada maintained a wide range of survey programs to monitor the status of wild bird populations. For example, status reports on the populations of Canada's waterfowl species were published in December 2005 and used as the basis for the 2006 hunting regulations. In addition to many special-purpose studies, CWS cooperated with the U.S. Fish and Wildlife Service in the running the Breeding Bird Survey; a continent-wide, volunteer-based program. Knowledge from these surveys was used by Environment Canada and by stakeholders in a wide range of conservation actions. Work is also under way to increase the use of population-linked indicators and objectives for non-game species.
Compliance with the *Migratory Birds Convention Act, 1994* is promoted and enforced.	Environment Canada officials met in 2005–2006 with industry representatives to discuss the incidental take of migratory birds, and compliance with the *Migratory Birds Regulations*. Environment Canada also promoted compliance with the 2005 amendments to the *Migratory Birds Convention Act, 1994*, dealing with prevention of oil pollution from ships. Marine environmental monitoring for oil pollution using radar satellite technologies, on the Atlantic, Pacific and Arctic coasts, in partnership with the Canadian Ice Service, has been implemented. The Wildlife Enforcement Directorate is also testing the potential to use Earth Observation technologies to assist with compliance monitoring in terrestrial environments, such as migratory bird sanctuaries.
Awareness of stakeholders and the public is increased and support for migratory bird conservation initiatives obtained.	Migratory bird officials meet regularly with provincial, territorial, industry and nature conservation organizations including the North American Bird Conservation Initiative (NABCI-Canada), to raise awareness and increase support for migratory bird conservation actions. In 2005–2006, these interactions included discussion on the importance of incidental take of migratory birds, including possible future regulatory amendments to improve compliance and focus efforts on conserving migratory bird populations.
Cooperative management processes and structures are established to accommodate and respond to Aboriginal and treaty rights in land claim settlements.	Environment Canada participated in the Federal Steering Committee on Self-Government and Comprehensive Claims and in negotiations on the Labrador Innu, In-SHUCK-ch, Te'mexw, James Bay and Northern Québec offshore, Lheidli T'enneh and the Makivik offshore agreements. CWS also contributed to the development of policies, strategies and training materials regarding the federal response on harvesting by Métis hunters and entered into preliminary discussions with Métis organizations regarding cooperative wildlife management agreements. As well, Environment Canada negotiated a new contribution agreement on funding of trap research with the Fur Institute of Canada.

Partnership initiatives for migratory bird conservation are developed and implemented.	Environment Canada through NABCI-Canada continued to work with U.S. and Mexican NABCI councils to support emerging partnerships in Mexico similar to the joint ventures in the U.S. and Canada. Efforts were made to link Canadian joint ventures with these emerging Mexican joint ventures. Canadian joint ventures and the North American Waterfowl Management Plan (NAWMP) Committee members also participated in a major continental assessment of the NAWMP. Environment Canada continues to pursue broader international partnerships with countries with which we share migratory birds, such as the ongoing work to develop the Western Hemisphere Migratory Species Initiative (WHMSI) in cooperation with the U.S. Fish and Wildlife Service, Mexico's Secretaría de Medio Ambiente Y Recursos Naturales (SEMARNAT), and organizations in other countries (e.g. BirdLife International in Ecuador).
Impacts of toxic substances and diseases on migratory birds and other wildlife at risk are understood and the advice provided supports timely interventions.	In 2005, a five-year survey was begun to establish a baseline for the strain types of avian influenza and their prevalence in live selected waterbird species and in dead birds (all species) collected from across Canada. This was completed through a joint undertaking coordinated by the Canadian Cooperative Wildlife Health Centre, with participation by the Canadian Wildlife Service, the Public Health Agency of Canada, the Canadian Food Inspection Agency, and their provincial and territorial counterparts. No strains of highly pathogenic avian influenza H5 and H7 viruses were detected. These agencies also approved the development of a long-term operational plan for the National Wildlife Disease Strategy that addresses emerging infectious disease issues such as avian influenza, West Nile virus and chronic wasting disease.
Impacts of oil and other pollution, illegally discharged from ships in Canada's Exclusive Economic Zone, are reduced using existing enforcement capabilities of the *Migratory Birds Convention Act, 1994* and *Canadian Environmental Protection Act, 1999* with the potential for enhanced capability through amendments to the two Acts proposed in Bill C-15.	Legislative amendments to CEPA 1999 and the MBCA came into force in June 2005. Environment Canada focused on improved surveillance, closer interdepartmental cooperation for enforcement and, for migratory birds, improving our scientific understanding of marine bird populations. Negotiations were initiated on a memorandum of understanding with Transport Canada for a shared enforcement response and to help increase the marine sector's compliance with Canada's environmental laws. A birds oiled at sea (BOAS) officer training program was established.

Program Area: Significant habitats are conserved, restored and rehabilitated; overall ecosystem integrity is sustained	
Activities: Protecting and conserving specific critical habitats; facilitating a national evolution toward systems of integrated landscape management.	
Indicators: Area of conserved wildlife habitat that is under direct Environment Canada protection or protected through departmental partnerships and influence; area of the nation covered by integrated landscape decision-making/management processes.	
Expected Results	**Progress**
A steady increase in the number of Canadian ecosystems covered by an integrated landscape decision-making/management process.	Generally institutionalized efforts at practical integrated landscape management (ILM) continue to expand across Canada, for example, in northern Alberta and the central B.C. coast. While few terrestrial ILM initiatives are or will ever be led by a federal department, Environment Canada's Habitat Management Program deliberately and actively supports and promotes ILM and ecosystem-based approaches to environmental management.

Species at risk and their habitats are conserved through the Habitat Stewardship Program for Species at Risk.	The Habitat Stewardship Program (HSP) for Species at Risk contributed $9 million towards 152 projects. This leveraged an additional $21 million investment from recipients for habitat conservation for 300 terrestrial and aquatic species at risk, as designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), in all provinces and one territory. Through HSP's 2005–2006 activities, 19 343 hectares of habitat were protected through long-term agreements and 138 538 hectares through temporary protection measures, and 4915 hectares of habitat were improved.
National Wildlife Areas, Marine Wildlife Areas, Migratory Bird Sanctuaries and Ramsar sites are established and maintained, within the context of broader ecosystem/landscape plans.	No new protected areas were established in 2005–2006; however seven candidate protected areas in the North are in various stages of the establishment process (mostly through the Inuit Impact and Benefits Agreement (IIBA) and the Northwest Territories Protected Areas Strategy (NWT-PAS). Existing protected areas have undergone a management review and are now connected through a Web portal, and a select number have also completed a contaminated sites assessment (phases 1 and 2).
Land donations to support conservation are enabled through the Ecological Gifts Program.	In 2005–2006, 50 gifts of ecologically sensitive land worth $26.5 million were conserved through the Ecological Gifts Program. This represents an additional 6041 hectares of private land that have been protected for conservation purposes.
Aboriginal organizations and communities continue to be engaged.	Aboriginal engagement in the implementation of SARA has been supported by two specific funds. The Aboriginal Capacity Building Fund provided $707,000 to 27 projects that benefited nearly 60 communities. The Aboriginal Critical Habitat Protection Fund invested $495,000 in 18 projects, the majority of which were on reserve lands. In addition, the HSP awarded 8 percent of its funding, approximately $737,000, to Aboriginal organizations. Through the Protected Areas Strategy, Aboriginal organizations and communities have been actively involved in the IIBA and NWT-PAS as well as the proposed establishment of the Scott Islands Marine Wildlife Area.
Stakeholder consultations and participation continue to be used to contribute to desired results.	Through the Habitat Stewardship Program for Species at Risk, 10 400 people were directly involved in projects and many more people were connected through various outreach and education activities. The Ecological Gifts Program, as a part of its ongoing operations, consults and actively works with over 100 land trust organizations, federal/provincial governments and hundreds of landowners and their representatives from across Canada. Through the Protected Areas Strategy, stakeholders have been actively involved in the IIBA, NWT-PAS and the proposed establishment of the Scott Islands Marine Wildlife Area.

Program Area: International and domestic biodiversity agendas are coordinated	
Activities: Fulfill Canada's key international obligations under the Convention on Biological Diversity (CBD) and domestic obligations under the Canadian Biodiversity Strategy (CBS).	
Indicators: National consensus on biodiversity outcomes framework in support of 2010 target; biodiversity reporting system in place; introduction of Access and Benefit Sharing (ABS) policy frameworks and pilot projects at national and sub-national levels.	
Expected Results	**Progress**
Convention on Biological Diversity decisions serve the environmental, economic, social and cultural interests of Canadians: Canadians have easy access to information on Canada's participation in the CBD and other international biodiversity forums.	Canada continues to provide leadership to ensure that CBD decisions serve the interest of both Canadians and the global community. Canadians continue to have easy access to information on Canada's CBD participation through the Biodiversity Convention Office and the recently updated Canadian Biodiversity Information Network Website (http://www.cbin.ec.gc.ca).
Canada recognized globally as fulfilling its obligations and commitments under the CBD and as an influential contributor to implementing and reporting against the international target of reducing the rate of biodiversity loss by 2010.	Canada continues to fulfill its CBD obligations and commitments as demonstrated by its extensive reporting, development of a new working group on implementation, and leadership in the development of the reporting guidance for the 2010 biodiversity target.
Canada seen to be playing a significant role in the operation/strategic direction of the CBD, in enhancing capacity of other countries, and in promoting interests of indigenous people.	Canada plays a significant management support role for the CBD by serving on the Bureau of the Intergovernmental Committee for the Cartagena Protocol on Biosafety and co-chairing the Working Group on Access and Benefit Sharing. Canada continues to support capacity building for less-developed countries through voluntary fund contributions. Canada demonstrates an ongoing commitment to and recognition for the promotion of the interests of indigenous people, including strong support for their participation in CBD decision making.
Facilitated implementation of the Canadian Biodiversity Strategy by Canadian jurisdictions, government departments, and resource sectors through management, coordination and identification of national implementation priorities and development of common biodiversity targets, indicators and supportive monitoring systems.	Environment Canada provides a national focal point and secretariat support for implementing the CBS and CBD. The Department coordinates preparations for all CBS and CBD meetings and leads the development of the biodiversity outcomes framework.

Environment Canada will continue its leadership role relating to An Invasive Alien Species Strategy for Canada which was approved by the federal/provincial/territorial Ministers responsible for Forests, Wildlife, Endangered Species, and Fisheries and Aquaculture in September 2004. Beginning in 2005–2006, the federal government will initiate implementation of the Strategy in the areas of public awareness and risk analysis of alien plant and aquatic species.	The Federal/Provincial/Territorial Leadership and Coordination Committee was established to address plant and aquatic invasive issues of a horizontal nature and ensure enhanced integration under the Invasive Alien Species Strategy for Canada. In its November 2005 call for applications under the Invasive Alien Species Partnership Program, Environment Canada netted 310 submissions, which represented requests for nearly $19 million in funding over a 3-year period. Fifty-eight projects totalling $2 million were recommended for funding by an interdepartmental committee for the 2006-2007 fiscal year.
Enhanced conservation and sustainable access and use of Canadian genetic resources facilitated through development (with provinces and territories, with input from Aboriginal groups, and stakeholders) of an approach which identifies Canadian interests in this emerging priority and better positions Canada to be active, on a domestic-driven basis in negotiations on an international regime on Access and Benefit Sharing (ABS) of genetic resources and associated traditional knowledge.	In partnership with the Federal/Provincial/Territorial Working Group on Access and Benefit-Sharing of Genetic Resources and Associated Traditional Knowledge, a scoping paper outlining the questions and issues associated with ABS policies in Canada was produced to help move the domestic policy exercise to the next stage. The paper was endorsed in October 2005 by Federal/Provincial/Territorial Ministers responsible for Forests, Wildlife, Endangered Species and Fisheries and Aquaculture. An engagement strategy was also prepared. In addition, workshops were held in partnership with other government departments and provincial governments on genetic resources and, respectively, agriculture and forestry. A pilot project was initiated with two Aboriginal communities, in Ontario and Alberta, with the aim of building their capacity to raise awareness and develop responses to ABS policy developments.

Program Area: Natural Legacy Agenda	
Activities: Fulfil Environment Canada's responsibility to develop environmental performance standards which will specify desired levels of environmental quality required of agriculture, and for validating beneficial management practices. The Oceans Action Plan builds upon Canada's Oceans Strategy and is a continuation of efforts to develop a comprehensive strategy for oceans management. Environment Canada will work with the interdepartmental community in the implementation of Canada's Oceans Action Plan, including the identification of Marine Protected Areas and the creation of integrated management zones in priority areas.	
Indicators: use of scientific information by decision makers**;** standards are integrated by Agriculture and Agri-Food Canada (AAFC) into beneficial agricultural management practices and to assess relative performance of the agriculture industry; amount of totally and strictly protected areas in Canada.	
Expected Results	**Progress**
Suite of standards for air, biodiversity, pesticides, and water elements that are at high risk from agricultural activities.	Twenty-four draft standards were developed in 2005–2006 for priority agri-environmental parameters in the following areas: biodiversity (e.g. ecozone-specific habitat conservation standards), pesticide (e.g. top priority pesticides in water) and water (e.g. nutrients and sediments).

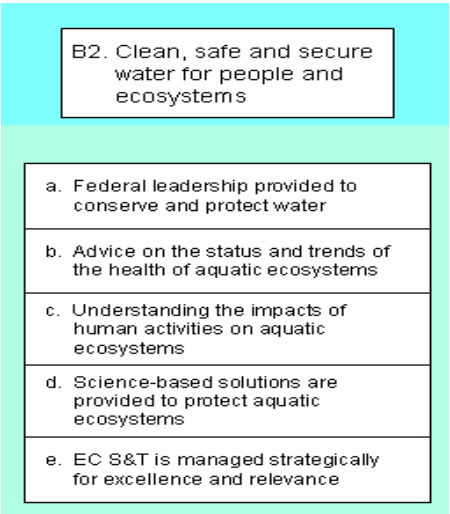
Environmental performance standards developed by the National Agri-Environmental Standards Initiative (NAESI) will be implemented at the farm level through beneficial management practices leading to certification of Canadian agriculture practices and continued access to international markets.	Discussions with AAFC during 2005–2006 identified potential future uses of the agri-environmental standards by strengthening linkages with existing agricultural programs such as the National Agri-Environmental Health Analysis and Reporting Program, National Land and Water Information Service, and Environmental Farm Plans.
Improved stewardship by agricultural producers of the land, water, air, and biodiversity.	The first stakeholder consultation workshop on the science-based standards was held in March, 2006 to discuss the progress on standards development and the benefits of the standards.
Wild living resources are conserved (refer also to expected results under "Species at risk are protected" and "Migratory bird populations are conserved" major initiatives/programs).	Environment Canada's Protected Areas Strategy, as well as the Ecological Gifts Program (EGP) and the Habitat Stewardship Program (HSP) for Species at Risk, which addresses species at risk, conserve habitat and its associated terrestrial and aquatic species. The protected areas network is comprised of areas significant to Canada's wildlife, with a focus on migratory birds and species at risk. The EGP and HSP are intended to conserve non-federal, ecologically sensitive lands.
Increased public and private stewardship on Canada's lands and waters.	Environment Canada continues to actively promote and support the conservation of wetland habitats in decision making and operations, through both continued implementation of the Federal Policy on Wetland Conservation and development of year 3 of the advanced remote sensing technology for wetland inventory and monitoring (Canadian Wetland Inventory).
Canada's protected areas are established, expanded and restored (refer also to expected results under "Significant habitats are conserved, restored and rehabilitated; overall ecosystem integrity is sustained" major initiative/program).	In 2005–2006, 6014 hectares of private land were added to Canada's protected areas network through the Ecological Gifts Program and Environment Canada's ongoing legislative requirements to protect these lands in perpetuity. Through the HSP, 19 343 hectares of land have been protected through long-term agreements and an additional 138 538 hectares through temporary protection measures.
Strengthen the scientific information base.	Environment Canada undertakes extensive research and technological development on wildlife habitat ecology (characterization, assessment, and modelling) and in 2005–2006 continued to conduct a wide array of specific habitat monitoring activities (for example, in the Great Lakes Basin) in support of informed decision making. Supporting the trend of this type of science toward system-scale analysis, in 2005–2006 Environment Canada created a dedicated wildlife and landscape science organization within the Department. Through the work under NAESI, numerous reports and other tools which increase our understanding of the impacts of agriculture on the environment have been developed. In March 2006, Environment Canada released the 2005 NAESI Technical Series which contains the 55 reports from the previous year's work.

Program Area: Promotion of sustainability for 2010 Olympic and Paralympic Winter Games	
Activities: Fulfill Environment Canada's responsibility to lead and contribute, through partnerships, to the promotion of environmental sustainability, conservation and best practices to maximize sustainable legacies associated with the 2010 Olympic and Paralympic Winter Games.	
Indicators: Environmental sustainability best practices are adopted by the Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games (VANOC) and other partners; Canadians have a greater understanding of sustainability issues; Canada's international reputation in sustainability is enhanced; there is increased collaboration with Beijing, London and future Olympic host cities on sustainability initiatives.	
Expected Results	**Progress**
Leadership and cooperation in Canadian sustainability is demonstrated in the leadup to and during the 2010 Games.	Environment Canada initiated, in partnership with VANOC, a Leadership in Energy and Environmental Design (LEED) business case study for a specific Olympic venue (Hillcrest Curling venue in Vancouver). There is collaboration with the London and Beijing Olympic Organizing Committees on key areas (sustainability indicators, citizen engagement, etc.). The Department continues to co-chair the Environment and Sustainability Cluster committee, providing a coordinated federal forum for departments to contribute to maximizing sustainable legacies associated with the 2010 Games.
Environmental best practices and technologies in environmental sustainability are promoted and demonstrated.	Environment Canada continues to participate and provide scientific advice in the collaborative development of sustainability indicators for the Games. The Department identifies opportunities for VANOC and other partners to implement Zero Waste initiatives, in collaboration with Industry Canada and the City of Vancouver. Environment Canada showcased Canadian environmental technologies at the Sustainability Corner at the World Urban Forum and invited delegates to speak on sustainability initiatives in their region/country. The Department collaborated with Industry Canada to revise and strengthen the sustainability sections of the "2010 Business Opportunities" Handbook, which will be used in Canada-wide workshops open to small businesses.
Canadians are educated and have greater awareness of sustainability initiatives and approaches associated with the Games.	Environment Canada is working with VANOC to put together a citizen engagement plan to promote sustainability awareness and action in the leadup to 2010. The Department participated in key events to promote greater awareness of sustainability, e.g. Globe 2006, 30 Days of Sustainability, World Urban Forum.
There is departmental coordination for Environment Canada's essential service commitments for weather services, environmental assessment and sustainability.	Environment Canada provided strategic input to the Canadian Heritage 2010 Winter Games Horizontal Results-Based Management and Accountability Framework (RMAF) and Risk-Based Audit Framework (RBAF). There is ongoing engagement of the regional Environment Canada 2010 Working Group.

For more information

Canadian Biodiversity Information Network	http://www.cbin.ec.gc.ca
Canadian Wildlife Service	http://www.cws-scf.ec.gc.ca/default.cfm
NAESI Website	http://www.agr.gc.ca/env/naesi_e.php
2005 NAESI Technical Series	Available on CD

Clean, safe and secure water for people and ecosystems



What is the issue?

Water is emerging as a critical issue of the 21st century. While Canada is recognized around the world for its natural wealth in water resources, these resources are at risk.

Despite significant reductions in point source discharges of contaminants, other key sources of pollution remain, including emerging chemicals, about which little is known. About 1 trillion litres of primary or untreated sewage pour into our water every year. Losses of wetlands continue: 68 percent of original wetlands in southern Ontario, and 75 percent of those in southwestern Manitoba have been converted from their natural state. Threats to water quality include the release, redistribution and biomagnification of contaminants. Adopting an ecosystem or watershed management approach is important to maintaining healthy ecosystems and protecting human health.

Water is also an essential resource for important areas of Canada's economy such as agriculture, pulp and paper, oil and gas, electric power generation and transportation, as well as tourism and other recreational uses. Urban population growth has resulted in pressures on infrastructure for water, and economic development is creating competing sectoral demand for scarce water resources. Flooding in Canada has had an economic impact in the millions of dollars. Canadian business earned $1.4 billion from water-related environmental goods and services in 2000. Upwards of $1.25 billion worth of hydroelectricity is generated by the St. Lawrence system.

What are we doing about it?

Ongoing activities of this Program Activity are:

- enhancing inter-jurisdictional relations and governance structures
- improving federal water management across departments
- improving water quality and aquatic ecosystem health monitoring and information
- enhancing understanding of the impacts of human activities on water resources and aquatic ecosystem health
- undertaking actions to restore and preserve Canada's water resources and promote wise and efficient water management and use.

Are we succeeding?

Securing clean, safe and secure water for people and ecosystems requires a shared vision for governments domestically and internationally. International aspects of water management are led by the federal government, although some transboundary Canada-U.S. waters are managed through the International Joint Commission. Judicial interpretation of our constitution has held that the provinces are the primary managers of water in Canada and are responsible for much of the environmental regulation and policy making that affects water issues.

The Canadian Council of Ministers of the Environment provides an important forum for fostering federal, provincial and territorial collaboration on environmental priorities of national concern.

However, water bodies and watersheds frequently extend across provincial and national boundaries. Canada has in place a number of institutional arrangements that help address matters of shared jurisdiction pertaining to waters that span provincial borders, including the Prairie Provinces Water Board, the Lake of the Woods Control Board, the Ottawa River Regulation Planning Board and the MacKenzie River Basin Board. Furthermore, all governments have major policy and regulatory levers they can deploy in support of water management. Ensuring that those levers are used in a harmonized and collaborative manner that is ecologically, socially and economically beneficial is a central challenge of water management in Canada.

Federally, 19 departments are working together to ensure stronger integration of efforts, continued development and application of an approach to enforceable national water quality guidelines, and effective handling of challenges in the management of federal facilities and lands.

Major programs and initiatives

Environment Canada addresses critical water issues on a number of fronts:

Program Area: Federal leadership is provided to conserve and protect water	
Activities: Governance; international and bi-national water initiatives.	
Indicators: Coordinated federal water policy with targeted instruments and actions that support partnerships and deliver on common goals.	
Expected Results	**Progress**
An integrated, watershed approach to water management in Canada is advanced and connected.	*Water and Canada: Integrated Water Resources Management: An Overview of Perspectives, Progress, and Prospects for the Future at Home and Abroad* was prepared. All jurisdictions are moving to adopt Integrated Water Resources Management (IWRM) as a central management strategy; a shared understanding of IWRM principles is emerging.
Shared water priorities are identified with provinces and territories and integrated into work plans.	Discussions were held with the Partners for the Saskatchewan River Basin about the possibility of collaborating with them to prepare a state of the watershed report for the basin.
Programs are tailored to deliver source water protection and water conservation through the First Nations Water Management Strategy in partnership with Indian and Northern Affairs Canada and Health Canada.	A Source Water Protection Plan protocol and technical guidance documents as well as a water use audit manual were developed. These documents will be used/tested in source water protection plans and water use audits in several First Nation communities in 2006–2007.
Key sectoral strategies are developed and implemented to improve the efficient and sustainable use of water in Canada.	The identification of water use strategies in the municipal and industrial sectors is under way.

Information on water issues is conveyed to respond to demands from national to local levels of decision making.	Information that was provided included the following: • A Municipal Water and Wastewater Survey interactive Website, Web-based mapping service, database, 75-page variable description document and metadata (collection level and record level) were completed. • The 2001 Municipal Water Pricing Database and summary tables were completed. • Sewer rates were published (along with water rates, above). The response rates on the Infrastructure Supplement of the 2001 survey were too low for developing useful estimates regarding infrastructure financing. However, key portions of this supplement were incorporated into the Municipal Water and Wastewater Survey done in 2005–2006 to gather 2004 data. For further information on this information see: http://www.ec.gc.ca/water/MWWS/en/publications.cfm
The mix of water management instruments and tools (e.g. economic, policy, guidelines) are designed, modified, or adapted to promote uptake and optimize results.	Work during this period included the following: • A study of the impact of pricing structures on residential water demand in Canada (completed) • Work on the Centre for Health Evidence water reuse guidelines (ongoing) • Funding and technical expertise as a contribution to the completion of the National Research Council's *Water and Sewer Rates: Full Cost Recovery*—a best practice by the National Guide to Sustainable Municipal Infrastructure (InfraGuide)
Canada's engagement in global water events and negotiations improve access to clean water and promote the use of Canadian expertise and technology.	The Department supported the Government of Canada on water issues at key multilateral fora and events including the World Water Forum, March 2006. Official delegates and representatives from 140 countries came together to debate and promote policies and practical actions aimed at resolving major water issues. Some 78 ministers, including the Canadian Minister of the Environment, attended the Ministerial Conference. See website for further information http://www.worldwatercouncil.org/index.php?id=1594&L.
Canada's water quality and quantity interests are protected bi-nationally.	Environment Canada provided advice and options and participated as a technical expert in binational discussions related to Devil's Lake. The Department led the development of advice and guidance on key emerging water issues such as the International Joint Commission's Great Lakes/St. Lawrence water levels study and North Dakota's Red River Valley Water Supply Project.
Federal water strategies are developed and implemented in a complementary and comprehensive manner.	Significant revisions and additions to the Freshwater Website have been instituted and a watershed map of Canada has been developed and is being distributed. The first phase of the Know Your Watershed project (RésEau) has been completed.

Program Area: Advice on the status and trends of the health of aquatic ecosystems	
Activities: Providing leadership on the development and implementation of an affordable and demand-driven monitoring and reporting program on the status and trends of aquatic ecosystem health which will produce nationally consistent, locally relevant information and indicators for decision makers and Canadians.	
Indicators: Policy makers and decision makers and Canadians have the scientific information they need on the status of and trends in ecosystem health to make informed decisions to protect and conserve the environment.	
Expected Results	**Progress**
Develop RésEau – a Canada-wide information portal integrating water quality/quantity and use data and information from distributed sources which will facilitate sharing, discovery, access and use by water management experts and the Canadian public (2005–2007).	The RésEau portal was released in March 2006 and provides pre-defined maps for general users, as well as advanced search and query functions which create dynamic maps in real time for more advanced users. The monitoring networks include 1819 water quality stations, 1936 water quantity stations and includes near real time hydrometric mapping. Through RésEau, water data are now accessible online through one portal which includes both federal government monitoring programs for water quality and quantity, as well as programs on groundwater availability, groundwater contamination, water use, water and human health (disease outbreaks). In addition, through a partnership initiative, data has been made available from a network of 16 partner groups including provinces, NGOs, community groups and high schools. For more information, see: http://www.environmentandresources.gc.ca/reseau/
Develop a water quality indicator that will provide a trusted source of information on national water quality by filling gaps in data through establishment of dedicated national water quality monitoring network and federal-provincial agreements; strengthened interpretive tools and assessment approaches and improved national reporting (2005–2008).	Environment Canada completed the initial review of the departmental water quality data holdings (ENVIRODAT, etc.) and initiated a national exercise on data comparability for key monitoring classes (nutrients, base metals) based on consistent parameter nomenclature, analytical methods reviews and variable form. This is a key step in the scientifically credible aggregation and use of distributed Environment Canada water quality data for developing a national picture of water quality. The first national assessment of water quality in Canada in support of the Government of Canada report on key Canadian Environmental Sustainability Indicators was released in December 2005. This first freshwater indicator report was based on an assessment of monitoring data from 345 federal, provincial, and federal-provincial monitoring stations across Canada and involved cooperation across several federal departments and the provinces. Environmental indicators for freshwater quality are presented in the *Canadian Environmental Sustainability Indicators* 2005 report. http://www.environmentandresources.ca/default.asp?lang=En&n=2102636F-1

Program Area: Understanding the impacts of human activities on aquatic ecosystems	
Activities: Conducting research to identify human activities that are having significant impact on aquatic ecosystems, ecosystems that are most vulnerable to those impacts, and opportunities to minimize these impacts, and transferring the knowledge to decision makers who can take action to address aquatic ecosystem health issues.	
Indicators: Use of research and scientific information by decision makers.	
Expected Results	**Progress**
Advance scientific understanding of the impacts of land use practices and the effects of toxics and other substances of concern as well as changes in climate and biodiversity on aquatic ecosystems.	Environment Canada generated new knowledge on the effects of toxics and substances of concern, including determining temporal trends in priority contaminant levels in aquatic biota for polybrominated diphenylethers and polyfluorinated chemicals; determining the occurrence of perchlorate in surface water and groundwater in Canada; determining gene-transfer events in genetically modified crops; determining *E. coli* sources in Great Lakes beaches; and determining the occurrence, persistence, fate and toxicity of selected pharmaceuticals and personal-care products as well as their treatment efficiency in sewage treatment plants. The Department's research also produced new knowledge on assessing and predicting the impacts of climate variability on cold regions hydro-ecology, river ice jams, peatland and permafrost hydrology, aquatic food webs, groundwater systems and on ice-covered aquatic ecosystems. Other research priorities include landscape disturbance (e.g. agriculture, forestry, mining); the effect of multiple stressors on biodiversity; watershed developments (e.g. dams/diversions, water availability); and the effect of human activities on vulnerable ecosystems (e.g. wetlands). Ongoing research and inter-agency program coordination efforts are taking place for designing and implementing a Canadian Aquatic Biomonitoring Network (CABIN) for riverine, lake and wetland environments.
Conduct and publish science assessments on taste and odour in drinking water sources, contaminated sediments, and ecosystem impacts of acid rain (2005–2007).	Work continued on assessing taste and odour in Lake Ontario, the Bay of Quinte and the St. Lawrence River. Research was begun on the question of whether lake whiting phenomena may be a predictor for taste and odour events. Three papers were published and nine were submitted for publication. Initial work was completed on a Canada-Ontario contaminated sediment decision-making framework for the Great Lakes and elsewhere. The Contaminated Sediment Assessment Decision-Making Framework, 2005 was drafted. The *2004 Canadian Acid Deposition Science Assessment* was released.

Program Area: Science-based solutions are provided to protect aquatic ecosystems
Activities: Develop innovative science-based solutions (e.g. environmental quality standards and guidelines) and integrated water resource and landscape management actions to conserve, protect and promote sustainable use practices and to protect and enhance the health of aquatic species.
Indicators: The availability of innovative science-based solutions (e.g. environmental quality standards and guidelines).

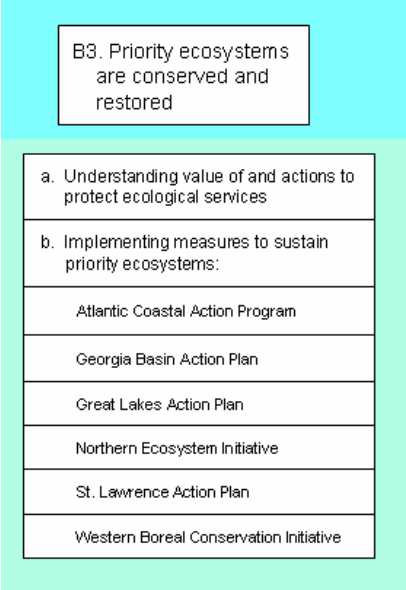
Expected Results	Progress
Develop environmental quality guidelines for aquatic ecosystems (water, sediment, tissue residues) to sustain, protect and enhance the quality of the environment and its major beneficial uses.	Guidelines were completed for the protection of aquatic life with respect to diisopropanolamine, permethrin, and sulfolane. Guidelines for the protection of agricultural water uses for diisopropanolamine and sulfolane were also completed, as well as those for phosphorus ecoregions. In 2005–2006, the efforts of the National Guidelines and Standards Office (NGSO) on environmental quality guidelines for aquatic ecosystems focused specifically on revisions to the protocol for environmental quality guidelines in water (i.e. aquatic life protocol). The bulk of the work is complete and is currently under stakeholder review.
Develop soil quality guidelines for the remediation of contaminated sites and to sustain, protect and enhance the quality of the terrestrial environment and its major beneficial uses.	Environment Canada completed soil quality guidelines for diisopropanolamine and sulfolane. The Department also developed soil quality guidance for propylene glycol. In 2005–2006, the revisions to the protocol for the derivation of environmental and human health soil quality guidelines were completed.
Provide expertise and guidance on the application of guidelines in priority government initiatives such as source water protection, agri-environmental standards and site-specific water quality indicators.	Environment Canada provided expertise and guidance on the application of water quality guidelines in the calculation of the water quality indicator and the development of site-specific guidelines; the development of pesticide ideal and achievable performance standards for the National Agri-Environmental Standards Initiative (NAESI); the development of a marine eutrophication guidance framework; the development of a source water protection protocol for First Nations; and the development of a sediment quality index.
Promote the uptake of water quality assessment tools through training, technical publications and website information.	The Department provided training on the development and appropriate use of Canadian Water Quality Guidelines to federal/provincial/territorial governments, academia and stakeholders.
Develop sustainable water management practices (e.g. improved municipal wastewater treatment approaches, new technologies for remediation of contaminated sites and development of sustainable urban stormwater management practices).	Progress has been achieved on improved municipal wastewater treatment approaches and development of sustainable urban stormwater management practices. A pilot scale research at Clifford, Ontario, has defined the design and operating conditions of a recirculating sand filter, and confirmed that this process can be used as an effective means to upgrade septic tank effluents to meet stringent surface discharge limits. A comprehensive assessment of the Terraview Stormwater Management Facility (Toronto) has been completed and recommendations for improvements have been made. The effectiveness of street sweeping in controlling pollutants on streets was studied in Toronto. Technical guidance was provided for preparing a best practice document on end-of-the-pipe measures for stormwater management (published in 2005). Sources of fecal microbial pollution were tracked on two beaches in Toronto—the findings will be reflected in future plans for fecal bacteria controls. Site characterization studies of high-priority contaminated sites in northern settings were conducted to establish biogeochemical and hydrogeological processes that control contaminant release and transport pathways. A report on the urban water cycle was submitted to UNESCO and published in February 2006. It presents the urban water cycle as a basis for integrated urban water planning.

Develop agri-environmental standards under the Agricultural Policy Framework for use in the management of impacts on water stemming from the agricultural sector.	In 2005–2006, 56 projects focused on water priorities: nutrients, pathogens, sediments, environmental stream flows and water availability. Science-based standards were developed for certain water priorities. These standards will be validated and standards for other priorities developed during the remaining two years of the National Agri-environmental Standards Initiative.

Program Area: Environment Canada's science and technology is managed strategically for excellence and relevance	
Activities: Strategically managing Environment Canada's science and technology and developing science and technology policy for Environment Canada, contributing to and implementing federal science and technology policy, and reporting on and communicating about Environment Canada's science and technology effort.	
Indicators: Independent recognition of the quality of Environment Canada's science and technology and their management.	
Expected Results	**Progress**
Environment Canada's science and technology are high quality.	A quantitative study of 25 years of international, peer-reviewed journal publications in environmental research showed that Environment Canada's position in environmental research is very strong. Environment Canada is in fact the top Canadian institution among the 50 most productive institutions in environmental research in the world, ranking seventh, and the top collaborator of 10 of the 14 other most productive Canadian institutions—making it the central hub of the Canadian network in environmental research. The establishment of a Science and Technology Branch at Environment Canada, bringing together much of the Department's research capacity for the first time, promises to enable even stronger science and technology excellence in the future.
Environment Canada's science and technology efficiently and effectively support the Department's mission and contribute to achieving the federal government's goals.	The Department's Science and Technology Branch was formed in September 2005. Before that time, scientific research was dispersed throughout the Department and served individual organizational units; now research is centralized in the Science and Technology Branch and it is being better aligned to Department priorities. Work began on the Department's first Science Plan, the purpose of which is to ensure that Environment Canada's science is positioned to support the Department's evolving policy, program and service needs. The Science Plan will clarify how Environment Canada's science can be integrated internally, and where the Department can collaborate, partner, and foster science integration within and outside the federal government. A Technology Plan is to follow.
Environment Canada's science and technology are integrated with federal, Canadian and international environmental science and technology capacity.	The Assistant Deputy Ministers Science and Technology Integration Board is working effectively to create closer collaboration between federal science and technology performers; Environment Canada is viewed as a leader in the Board's operations. The Integration Board developed a report on *Overcoming Barriers to Collaboration* and will be working with central agencies and across the federal government to implement its recommendations. The Board was a key target audience for the "Beyond the Horizon" report, prepared by federal scientists in September 2005, which identified emerging national science and technology issues. Following from that work, the Board has undertaken integration initiatives in three areas, one of which is freshwater research. The Board is proposing a mapping exercise for federal science and technology which would identify federal capacity and leadership around key domains, one of which will be the environment.

	Environment Canada also worked in 2005–2006 to encourage closer collaboration on environmental science and technology with university, industry, and other government partners. Work continued on fostering regional and thematic networks such as the Atlantic Environmental Sciences Network and the federal research network on the ecosystem effects of novel living organisms (EENLO).
Environment Canada's science and technology effectively address the environmental and sustainable development needs of Canadians.	The establishment of a Science and Technology Branch at Environment Canada has strengthened the Department's in-house science and technology capacity. This capacity is essential for addressing the environmental and sustainable development needs of Canadians. It gives the Department the means to do the essential "public good" science and technology that others cannot or will not do. It also establishes the Department's credibility, which helps it advance the environmental agenda and allows it to contribute to and influence other agendas that affect the environment.

Priority ecosystems are conserved and restored



What is the issue?

Ecosystem initiatives (EIs) have been developed with a wide range of partners, as an effort to respond to the unique environmental and sustainability issues of targeted ecosystems across Canada. The objective is, through the application of an ecosystem approach, to attain the highest level of environmental quality within targeted ecosystems as a means to enhance the health and safety of Canadians, preserve and enhance our natural capital and optimize economic competitiveness.

Sound science that helps us understand how each ecosystem works and how ecosystems are affected by human-induced pressures is vital. Similarly, the sharing of knowledge, integrated and informed planning and decision making, as well as community and citizen engagement, are crucial.

What are we doing about it?

The ecosystem approach provides a framework for collaborative action to address the complex environmental issues affecting targeted ecosystems. Ecosystem initiatives achieve results by relying on measurable environmental results, aligned and coordinated efforts, collaborative governance mechanisms, integrated science and monitoring, community involvement, sharing of information and experiences and informed decision making. Each EI has built up over the years and now enjoys a broad basis for support.

Environment Canada is engaged in six priority EIs—the Atlantic Coastal Action Program, Georgia Basin Action Plan, Great Lakes Action Plan, St. Lawrence Action Plan, Northern Ecosystem Initiative and Western Boreal Conservation Initiative.

Environment Canada contributes $32.5 million each year to priority ecosystems. This investment is augmented by other sources including significant contributions from partners.

Are we succeeding?

Priority EIs are working to restore and enhance elements of environmental quality in each targeted ecosystem. They continue to produce sound science as well as strong and multiple partnerships that work collectively to address priority issues in the targeted area. A wide variety of products, tools and information is produced by these initiatives each year. Capacity building has also been a main thrust.

However, a shift is still required towards greater use of an ecosystem-based approach (EA) for environmental management within the Department. Given that there is now agreement on the need to apply such an approach, the next step will be to develop and implement an EA framework. In doing so, it is expected that horizontality and interactions within the Department will be strengthened. The objective, from an environmental point of view, is to maintain a natural capital system that ensures a perpetual supply of the ecological goods and services provided by ecosystems to sustain our health, economic prosperity and competitiveness.

Environment Canada has developed an evaluation framework to assess the effectiveness and alignment of any Environment Canada programs to the departmental strategic outcomes. In testing the integrity of this framework, an evaluation is being conducted using the Georgia Basin Action Plan as a case study.

Major programs and initiatives

Environment Canada works with a broad spectrum of governments and communities of interest in pursuit of shared objectives in six EIs across Canada:

<table>
<tr><td colspan="2">Program Area: Understanding the value of and actions to protect ecological services</td></tr>
<tr><td colspan="2">Activities: Environmental quality status and trends monitoring and reporting.</td></tr>
<tr><td colspan="2">Indicators: An improved understanding of the inter-related dynamics of the ecological, economic and social systems in ecosystems.[SDS3.1.1]</td></tr>
<tr><th>Expected Results</th><th>Progress</th></tr>
<tr><td>Enhanced linkages with networks in Canada and improved information sharing on ecosystem changes.</td><td rowspan="4">Environment Canada, in collaboration with partners, developed and reported on indicators of the quality and health of ecosystems in Canada. These included information products on the state of the Great Lakes with the U.S. EPA and a comprehensive report on British Columbia's coastal environment developed jointly with provincial and federal partners.
Given the crosscutting nature of many environmental issues, joint initiatives on state of the environment reporting were undertaken. For example, Environment Canada, Statistics Canada, and Health Canada published the Canadian Environmental Sustainability Indicators 2005 report, responding to a commitment to report nationally on key indicators of environmental sustainability including: air quality, freshwater quality and greenhouse gas emissions. A new information module providing background on key socio-economic variables related to environmental indicator results was published.
Environment Canada and Statistics Canada also collaborated on surveys to interpret indicators: household and environmental, agricultural water use, and industrial water use.</td></tr>
<tr><td>Integrated approach to the generation, acquisition and dissemination of information and knowledge.</td></tr>
<tr><td>More accessible information on ecosystem health and enhanced public awareness of ecosystem changes.</td></tr>
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Policy and decision makers and Canadians have the scientific information on the status of and trends in ecosystem health to make informed decisions to protect and conserve the environment.	A complementary, online tool was also released to provide indicator results in a user-friendly format, including interactive maps, allowing users to directly access monitoring station data used to develop the air and water indicators. In addition, another collaborative initiative between Environment Canada and Health Canada produced a report entitled *Children's Health and the Environment in North America: A First Report on Available Indicators and Measures. Country Report: Canada* directly supporting the first report on available indicators for children's health and the environment by the Commission for Environmental Cooperation. This report covers three major areas: air pollution, asthma and respiratory diseases; lead and other chemicals; and drinking water, sanitation and waterborne diseases.

Program Area: Implementing measures to sustain priority ecosystems	
Activities: Atlantic Coastal Action Program (ACAP).	
Indicators: An improved understanding of the inter-related dynamics of the ecological, economic and social systems in ecosystems.[SDS3.1.1]	
Expected Results	**Progress**
Local capacity built to assume a leadership role for sustainability at the community and regional ecosystem level.	Partnerships with 14 ACAP multi-stakeholder, community-based organizations throughout Atlantic Canada were sustained and strengthened. Empowered ACAP communities continue to lead in community awareness and behavioral change, priority setting, partnership development for action, and producing best management practices (BMPs) for governments and industry.
Collaborative stewardship actions support the sustainability of Atlantic ecosystems and communities.	Ninety-four projects were undertaken by 14 ACAP groups. An amount of $1.15 million was contributed, and leveraged 8:1, for a total project investment of over $9 million. Collaborative monitoring and modelling were carried out (stream and coastal water quality, terrestrial biodiversity, marine forecasting and airsheds).
Local, scientific and indigenous knowledge supports improved public awareness and decision making by advancing the understanding of key ecosystem stresses.	Multi-year efforts were made in volunteer water quality (freshwater and coastal) and air monitoring, youth engagement and motivation, habitat restoration, as well as local emission reductions and better local management of household hazardous wastes.
Improved and enhanced environmental quality through priority actions identified in local comprehensive environmental management plans.	Endangered species are being protected (Lunenburg, Sable Island, Cape Breton), shellfish growing areas were re-opened for harvesting and job creation (Miramichi and Eastern Charlotte, N.B.), riparian zones were restored, pesticide audits were carried out in various natural resource sectors and alternatives were developed, and BMPs were established for municipal land-use planning. Several comprehensive environmental management plans (CEMPs) are being updated to reflect progress achieved and emerging challenges as well as being re-aligned to RMAF format for more precise outcomes measurement and reporting
Improved public awareness and enhanced scientific understanding of environmental issues.	Collaborative government-community science initiatives were taken under the ACAP Science Linkages Initiative on, *inter alia*, species-at-risk recovery, economic impact studies of environmental infrastructure investments (e.g. sewage treatment, aquaculture industry), pesticide usage alternatives, airshed modelling, and assessment of ecological health.

Program Area: Implementing measures to sustain priority ecosystems	
Activities: Georgia Basin Action Plan.	
Indicators: A performance measurement framework is in place to help determine the impact of the Georgia Basin Action Plan. A mid-term evaluation will be conducted in 2006. For more information, refer to: http://www.pyr.ec.gc.ca/georgiabasin/index_e.htm.	
Expected Results	**Progress**
Collaborative stewardship actions support the sustainability of the Georgia Basin.	**Community stewardship, awareness and information sharing:** Multiple partners were trained in biological monitoring using the CABIN bioassessment approach in August 2005. Sampling in twelve sites was supported to evaluate the CABIN reference condition model. **Stewardship Center:** Support was provided to this online stewardship resource aimed at the development and coordination of networks to serve stewardship activities (e.g. inventories, mapping, monitoring and technical publications). Evaluation of the Stewardship Center was supported and the value of continued support was confirmed. **Airshed planning and management:** Support was provided to the Georgia Basin Puget Sound International Airshed Strategy. Engagement was fostered through partnerships (Canadian and U.S. federal, provincial, state, local government, and Tribes and First Nations) for domestic air and binational air priorities. **Georgia Basin Action Plan Mid Term Review:** Survey instruments and methodology were developed in 2005–2006. A management review was scheduled for 2006–2007.
Sustainable land, aquatic and resource planning and management support the conservation, protection and restoration of the environment, enhance human well-being, and contribute to a strengthened economy.	**Innovative processes and practices and sustainable resource use:** Support was provided for Smart Growth on the Ground in the District of Squamish through a multi-stakeholder design charrette which developed the Downtown Squamish Concept Plan (to guide policy, planning and design decisions). The Biodiversity Conservation Strategy for the Greater Vancouver Region was completed, spatial framework methodology was established, and habitat mapping and analysis were reviewed. **Watershed-based planning: S**ets of soil samples (3) were completed to establish benchmark conditions for the Fraser Valley Farm Soil Nitrogen, Phosphorus, and Potassium Survey 2005. Feedback in the form of soil quality data was provided to the farming community and others in support of sustainable resource planning. Groundwater modelling in the Abbotsford Aquifer was supported (monthly monitoring of nitrate in the aquifer, results were published on Environment Canada's Water Quality Website, and the Nitrate Transport Model was calibrated with Simon Fraser University).
Scientific and indigenous knowledge supports improved decision making by advancing the understanding of key ecosystem stresses.	**Interdisciplinary science and knowledge exchange:** In November 2005, Environment Canada participated in the Coast Salish Policy Dialogue "Protecting our Place with One Voice" convened by the Tribes and First Nations whose traditional territories border the Salish Sea. It was agreed to form a Coast Salish Aboriginal Council. The 2002 Georgia Basin – Puget Sound Ecosystem Indicators Report was updated with nine ecosystem indicators. Data collection and trend analysis for the Fraser River Estuary Management Plan **(**FREMP) indicators were completed and eight indicators were established to measure FREMP partner progress in implementing the plan.

	Through research and monitoring, better understanding of human impacts on the environment: Municipal wastewater sampling at key outfall sites in the Greater Vancouver Regional District and Capital Regional District was completed. Ongoing analysis was carried out to determine emerging chemicals of concern (i.e. pharmaceutical, toxic chemicals) and their impacts on marine, freshwater and terrestrial resources. The establishment of a conservation framework for coastal waterbirds was supported by contributing to the British Columbia Coastal Waterbird Survey which aims to monitor numbers, trends and site occupation of waterbirds in the Georgia Basin and identify priority areas and actions for future conservation.
Targeted ecosystems are protected from harmful human activities and affected key ecosystem components are restored.	**Reduction of pollutants in air and water:** Environment Canada supported the Toxic Chemical Management Strategy and finalized the Toxic Working Group Action Plan. Monitoring was done of the performance of stormwater source controls in the District of Maple Ridge (promotion of alternative development standards to achieve stormwater runoff reduction targets as established in *Stormwater Planning: A Guidebook for British Columbia*). Support was provided for the development and implementation of BMPs for pollution prevention in boatyards and marinas in the Georgia Basin in accordance with provisions of ss. 36(3) of the *Fisheries Act*. Promotion and awareness building related to anti-fouling paint residues were continued.

Program Area: Implementing measures to sustain priority ecosystems	
Activities: Great Lakes Action Plan.	
Indicators: An improved understanding of the inter-related dynamics of the ecological, economic and social systems in ecosystems.[SDS3.1.1]	
Expected Results	**Progress**
Restored environmental quality in two Areas of Concern, resulting in the removal of the designation "Area of Concern."	Significant progress is being made in area of concerns. Wheatley Harbour Remedial Action Plan (RAP) is on schedule to complete all actions by 2007. Nipigon Bay RAP is on schedule to delist in 2008.
Completion of all required federal actions for RAPs in at least six Areas of Concern.	Significant progress is being made toward completing all actions in six areas of concern by 2010. In 2005–2006, implementation frameworks have been established to facilitate implementation of actions where required. Work plans are in place and priority actions have been identified. A federal-provincial Decision-Making Framework to Assess Contaminated Sediments has been drafted and is proceeding through the approvals process.
Progress towards the rehabilitation of ecological systems in the remaining Areas of Concern.	Progress towards the rehabilitation of ecological systems is proceeding at a steady pace in remaining areas of concern. For example, habitats for recovery of sturgeon populations in the Detroit River area of concern have been assessed and potential rehabilitation sites have been identified. There are also several binational rehabilitation projects under way.
Progress towards the virtual elimination or significant reductions of persistent bioaccumulative toxic substances such as mercury, dioxins, furans and PCBs.	Actions to reduce the presence of persistent toxic substances in the Great Lakes have been undertaken in area of concerns and Great-Lake based programs. Actions have focused on elimination of remaining sources through source trackdown, development of sediment management strategies for contaminated sediments and pollution prevention activities.

	These actions have resulted in significant reductions to date, for example, 89 percent for PCBs, 84 percent for mercury, and almost 87 percent for dioxins/furans.

Program Area: Implementing measures to sustain priority ecosystems	
Activities: Northern Ecosystem Initiative.	
Indicators: An improved understanding of the inter-related dynamics of the ecological, economic and social systems in ecosystems.[SDS3.1.1]	
Expected Results	Progress
The health and sustainability of northern communities and ecosystems is enhanced.	Evaluation of 39 projects reporting in 2005–2006 showed that 100 percent of these projects were generating new knowledge or tools of benefit to Canada's North; 80 percent had "high" local involvement; and 75 percent were likely to continue after funding ends.
Improved understanding and awareness of the ecosystem impacts of contaminants and climate change through a combination of local, traditional and scientific knowledge and methodologies.	A total of 85 percent of projects used a combination of local, traditional and/or scientific knowledge and methodologies. Northern Ecosystem Initiative (NEI) Program Partner Inuit Tapiriit Kanatami released book entitled, *Unikkaaqatight*: *Putting the Human Face on Climate Change, Perspectives from the Inuit in Canada*. A special focus session was held on NEI-supported Local Contaminants Concern Projects at the 2005–2006 Northern Contaminants Program Results Workshop.
Development of an Integrated Ecosystem Thresholds Model for implementation in the Canadian North.	A terrestrial biodiversity index that quantifies the relationship with the human footprint was completed. A predictive tool was developed to demonstrate the relationship between land use and indicators of aquatic ecosystem health. An integration computer model was tested by the North Yukon Planning Commission which is now considering implementation options. A major workshop in Labrador set the foundation for further development and implementation of the project.
Completion of an inventory of existing ecosystem indicators for the Canadian North.	An inventory of indicators for the Canada's North was completed. An outline document was completed as a basis for developing an indicator report for Canada's North.
Improved environmental stewardship capacity in northern communities and Aboriginal organizations.	NEI Aboriginal Partners highlighted project results (e.g. book, video, etc.) on Arctic Day, in association with the Eleventh Conference of the Parties (COP11) to the United Nations Framework Convention on Climate Change. New community monitors were established in both terrestrial and marine systems.

Program Area: Implementing measures to sustain priority ecosystems	
Activities: St. Lawrence Action Plan.	
Indicators: An improved understanding of the inter-related dynamics of the ecological, economic and social systems in ecosystems.[SDS3.1.1]	
Expected Results	**Progress**
Develop a concerted Canada-Quebec concept for the integrated management of the St. Lawrence.	The Intergovernmental Working Group on Integrated Management of the St. Lawrence (IWG-IMSL) has completed the first stage of its mandate—the preparation of a document presenting the governance mechanisms and implementation procedures of the IWG-IMSL—based on existing organizations active along the St. Lawrence.

	This work resulted from community consultation and collaboration, primarily through the Priority Intervention Zones (ZIP) and Strategies Saint-Laurent (SSL) committees and the federal and provincial governments under the St. Lawrence Plan (SLP). The 2005–2010 SLP therefore represents a transition towards the integrated management of the St. Lawrence, and the mobilization of new stakeholders has begun.
Implement actions that contribute to the health and prosperity of the ecosystem.	The Canada-Quebec Agreement on the St. Lawrence 2005–2010 was signed on November 28, 2005. The fourth such agreement, the St. Lawrence Plan for Sustainable Development undertakes the concerted implementation of actions designed to conserve, protect and restore the ecosystem and recover uses. The Canadian and Quebec governments will provide funding of $80.8 million and $33.4 million respectively, over five years. The agreement aims to achieve 28 results that fall into six areas of intervention: community involvement and awareness, shoreline access, agriculture, ecological integrity, navigation, and monitoring the state of the St. Lawrence. A simple and effective management structure has been put in place to ensure coordination among stakeholders and involvement by all users, riverside communities and economic partners.
Improve our knowledge of the St. Lawrence ecosystem (impacts of stresses, biodiversity, monitoring).	The State of the St. Lawrence Monitoring and the Ecological Integrity consultative committees continue their research and monitoring activities, providing better knowledge about the St. Lawrence ecosystem. In the area of water quality, improvements have been made to four elements of the spatial coverage of state of the St. Lawrence indicators: monitoring of certain emerging substances, sediment quality, food and breeding success of the Northern Gannet and contamination of fish by toxins in freshwater. New indicators have been put in place for land use and benthic communities in Lac Saint-Pierre. Other new indicators have been developed jointly with communities for monitoring uses and invasive plant species, shoreline erosion and water quality for swimming. We have begun the modelling of the environmental fate of metals released through urban effluent and have begun documenting the ecotoxic potential of pharmaceutical substances in the City of Montréal effluent dispersion plume.
Increase public knowledge of the state of the ecosystem's health.	The Community Involvement and Awareness consultative committee continues its work to increase community awareness and participation, especially through the establishment of the St. Lawrence Observatory. This was accomplished in June 2005 by means of an agreement between the university, government, community and private sectors. In November 2005 the agreement led to the formation of a non-profit corporation and the development of a business plan. The committee contributes to youth-oriented educational Biosphère programs ($210,000) and funded the first Sommet jeunesse sur l'eau et le Saint-Laurent (March 2006), organized in cooperation with the Établissements verts Brundtland (Brundtland Green Schools) movement. Youth aged 12 to 17 from all areas of Quebec attended.
Support local community groups (14 ZIP committees) and build new partnerships.	The Department provides scientific and technical support to 14 ZIP and SSL committees for local and regional activities aimed at the ecological rehabilitation of the St. Lawrence carried out by a harmonization group composed of departmental scientists. They were also granted $1.1million in core support.

	The Community Interaction Program supported 25 community projects that conducted plant and wildlife inventories in Lac Saint-Pierre, cleaned the banks on the south shore of the freshwater reaches and set up a network of stopovers along the southern shoreline of the estuary.
Implement and improve the sustainable navigation strategy for the St. Lawrence.	The navigation consultative committee continued its maritime coordinating activities. It produced a discussion paper in collaboration with the Ouranos Consortium, a group that studies the anticipated effects of climate change. The paper, available on the Internet, assessed various options for adapting commercial shipping to a possible drop in water levels.

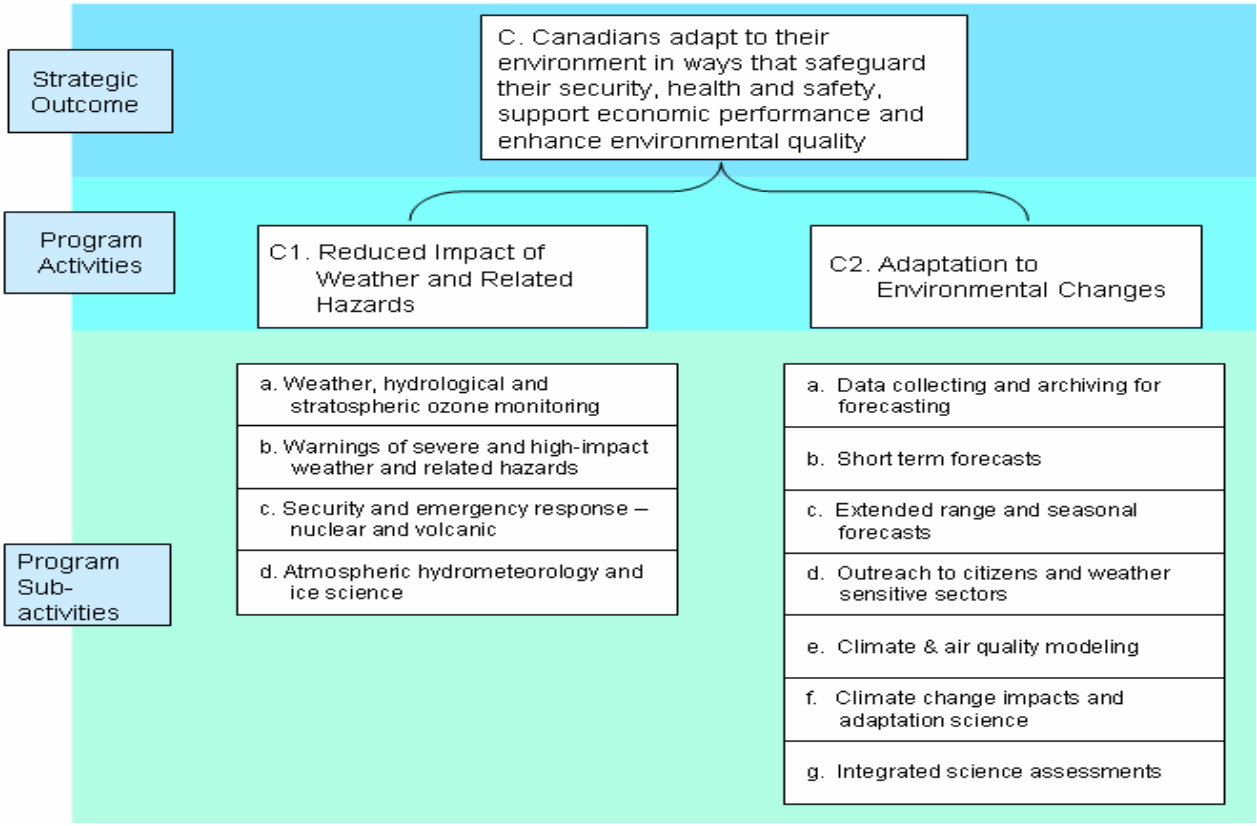
Program Area: Implementing measures to sustain priority ecosystems	
Activities: Western Boreal Conservation Initiative.	
Indicators: Availability of knowledge relevant to biodiversity conservation in boreal forests; application of results to best practices, governance and conservation programs of partners and Environment Canada; existence of a national program within Environment Canada that is focused on the conservation of boreal forests.	
Expected Results for Phase I (2003–2008)	**Progress**
Production of knowledge and action that has worked towards conservation of boreal forests, and to sustain or increase populations of migratory birds in the boreal forest.	In 2005–2006, projects were established or ongoing in the following areas: response of migratory birds to post-fire salvage logging and implications for best practices; development of predictive bird-habitat models to inform conservation frameworks for boreal forests in Canada; comparison of natural and anthropogenic disturbances on waterbirds; effects of riparian forest harvesting policy on migratory birds and cavity nesting species; assessment of cumulative effects of anthropogenic disturbance in wetlands; and comparison of best practices with conventional forest harvesting effects on migratory birds. Support was provided to the environmental assessment of the development of boreal forests. Policy analysis was done to support biodiversity conservation and its local benefits for Métis communities in Saskatchewan. Work was carried out on the definition and measurement of social sustainability in sustainable forest management, on fiscal incentives for biodiversity conservation and sustainable forest management, on assessment of conservation policies on the global competitiveness of Canada's forest industry, and on the design and implementation of an integrated landscape management strategy for western Canada.
Working through partnerships, management of boreal forests in Canada is moving towards a model of conservation-based landscapes, based on the principles of protected areas and sustainable development.	Through the Western Boreal Conservation Initiative (WBCI), Environment Canada is engaged in the pilot project Alberta Biodiversity Monitoring Program, in a national network to tie research to practice with regard to sustainable forest management, in the Cumulative Environmental Management Association (land-use planning) and in a review of third-party certification standards (CSA Z809 and Z804).
Partnerships and resources are in place that will allow Phase II of the WBCI to function as a nationally based program across the boreal forest.	The Western Boreal Conservation Initiative has initiated national-level projects, networks and partnerships across industry, Aboriginal governments, federal/ provincial/territorial governments and NGOs.
Improved understanding of the status of populations in the boreal forest acquired and contribution made to ensure recovery of species	There has been continued development of a set of spatially explicit, predictive models in the western boreal forest to improve understanding of bird distribution and habitat associations.

at risk.	Development has continued on sampling methodology to inform and direct development of a departmentally initiated national boreal bird monitoring program to understand the status of migratory birds in boreal forests.
There is an increased awareness and appreciation of boreal forests and their biodiversity in Canada.	Several important communication products were initiated and used by WBCI. These include: development and distribution of a program update document to partners and other interested parties; distribution of a fact sheet describing a national boreal bird-habitat modelling project to partners and other interested parties; lectures to members of the public on the natural history and conservation of migratory birds in the boreal forest; distribution of boreal bird posters in English and French to over 400 schools; response to over 50 requests from the public about information posted on the Green Lane Western Boreal Conservation Initiative Green Lane website.

For more information

Atlantic Coastal Action Program	http://atlantic-Web1.ns.ec.gc.ca/community/acap/
Georgia Basin Action Plan	http://www.pyr.ec.gc.ca/GeorgiaBasin/index_e.htm
Great Lakes Action Plan	http://www.on.ec.gc.ca/greatlakes/
St. Lawrence Action Plan	http://www.planstlaurent.qc.ca
Northern Ecosystem Action Plan	http://www.pnr-rpn.ec.gc.ca/nature/ecosystems/nei-ien/index.en.html
Western Boreal Conservation Initiative	http://www.pnr-rpn.ec.gc.ca/nature/ecosystems/wbci-icbo

Adaptation to the Environment Strategic Outcome



What is the issue?

As Canadians, we are affected by environmental and weather conditions such as extremes in temperature and precipitation, variable lake levels, winter storms, hurricanes, tornadoes, droughts, floods, smog, sea ice conditions, road icing and atmospheric turbulence. These conditions can affect our health and safety, our property, our businesses, the economy, and the environment.

What are we doing about it?

Environment Canada works to reduce risks to Canadians from weather-related and environmental hazards by providing warnings of hazardous and severe weather and by providing science and information to support other government departments and agencies in their decision making.

Forecasting services operate 24 hours per day, 365 days per year, to forecast weather and environmental conditions across Canada at the local, regional and national levels.

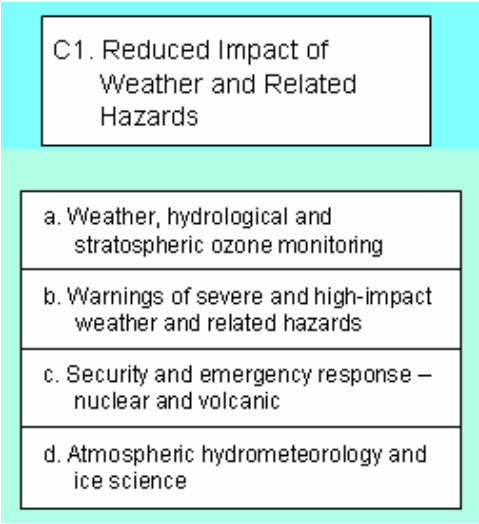
Environment Canada provides the federal government with essential scientific information to support the development of effective policies on key issues such as clean air, clean water and water management, and climate change.

Environment Canada's work also helps weather-sensitive sectors such as transportation, energy, agriculture, fisheries, forestry and tourism, to improve productivity and competitiveness, and assists them in making their operations environmentally sustainable.

Investment

Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
Reduced impact of weather and related hazards	156	184	186	1,330	1,743	412
Adaptation to environmental changes	93	99	84	734	568	-167
Totals	**249**	**283**	**270**	**2,064**	**2,311**	**245**

Reduced impact of weather and related hazards



What is the issue?

The risks to health, safety, property and the economy from naturally occurring environmental hazards such as ice storms, floods, hurricanes, drought and wind are increasing. As well, property and economic losses due to environmental hazards have increased dramatically in recent years.

In 1998, Canada spent $3 billion to repair damage from high-impact weather and related hazards. Not counting timber losses, the cost of fighting British Columbia's wildfires in 2004 alone approached $500 million. In total, nearly 2500 forest fires destroyed 2650 square kilometres of land, bush and residential areas. After back-to-back deluges in Edmonton in July 2004, insurers paid out close to $160 million in over 12 000 claims.

What are we doing about it?

The long-term goal of Environment Canada's work in this program area is to improve Canadians' capacity to adapt to, anticipate, mitigate, withstand, and recover from high-impact weather events and related hazards. This helps to create healthy communities where threats from environmental hazards are minimized.

To further the benefits derived from warnings, Environment Canada continues to explore innovative ways to deliver weather warnings and information to Canadians in time for them to take action to protect themselves and their property. Media and private sector companies are key partners in getting warnings and forecasts out to Canadians. Technologies such as cell phones, personal data assistants, laptop computers, the Internet and digital radios offer a variety of future opportunities.

Water continues to be a growing priority in Canada and Environment Canada plays a key role in monitoring, understanding and predicting the impacts of environmental changes on Canada's water resources. Environment Canada works closely with provincial and other partners to make available its knowledge of current and forecast conditions of rain, snow and ice so that critical drought and flood hazard impacts can be mitigated.

Environment Canada continues to support university-based research in climate and atmospheric sciences through the Canadian Foundation for Climate and Atmospheric Sciences.

Are we succeeding?

Environment Canada continues, on a 24/7 basis, to produce warnings of high-impact weather for public and marine users. As part of the modernization of Environment Canada's Meteorological Service of Canada, weather forecast operations have been consolidated into five storm prediction centres and two meteorological aviation centres. The Department continued to improve routine automated forecast production to enable meteorologists to devote greater attention to warning Canadians of the high-impact weather that affects them the most. Moreover, dedicated warning preparedness meteorologists work with media and emergency measures organizations to reduce the impact of weather and related hazards on the health, safety and security of Canadians.

We continue to improve our understanding of the science of severe weather. Special emphasis is being placed on transferring that understanding to operations. National laboratories, co-located with storm prediction centres, have been created to better link scientific research and forecast operations.

Our understanding of the current state of the atmosphere is also improving. Of note is the Aircraft Meteorological Data Relay system, which allows automated real-time monitoring of atmospheric conditions from commercial aircraft, and the newly developed capacity to use these reports to improve weather forecasts and warnings. Planning also continues regarding the advanced weather observing systems (weather radars, wind profilers) that will be needed for the Vancouver 2010 Olympic and Paralympic Winter Games.

Major programs and initiatives

In partnership with others, Environment Canada wants to improve the capacity to anticipate, mitigate, withstand and recover from high-impact events and related hazards by improving the lead time, accuracy and utility of, as well as satisfaction with, warnings.

Program Area: Weather, hydrological and stratospheric ozone monitoring	
Activities: Technology and approaches to monitoring that will increase the likelihood of early detection of severe weather and its precursors.	
Indicators: Integrity of monitoring networks.	
Expected Results	**Progress**
Weather, climate, surface water, ice and stratospheric ozone are monitored.	Environment Canada operated a comprehensive network to monitor weather and climate conditions. Weather conditions were monitored 24 hours per day, 365 days a year through national networks of surface observation stations, radar stations, lightning detection sensors, ships and buoys, and an upper air network.

	These networks are life-cycle managed, operate according to published standards and are highly reliable. Their data are accessible in real time. The state of Canada's climate was monitored by the surface observing network and a network of volunteers. The Water Survey of Canada operated 2300 surface-water-gauging stations in partnership with the provinces and territories, and approximately 1300 of these stations provided data in real time. Ontario and Alberta saw network increases under provincially funded initiatives. Ice analysis charts detailing the distribution of sea ice were produced once a week for all navigable Canadian waters affected by ice. When ships are operating in the vicinity of ice, charts are produced daily to enhance safety and economy of marine transportation. Stratospheric ozone over Canada is continually monitored by a national network of Brewer spectrophotometers, providing information used for ozone and UV forecasting as well as ongoing scientific research.
Ensure optimization, contribution and continuing access to international monitoring data through initiatives such as the Global Earth Observation initiative.	Environment Canada’s participation in the commissions and working groups of the World Meteorological Organization and Group on Earth Observations has continued to forward Canadian interests related to access to international monitoring data, such as weather observations, and satellite data. The Canadian GEO Secretariat has initiated the development of a “Federal Earth Observation Strategy” to coordinate the use of these data across departments to more effectively support federal government operations.
Better detect dangerous or changing weather and environmentally related conditions by continuing modernization of monitoring equipment.	The Meteorological Service of Canada (MSC) completed its third year of transition where one of the key deliverables is the modernization of the observing system to ensure its robustness and sustainability. Activities in the past year to meet this goal include installation of automated surface and climate observing systems, automation of shipboard observations, and selection of replacement technology for the upper air network. The Water Survey of Canada formally adopted and implemented the acoustic Doppler current profiler for velocity and discharge measurement. Work continued jointly with the U.S. Geological Survey on the development and evaluation of hydroacoustic measurement technologies for the establishment of national standards. Using the recently polarized C-band King radar, experimental polarization products were developed and provided to the Ontario Storm Prediction Centre for evaluation and for enhancing their forecasts of severe weather events. This is a step in the presumed future polarization of the radar network. Ten Precipitation Observing Sensing Systems (POSS) instruments within the Canadian POSS network were modified to provide advanced precipitation information at a high temporal resolution, and a data archive for these was established. This will have future application to the real-time calibration of the radar network. Networks are being established to monitor the impacts of a changing climate, with ongoing discussions with the Northern Ecosystem Initiative and the Circumpolar Biodiversity Monitoring Network.
Continue to demonstrate leadership in environmental stewardship by cleaning up contaminated federal monitoring sites.	Environmental assessments and clean-ups continued at a number of sites. The Department will be developing a holistic remediation plan for Mould Bay, Isachson and Eureka.

	Staffing was initiated to establish contaminated sites officers for both hydrometric and atmospheric monitoring sites. Of 1308 hydrometric stations identified as having used instrumentation containing elemental mercury, 1039 of the sites have been assessed and remediated as required. It is planned that assessment and required remediation of the remaining 269 sites will be completed by the end of 2008–2009.

Program Area: Warnings of severe and high-impact weather and related hazards	
Activities: Improving warning production and dissemination capability through production modernization.	
Indicators: Integrity of monitoring networks, new data sources and improved spatial coverage.	
Expected Results	**Progress**
Seamless, continued production of warnings by forecasters from the newly consolidated storm prediction centres.	Production of warnings (public and marine) of high-impact weather-related events continues with no interruptions. Procedures are in place and tested on a regular basis in all storm prediction centres to ensure a high level of coordination across all of them, thus avoiding any interruption in the operational production of warnings.
Warning improvements through scientific knowledge transfer to operations, more training and professional development for forecasters and automation of routine production.	The automated routine forecast production tool is continuously improved to allow forecasters to focus on high-impact weather. Ten to twenty percent of the time of meteorologists in the storm prediction centres was allocated to non-operational activities in order to improve and restore skill sets. Regular workshop and training sessions were made available to the forecasters over the year (e.g. SCRIBE workshop across the country, the operational meteorological workshop on remote sensing, most of the audience being made up of meteorologists) and forecasters attended relevant scientific conferences. **Global assimilation** is the backbone of all other activities including mesoscale forecasting and "environmental" prediction. It includes - implementation of the 4D-Var assimilation system; - improvements to the 4D-Var assimilation system leading to better use of available measurements from ground or satellite based instruments; - unification of software between research and development and operations to facilitate the validation and transfer of proposed changes to operational systems; - adaptation to the regional assimilation; - implementation of 4D-Var adapted to global mesoscale global weather model with regional physics at 35 km; and - vertical extension of the assimilation-forecast system to the stratosphere. **Remote sensing** refers to the use of remotely sensed (satellite) data in the operational 4D-Var analysis. Research and development are carried out in view of using existing and upcoming satellite measurements of infrared and microwave radiances. **Training** included the third Cooperative Program for Operational Meteorology, Education and Training Winter Weather Forecasting Course, which provided two weeks of advanced professional forecasting training to 20 Environment Canada meteorologists. The 7th Operational Meteorology Workshop was conducted, providing three days of professional training in radar, satellite and nowcasting techniques to approximately 60 meteorologists.

	A model for the technical transfer of science to operations was developed for the MSC. It will be finalized and implemented in subsequent years.
Increased accessibility to and use and reliability of warnings delivered through Environment Canada service channels (Web, phone and Weatheradio) and partnered channels (media, radio and television).	Error rate and down time have diminished for Environment Canada's weather information website. Environment Canada is a member of the Canada 511 Consortium, whose purpose is to increase the availability of phone services related to weather and road conditions. The media website gets more visits. Media can design and adapt the information to their needs.
Flood-related forecasting is improved and provincial stakeholders are provided with the water quantity science information required to better warn Canadians of floods.[SDS1.3.2]	Environment Canada is working with provincial partners and the private sector in flow forecasting to provide gridded hydrometeorological products for use by these agencies. The Department is working towards a community modeling system for improved flow forecasts Environment Canada is establishing the framework for flash-flood prediction.
Canadians' access to and understanding of high-impact weather warnings is improved.[SDS1.3.3]	The warning preparedness meteorologists provided information and support to media over 4000 times this year. High-impact weather training was provided to hundreds of community emergency measures officials across the country.
A national research and development approach is developed to help address the science needs associated with high-impact weather and climate events.[SDS1.1.4]	THORPEX program: coordination with international activities to insure that MSC's research plan translates into improved high-impact weather forecasting for the benefit of the Canadian society Science plans were developed for (1) the CloudSat/CALIPSO satellite validation research project which measures global cloud properties for application to climate and meteorology science; (2) a hub airport nowcasting development project for providing the aviation community with advanced point forecast products; (3) a national radar quality control / quantitative precipitation estimation strategy for provision of improved accuracy in precipitation observation and prediction; and (4) the development of an advanced fog forecasting tool for operational forecasting. The network of national laboratories was further integrated into the national science program, and each national laboratory developed a detailed 5-year plan for their research and development activities. The aviation laboratory was established, and the first science planning meeting was held.

Program Area: Security and emergency response – nuclear and volcanic
Activities: Improving support to emergency preparedness and response for citizens and first responders, including capacity to address atmospheric security threats.
Indicators: Satisfaction of federal departments and emergency response agencies with nuclear and emergency preparedness and response, and with contingency plans that take nuclear and volcanic threats into account (and actions to take should such an emergency occur).

Expected Results	Progress
Response agencies, other departments such as Health Canada and National Defence, and Canadians in general can ensure their safety in case of a volcanic eruption or a nuclear leak or explosion.	International and national obligations continued to be met for the 24/7 nuclear and volcanic response capability, with internationally coordinated monthly tests through the Regional Specialized Meteorological Center and Volcanic Ash Advisory Centres (VAACs). VAAC Montréal issued volcanic ash advisories following the eruption of the St. Helens and Augustine volcanoes. Collaboration continued with Health Canada and operational support was provided in the context of the Federal Nuclear Emergency Plan and the international obligation under the Comprehensive Nuclear Test-Ban Treaty.
Completion of Canadian Meteorological Centre (CMC) fortification to ensure availability and reliability during high-impact weather and security events.	Completed.
Improved support to national security and national emergency events preparedness and response.	Significant advances were made in many chemical, biological, radiological, and nuclear (CBRN) Research and Technology Initiative projects aimed at improving the atmospheric dispersion capability for security issues, in particular, CBRN events in urban environments and other areas (biological threat, avian flu etc.). Support was provided to national security and emergency organizations through different exercises or real case event situations. Models were run several times to support response to chemical accidents. Environment Canada furthered its relationship with Public Safety and Emergency Preparedness Canada to support a national disaster mitigation program. The program's core will consist of enhanced weather and environmental prediction services. Capacity in urban meteorology and urban dispersion modelling was further developed. Atmospheric hazards information is being improved for Ontario and Quebec and, subject to existing resources, slowly being expanded to other regions of Canada. The Web-based and printed hazards information is required in Quebec and Ontario to meet legislative requirements for emergency response and disaster management planning.

Program Area: Atmospheric hydrometeorology and ice science	
Activities: Targeting atmospheric, hydrometeorology and ice science activities and associated predictive modelling capacity.	
Indicators: Quality and utility of essential government services improved to meet client needs; improved technology and knowledge transfer; improvements introduced into meteorological/ice/hydrometric forecasts and services.	
Expected Results	**Progress**
Forecast improvements through advancements in numerical weather prediction.	Several improvements were made to the numerical weather prediction models including addition of new satellite data. Verification scores indicated a reduction in errors. A new wave model was put into operation to produce forecasts over the Canadian Great Lakes as well as the Atlantic and Pacific Oceans. A greatly improved numerical weather forecasting model (GEM Meso-Global) was made operational in 2006. Capacity in hurricane forecasting was improved.

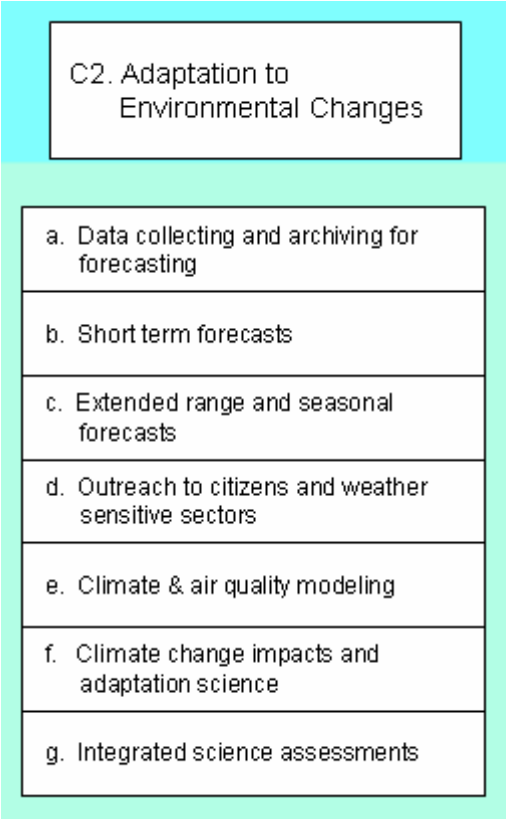
	Capacity in quantitative precipitation forecasting was improved. Stratospheric modelling was developed, which improved data assimilation and weather forecasting. Ensemble-based data assimilation and medium-range ensemble forecasting were developed. New forecast products for the Vancouver 2010 Olympic and Paralympic Winter Games were developed. Regional ensemble forecasting over Western Canada (15 km resolution) was developed. Mesoscale modelling over Western Canada (2.5 km resolution) was developed. The new coupled atmosphere-ocean-ice system for the Gulf of St. Lawrence was developed. An agreement was reached on collaborative work with the European MERCATOR consortium on an operational global coupled atmosphere-ocean-ice assimilation and prediction capability for Canada. A first version of a unified modelling framework (Modeling Environmental Community) was developed. This coupling and prediction environment software package helps to develop and optimize Canadian research projects, and results in new environmental prediction applications. A wind energy mapping software package and data for the wind energy industry was delivered. Environment Canada's Wind Energy Atlas website was delivered.
Focus and expand warning-related science efforts through new national labs.	The Canadian Precipitation Analysis project was developed. Coupling was carried out between ice and wave modelling for the Gulf of St. Lawrence. A storm surge forecasting model was developed for the east coast of Canada. The research support desk was deployed during the summer of 2005 in the Ontario Storm Prediction Centre and used to produce advanced meso-analysis during severe weather events. These products were used to enhance the operational severe weather forecasts. A storm surge prediction system for eastern Canada was developed and applied. Environment Canada developed the Gulf of St. Lawrence atmosphere-ocean-ice coupled modelling system for operational implementation. The Department participated in a bird migration study in collaboration with Acadia University.
Better understanding of the nature and characteristics of vulnerabilities and adaptations by conducting scientific analyses, with partners as appropriate.	Environment Canada is collaborating with partners from the U.S. and Norway to improve sea-ice analyses and forecasts. Activities revolve around adapting the models used in numerical weather prediction to the sea-ice problem and adapting models of sea-ice climatology to produce operational forecasts of sea ice. The Second Alliance Icing Research Study was completed, which will lead to advances in the application of remote sensing technology to detection and forecasting of severe weather phenomena. The hurricane project data archive, which will serve as a resource for any science investigation of the transition of extra-tropical hurricanes, was completed. Three additional field projects that utilized research aircraft including the AQRD PrAIRie 2005 study, the AQRD NH3 study and the CRD validation of snow cover from Advanced Microwave Scanning Radiometer satellite data study were completed.

	Ongoing work on atmospheric hazards in Ontario and Quebec (http://www.hazards.ca), and on their trends and projections for future climate impacts studies is helping to identify regional vulnerabilities in critical infrastructure and for disasters in general. Studies on water availability risks in selected regions across Canada are identifying regions and times of greatest vulnerability to water shortages for agriculture under existing and future climate conditions.
Improved hydrometeorological prediction and modeling capacity by work with others.	An atmospheric-hydrologic coupled system was developed. The Hydrological Ensemble Prediction system for the Great Lakes Basin was tested. Work was carried out towards developing a community modeling system for hydrological assessment.

For more information

Atmospheric Hazards	http://www.hazards.ca/
Canadian Foundation for Climate and Atmospheric Sciences	http://www.cfcas.org/index_e.html
Meteorological Service of Canada	http://www.msc-smc.ec.gc.ca/contents_e.html
National Water Research Institute	http://www.nwri.ca/nwri-e.html
Public Weather Warnings for Canada	http://weatheroffice.ec.gc.ca/warnings/warnings_e.html

Adaptation to Environmental Changes



What is the issue?

Citizens and weather-sensitive sectors in Canada depend on the availability of Environment Canada's weather and environmental forecasts to inform their planning and decision making.

Climate variability, air quality, water level, precipitation and general weather forecasts are increasingly important to agriculture, shipping, construction, media, health, environmental conservation, forestry, recreation and the public. These sectors seek increased predictive capacities for short and long-term weather, climate and environmental conditions, and an improved ability to predict the presence and levels of threats in air and water.

The Department needs to be able to continue meeting client needs, whether by working with the private meteorological sector in Canada to increase overall capacity, by augmenting service delivery options as budgets and technology permits, or by improving data accessibility and data quality.

From a science and service delivery perspective, increasing demands from the public and specialized clients for high quality, timely information will continue to exert pressure on the Department's limited financial and human resources. New technology such as ensemble prediction (i.e. the generation of probabilistic forecasts), has the potential for higher quality short- and longer-term forecasts, but it will require greater effort and investment in education and outreach to make sure the new products are interpreted and used appropriately.

What are we doing about it?

Environment Canada maintains forecast and data dissemination systems, actively builds client relationships, seeks to work with the private sector to develop new markets, and has dedicated public outreach staff whose responsibility it is to catalyze the use of Environment Canada's weather information and ensure the effectiveness of that information for our stakeholders.

Efficient distribution of weather products and services is one key to reducing risk by optimizing the lead time for decision makers. We distribute products directly on the Internet, on our own network of radio transmitters and through advanced telephone technologies for automated or live access to forecast information. We also rely heavily on the media for mass distribution of our forecasts. Last year, we received approximately 40 million phone calls from the public for weather and environmental information and had 100 million visitors to Environment Canada's weather information website. Most of our services are provided to the public at no charge, but we also serve those requiring specialized information on a cost-recovery basis where services are not available from the marketplace.

Are we succeeding?

Environment Canada collects a vast array of important meteorological, climate, air quality and hydrometric data. The Department is making these data more available through the increasingly popular online climate archive.

The Department's science related to atmospheric modelling is always improving. This science, the basis for many products and services, also informs policy and decision makers. Prediction in the short to medium term has benefited from a partnership with the U.S. and Mexico to create the North American Ensemble Forecast System. Issued twice daily, forecasts from this system have been extended from 10 to 16 days. Products for the public are under development.

Longer-term climate modelling is also being refined. Models now include the effects of ocean circulation and more detailed atmospheric processes such as a representation of the interactions between climate, air pollution and ecosystems. Environment Canada has developed climate indicators and software to compute climate indices; these are used internationally for analysing changes in climate extremes for the globe and in different parts of the world. In particular, they are used in analyses of the changes in climate extremes over North America and its regions, to improve understanding of the impacts of climate change and of society's vulnerabilities to them.

More than ever, citizens and weather-sensitive sectors plan and make decisions based on Environment Canada's weather and environmental forecasts and information. Environment Canada's weather information website receives over 430 000 visits daily—more than 40 percent of the total Web traffic of the federal government—and its usage continues to increase. Warnings, forecasts, weather observations, radar animations, satellite pictures and UV index values are but a few of the products easily available.

This increased usage is due in part to our outreach activities, which improve our understanding of what our clients and partners need and, in turn, improve their understanding of the utility of our products and services. Natural resources, surface transportation, construction and shipping are among the many sectors that benefit from better predictions and improved understanding of specialized forecasts.

Major programs and initiatives

Environment Canada provides the monitoring, production and service delivery infrastructure to produce weather, air quality, extended range and seasonal forecasts. These services continue to be refined and improved as the technological, scientific and demand drivers permit. Our work in these areas has been organized according to the program areas outlined below.

Program Area: Data collecting and archiving for forecasting
Activities: Improving access to all real-time and archived data holdings and providing a high level of quality control of this information.
Indicators: Increased lead time and increased quality of basic data disseminated to Canadians; Canadian climate data and information required to address global needs are collected, disseminated and archived.

Expected Results	Progress
Improved access to basic meteorological, hydrometric and climatological data by the public, private and academic sectors.	Public access to meteorological, hydrometric and climatological data increased by 25 percent on Environment Canada's public Internet site. The processing of Road Weather Information System observations for participating provincial agencies' observations became operational in 2005–2006, as part of the Data Management Framework project. A variety of new data sources were archived and available to the public in 2005–2006. These included archiving and access to historical Doppler weather RADAR files, more timely input through the Internet and access to climate observations from volunteer observers, and archiving of new observational elements from automatic weather and climate stations. Environment Canada's database of digital ice maps is made freely available on the Web. A project to digitize historical ice maps for 1959–1974 has been initiated to extend the digital database of climatological ice maps back from its current start.
Enhanced data sets to effectively document and understand climatic processes.	The quality and homogeneity of daily historical records of humidity and pressure have been carefully controlled for quality and these data sets are now publicly available. Long-term historical pressure data have been used to develop gridded sea-level pressure fields over Europe and extratropical North America that extend back to 1850. Annual quality-controlled data sets for greenhouse gases and isotopes were submitted to the World Meteorological Organization (WMO) Global Atmosphere Watch world data centers to support national and international C cycle process research, and improved estimates of North American carbon budgets, particularly for boreal regions.

Program Area: Short-term forecasts	
Activities: Improving the accuracy of and access to short-term forecasts for citizens, weather-sensitive industries and institutions.	
Indicators: Performance measurement benchmarks for accuracy of forecasts; benchmarks for quality of short-term forecasts; benchmarks for satisfaction of weather-sensitive industries with Environment Canada's weather services.	
Expected Results	**Progress**
Forecast improvements through training of forecasters and improvement of tools and work environment.	Development of the forecaster workstation, NinJo, continued. National recruiting is an ongoing process. For 2005–2006, a total number of 22 candidates were trained to be forecasters. Improvements to the production of the SCRIBE forecast tool include a marine version. Training material is being reviewed on a continuous basis to introduce up-to-date modules to reflect scientific and technological improvements. Change of season seminars are done in each Storm Prediction Centre (2 per year in each centre)
Increased accessibility, use and reliability of forecasts delivered through Environment Canada service channels (Web, phone and Weatheradio) and partnered channels (media, radio and television).	Water information is easier to access. Error rate and down time of Environment Canada's weather information website have diminished.

Improvements to key services for highly weather-sensitive economic sectors such as fisheries, agriculture, forestry, energy and transportation.	An umbrella Memorandum of Understanding with Parks Canada is near completion. Users and partners have been consulted on our Marine and Ice Services. Five provinces have signed an agreement on the Road Weather Information Systems (RWIS) network.
Increased capacity and role of the private sector in serving meteorological and hydrological needs in Canada.	Environment Canada participates in the Canada 511 Consortium with provinces and private companies to increase the availability of phone services related to weather and road conditions. The production of road weather forecasts has been transferred to the private sector.
Expand attribution in daily media broadcasts to Environment Canada for weather information.	Through the Media Website, media can design and select the information they are seeking. Activities led by the National Services Office – Media have increased the media's awareness of Environment Canada's weather information.

Program Area: Extended range and seasonal forecasts	
Activities: Improving the accuracy and use of extended range and seasonal forecasts for weather sensitive industries and institutions.	
Indicators: The Canadian climate data and information required to address global needs are collected, disseminated and archived.	
Expected Results	**Progress**
Improved extended range and seasonal forecasts.	Canada is participating actively in the North American Ensemble Forecast System (NAEFS). Data exchange with the U.S. National Centers for Environmental Prediction (NCEP) is ongoing; they intend to create a common product, which is under development. The ensemble prediction system is now running twice a day, at 00:00 and 12:00 UTC, and the forecast period was extended from 10 days to 16 days. Those changes are part of the NAEFS project. A project is under way to increase the number of models and members that drive the current operational seasonal forecast system. Currently the system uses 2 models and 12 members. With the proposed changes, Environment Canada would end up with 4 models with 40 members, thus improving confidence in the forecast. Ensemble prediction refers to the development of ensemble methods that take into account analysis and model error (ensemble Kalman filter). It includes validation of an ensemble prediction system and estimation of forecast and observation error characteristics (including biases) with ensemble-based methods. Environment Canada has implemented an ensemble Kalman filter in support of ensemble prediction. Research on analyzing output within the Canadian Historical Forecast Project has led to improved quantification of seasonal forecast skill and optimal blending of results from a multi-model ensemble. This is a significant improvement over the single-model ensemble approach. Empirical probabilistic seasonal forecasts for Canada have been produced and their performance evaluated for lead times up to a year.
More effective use of longer-range environmental prediction information leads to sustainable development decision making.	Through consultations with specialized users on long-term forecasts, and more specifically on ensemble forecasts, the Department has begun to learn how such forecasts could be used in its decision-making process.

Program Area: Outreach to citizens and weather sensitive sectors	
Activities: Increasing its support to information users with an expanded outreach program.	
Indicators: Satisfaction of citizens and weather-sensitive sectors with the timeliness of meteorological information; citizens' and weather-sensitive sectors' level of understanding and use of the information they receive.	
Expected Results	**Progress**
Canadian citizens and weather-sensitive sectors (private and public) receive meteorological information in a timely manner, properly understand it and know how to use it or react to it.	Several sectors, such as energy, agriculture and health, are getting better advice and increasing their knowledge from our outreach program, thus increasing our understanding of their needs. New publications on our Websites contribute to the education and overall understanding of weather and environmental information. Lag response time for public inquiries on weather-related information has steadily declined. Aiming to reduce disaster risk in Canada, Environment Canada is an active participant in Public Safety and Emergency Preparedness Canada's National Disaster Mitigation Strategy.

Program Area: Climate and air quality modelling	
Activities: Research and development functions, undertaken in collaboration with academia and international agencies, pertaining to climate analysis, trends processes, and modelling, as well as stratospheric studies	
Indicators: The successful production of new Intergovernmental Panel on Climate Change (IPCC) scenario runs and other coupled model runs at increasingly higher resolution and the successful development of a more comprehensive "Earth System" model. Canada meets its commitments to the U.S. and Mexico in providing our methodology, data analyses and expertise. Scientific understanding of the complex chemical and dynamic processes associated with ozone depletion is understood to the level that dynamical-chemical models can replicate changes in stratospheric ozone.	
Expected Results	**Progress**
The body of knowledge about climate analyses, climate trends processes and climate modelling, as well as stratospheric studies is increased.	The 3-dimension/4-dimension variational assimilation system and numerical weather prediction model has been extended to include chemical weather prediction and data assimilation Notable results from refereed scientific publications include the following: improved understanding of climate sensitivity, particularly in response to strong external forcing; several new lines of evidence conclusively linking human activities to observed climate change; and analyses of changes in ocean temperature, wind fields and precipitation extremes. Significant progress has been made in improving the representation of ocean mixing, atmospheric convection and radiative transfer in the climate model of the Canadian Center Climate Modelling and Analysis (CCCma). A stratospheric chemistry version of the CCCma climate model has been completed and is being used to simulate past ozone changes and to make projections of future change. New knowledge on snow cover characteristics in northern Canada was acquired through airborne remote sensing field campaigns in the Northwest Territories (NWT) and northern Manitoba, resulting in improved capability to retrieve snow water equivalent information from satellite observations. The participation of the NWT Power Corporation in NWT field activities is an indication of resource sector interest in using new scientific methods and data to improve the efficiency of their operations—in this case, the planning and management of hydro power operations in the North. The completion of Version 3.2 of the Canadian Land Surface Scheme (CLASS) improved our land surface process modeling capability.

	Progress in the integration of CLASS into a surface-hydrology model (MESH) is enhancing Environment Canada's environmental prediction capabilities through the improved representation of the land surface and hydrologic processes in numerical weather prediction. Scientific publications on the carbon cycle promote understanding through inversion modelling, with a focus on boreal regions. Scientific contribution was provided to the United Nations Environment Programme (UNEP) / World Meteorological Organization (WMO) Scientific Assessment of Ozone Depletion (e.g. an Environment Canada scientist was commissioned as a lead author in the assessment). Support was continued for the World Ozone and Ultraviolet Radiation Data Centre in support of WMO activities. Support for the Network for the Detection of Stratospheric Change was continued through observations of stratospheric ozone and ozone precursors in the Arctic. Ozone and ozone chemistry were analyzed based on observations made by MAESTRO aboard SCISAT 1
Environmental policies and services are developed based on sound atmospheric science.	Over 100 federal government climate change policy-makers and communicators were trained in six cities across Canada on "Understanding Climate Change Science."
Climate models are refined and used to inform climate change scenarios and policy discussions.[SDS1.1.2]	Three terabytes of output from the CCCma global climate model for different forcing scenarios were provided to the IPCC assessment process and were widely used in analyses and inter-comparisons summarized in the IPCC 4th Assessment Report, currently in preparation. IPCC assessments serve as the foundation through which national and international policy and decision making is influenced. These results are also used in climate change research and to drive the higher-resolution Canadian Regional Climate Model.

Program Area: Climate change impacts and adaptation science	
Activities: Research and development functions, undertaken in collaboration with academia and international agencies, pertaining to the effects of atmospheric change on various segments of Canadian society, and how to mitigate, or adapt to, these effects. These functions support sound policy development and service improvements.	
Indicators: Satisfaction of policy makers and decision makers (more than 200 partners and stakeholders engaged in development of adaptation solutions); awareness and understanding by economic sectors, other government departments and other levels of government of the issues and adaptation strategies.	
Expected Results	**Progress**
Awareness of impacts of climate change on economic development and planning processes.	Environment Canada continues to lead and collaborate in scientific and technical work as well as research on socio-economic impacts to ensure that Canada has sufficient federal capacity in science and in adaptation to impacts to understand and prioritize risks and opportunities. Some key activities include: - Hazards and disasters—developing climate hazards information describing current and future conditions to assist provincial and municipal disaster management planning. The Ontario Atmospheric Hazards Website now includes climate trends, the Quebec site now monitors and assesses extreme events, and information is being generated for the Atlantic Region. In addition, work is under way on methodologies to better project anticipated changes in the frequency and intensity of climate change hazards.

	- Resilient infrastructure—developing methodologies to better understand the implications of climate change for Canada's critical infrastructure and its maintenance, both existing and new. We have prepared six peer-reviewed papers on infrastructure and climate change adaptation and distributed this information to many decision makers. We are working with many partners, including other government departments, professional engineering associations and the academic community, in the development of new infrastructure codes/standards and technologies to meet the challenges of a changing climate. - Guidance for key economic sectors—continuing to develop advice and tools to assist key economic sectors on climate change implications for issues such as water management, transportation and energy risks, municipal operations, natural resources (e.g. agriculture, fisheries), etc. - Human health—through partnership, developing approaches to better understand changing climate-related vulnerabilities to heat, to waterborne, infectious and vector-borne diseases as well as to air quality links. - Decision and impact support—translating new research developments on climate change models and socio-economic scenarios into actual tools for use by the impact science community. This includes the expansion of Web-based information (e.g. scenarios) and development of tools that better link the outputs of scientific climate change models to impact studies (e.g. downscaling tools).
Scenarios and options to guide decision making on adaptation in areas vulnerable to a changing climate.	Environment Canada updated and sustained the existing Climate Change Scenarios Network (CCSN) and website and initiated a regional node in Toronto and Montréal. User hits on this website totaled 30 000 in the last month of the fiscal year. The sustainability of CCSN is now dependent on funding being available next fiscal year. An international workshop and guideline paper on climate change mitigation and adaptation synergies and pilot studies to illustrate opportunities for synergies were completed. Environment Canada worked in partnership with other federal departments and other governments on climate change adaptation actions.
Strategies for adapting to the changing climate particularly in the North and in municipalities as well as water management strategies.	Environment Canada made a presentation on infrastructure and climate change to the Northern Strategy Round Table Addressing the Impacts of Climate Change in the North, in Iqaluit, Nunavut. Subsequently, upon request, the background paper on infrastructure and climate change was distributed to the Nunavut Legislative Assembly and to selected Nunavut government departments.

Program Area: Integrated science assessments
Activities: Conducting integrated atmospheric science assessments on key policy issues for Environment Canada, carried out for improved environmental policy through science (e.g. to help set emission targets or ensure that the chosen policy options are optimal in the greater context of atmospheric issues). Also includes support to environmental assessments.
Indicators: Level of awareness and understanding by Canadians of the issue and the scientific basis of environmental policy; acceptance of validity of approach and results by key stakeholders.

Expected Results	Progress
Government policy dealing with environmental issues is developed based on in-depth, integrated assessments of the current state of scientific knowledge.	Environment Canada supported over 30 Canadian scientists in lead roles for the IPCC 4th Assessment Report.
The impact of various human activities on the atmospheric environment is assessed and taken into account.	The Meteorological Service of Canada published *Canadian Acid Deposition Science Assessment 2004*, which assesses anthropogenic causes of acid rain.

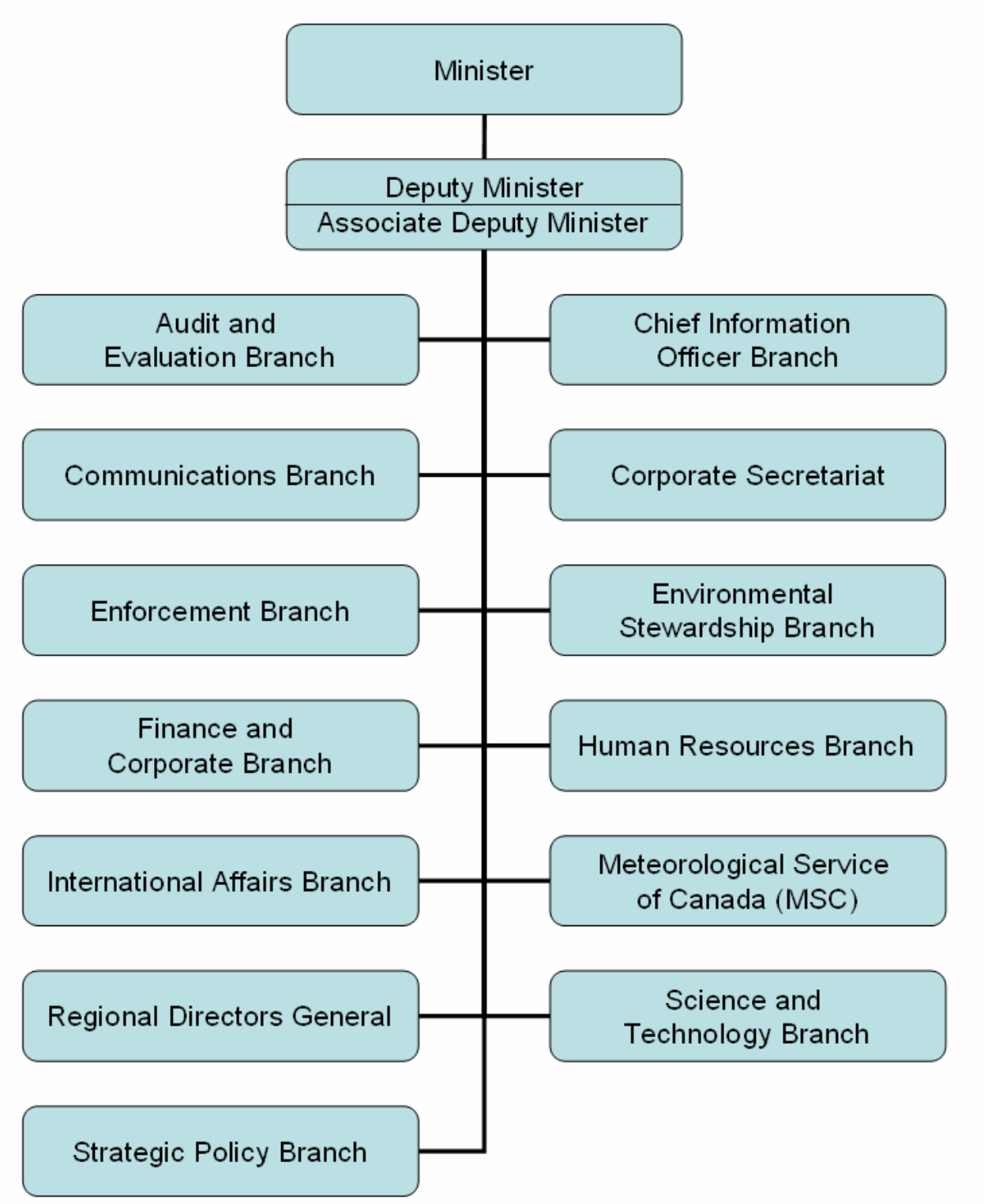
For more information

Environment Canada's weather information website	http://weatheroffice.ec.gc.ca/canada_e.html
Seasonal Forecasts	http://weatheroffice.ec.gc.ca/saisons/index_e.html

SECTION III

SUPPLEMENTARY INFORMATION

Organizational Information



Financial Performance Overview

This section contains a summary of Environment Canada's financial performance for the fiscal year 2005–2006.

The Department spent $1,041.5 million in 2005–2006. This amount is greater than the planned spending identified in our 2005–2006 *Report on Plans and Priorities*, as the Department played an instrumental part in Canada’s hosting of the first meeting of the Parties to the Kyoto Protocol in conjunction with the eleventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change.

The 2005–2006 fiscal year was a transition year for the Department as it proceeded with a major reorganization exercise. A number of reallocations were made in order to deal with internal financial pressures to meet departmental priorities. These include such items as the introduction of a new financial planning system and results management tool, increased support for departmental human resources services, and greater emphasis on policy direction and the revised governance structure.

Summary financial data, such as the information presented in Table 1, are displayed using four separate headings. For clarity, these headings are defined as:

- Main Estimates – Amounts shown in the 2005–2006 *Main Estimates*;
- Planned Spending – Amounts shown in the 2005–2006 *Report on Plans and Priorities*, adjusted to include the $150 million one-time grant for the Green Municipal Funds;
- Total Authorities – Planned spending plus any additional amounts Parliament has approved for departments to reflect changing priorities and unforeseen events; and
- 2005–2006 Actual Spending – The amounts actually spent for the fiscal year.

Note: Some totals may differ from one table to another due to the rounding of the figures.

Table 1: Comparison of Planned to Actual Spending

Program Activities ($ millions)	2003–2004 Actual Spending	2004–2005 Actual Spending	2005–2006			
			Main Estimates	Planned Spending	Total Authorities	Actual Spending
Reduced greenhouse gas emissions	186.5	155.4	53.6	53.6	83.8	76.5
Improved air quality	84.9	87.5	103.1	252.7	253.5	241.0
Reduced risk from toxics and other substances of concern	174.4	182.4	192.2	193.4	201.2	191.0
Biological diversity is conserved	142.8	123.3	117.8	115.9	126.4	127.5
Clean, safe and secure water for people and ecosystems	46.8	61.5	65.2	65.3	73.6	71.5
Priority ecosystems are conserved and restored	68.2	63.9	55.3	73.3	65.1	64.3
Reduced impact of weather and related hazards	150.5	159.1	155.7	156.0	183.6	185.7
Adaptation to environmental changes	153.4	93.7	92.4	92.6	98.7	84.2
Total	1,007.5	926.7	835.2	1,002.9	1,085.9	1,041.5
Less: Non-respendable revenue	(8.0)	(9.0)	N/A	(11.8)	N/A	(10.7)
Plus: Cost of services received without charge	70.9	72.2	N/A	72.3	N/A	75.4
Total departmental spending	1,070.4	989.9	N/A	1,063.4	N/A	1,106.3
Full-time equivalents	5,982	6,086	N/A	5,662	N/A	6,463

Totals may differ between and within tables due to rounding of figures.
Note: Excludes respendable revenues

* Services received without charge usually include accommodation provided by PWGSC, the employer's share of employees' insurance premiums, and expenditures paid by TBS (excluding revolving funds), Workers' Compensation coverage provided by Social Development Canada, and services received from the Department of Justice Canada (see Table 4).

** Planned spending figures are higher than the 2005–2006 *Report on Plans and Priorities* (RPP) figures because they include the $150 million one-time grant for the Green Municipal Funds that was originally anticipated in 2004–2005 forecast spending.

*** The $114.8 million increase in total costs from 2004-2005 to 2005–2006 is mainly attributable to the one-time $150 million grant provided in 2005–2006 for the Green Municipal Funds which is partially offset by the $100 million grant in support of the development and demonstration of climate change and clean air technologies received in 2004-2005. Other changes are related to the realignment of expenditures in some program activities within the results structure to enable the Department to better identify and align work in support of results in a transparent and coherent manner. Some changes relate to new funding, including: funding for Canada's hosting of the first meeting of the Parties to the Kyoto Protocol, in conjunction with the eleventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change; funding to increase federal, regional and science capacity in order to respond to the Mackenzie Gas Project; funding for developing and reporting on environmental indicators; funding for the development of environmental standards under the National Agri-Environmental Standards Initiative of the Agricultural Policy Framework; and funding to support initiatives associated with the 2010 Olympic and Paralympic Winter Games in Vancouver and Whistler, British Columbia.

Table 2: Resources by Program Activity

$ millions	2005–2006							
	Operating	**Capital**	**Grants and Contributions**	**Subtotal: Gross Voted Expenditures**	**Statutory Grants and Contributions**	**Total: Gross Expenditures**	**Less: Respendable Revenue**	**Total Net Expenditures**
Reduced greenhouse gas emissions								
Main Estimates	42.7	0.2	11.2	54.1		54.1	(0.5)	53.6
Planned Spending	42.7	0.2	11.2	54.1		54.1	(0.5)	53.6
Total Authorities	68.8	0.2	15.4	84.4		84.4	(0.5)	83.8
Actual Spending	61.7	0.0	14.8	76.5		76.5	(0.1)	76.5
Improved air quality								
Main Estimates	90.6	5.2	8.5	104.4		104.4	(1.3)	103.1
Planned Spending	90.3	5.2	8.5	104.0	150.0	254.0	(1.3)	252.7
Total Authorities	89.9	5.2	9.7	104.8	150.0	254.8	(1.3)	253.5
Actual Spending	78.7	3.8	9.6	92.1	150.0	242.1	(1.1)	241.0
Reduced risk from toxics and other substances of concern								
Main Estimates	190.5	5.4	3.4	199.3		199.3	(7.1)	192.2
Planned Spending	191.7	5.4	3.4	200.5		200.5	(7.1)	193.4
Total Authorities	196.0	6.4	5.9	208.3		208.3	(7.1)	201.2
Actual Spending	183.9	7.9	5.5	197.3		197.3	(6.3)	191.0
Biological diversity is conserved								
Main Estimates	96.5	0.5	22.2	119.2		119.2	(1.4)	117.8
Planned Spending	94.6	0.5	22.2	117.3		117.3	(1.4)	115.9
Total Authorities	103.5	1.0	23.3	127.8		127.8	(1.4)	126.4
Actual Spending	105.1	1.4	21.9	128.4		128.4	(0.9)	127.5
Clean, safe and secure water for people and ecosystems								
Main Estimates	67.9	1.7	0.3	69.9		69.9	(4.7)	65.2
Planned Spending	68.0	1.7	0.3	70.1		70.1	(4.7)	65.3
Total Authorities	74.8	2.4	1.2	78.3		78.3	(4.7)	73.6
Actual Spending	72.0	2.3	0.4	74.7		74.7	(3.2)	71.5
Priority ecosystems are conserved and restored								
Main Estimates	48.6	0.5	7.0	56.1		56.1	(0.8)	55.3
Planned Spending	64.0	2.6	7.5	74.1		74.1	(0.8)	73.3

Total Authorities	56.6	0.5	8.7	65.8		65.8	(0.8)	65.1
Actual Spending	56.4	0.9	8.0	65.2		65.2	(0.9)	64.3
Reduced impact of weather and related hazards								
Main Estimates	189.1	12.0	2.5	203.6		203.6	(47.9)	155.7
Planned Spending	189.4	12.0	2.5	203.9		203.9	(47.9)	156.0
Total Authorities	216.5	12.4	2.6	231.5		231.5	(47.9)	183.6
Actual Spending	226.3	13.2	2.2	241.7		241.7	(56.1)	185.7
Adaptation to environmental changes								
Main Estimates	101.7	5.7	0.5	108.0		108.0	(15.5)	92.4
Planned Spending	101.9	5.7	0.5	108.2		108.2	(15.5)	92.6
Total Authorities	106.1	5.7	2.5	114.3		114.3	(15.5)	98.7
Actual Spending	81.6	2.5	2.4	86.5		86.5	(2.4)	84.2
Total								
Main Estimates	***827.7***	***31.2***	***55.7***	***914.5***	***-***	***914.5***	***(79.3)***	***835.2***
Planned Spending	***842.6***	***33.4***	***56.1***	***932.1***	***150.0***	***1,082.1***	***(79.3)***	***1,002.9***
Authorities	***912.1***	***33.8***	***69.3***	***1,015.2***	***150.0***	***1,165.2***	***(79.3)***	***1,085.9***
Actual Spending	***865.7***	***32.1***	***64.8***	***962.6***	***150.0***	***1,112.6***	***(71.0)***	***1,041.5***

Totals may differ between and within tables due to rounding of figures.

* Operating includes salaries contributions to employee benefit plans. Minister's allowances and the disposal of crown assets.
** Total Net Expenditures excludes respendable revenues.
*** Planned spending figures are higher than the 2005–2006 *Report on Plans and Priorities* (RPP) figures because they include the $150 million one-time grant for the Green Municipal Funds that was originally anticipated in 2004–2005 forecast spending.

Explanation of the variance from Planned Spending to Actual Spending:

The $23.1 million increase from planned spending to actual spending is mainly due to additional funding to support Canada's hosting of the first meeting of the Parties to the Kyoto Protocol, in conjunction with the eleventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change.

Grants and Contributions: The $8.7 million increase from planned spending to actual spending is due to funding for the Invasive Alien Species Strategy for Canada as well as funding to support Canada's hosting of the first meeting of the Parties to the Kyoto Protocol in conjunction with the eleventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change.

Respendable Revenues: The most significant decline in actual versus planned revenue was under the contract between Environment Canada and NAV CANADA as well as with its intradepartmental agreements with the Canadian Coast Guard and National Defence. Some projects from DND Search and Rescue funds entering the Department through Supplementary Estimates were unfunded last year since there were no Supplementary Estimates. The other minor variances in the other program activities are mainly due to lower overall commercial revenues.

Table 3: Voted and Statutory Items

This table explains the way Parliament votes resources to the Department.

Vote or Statutory Item	Truncated Vote or Statutory Wording	($ millions) 2005–2006			
		Main Estimates	Planned Spending*	Total Authorities	Actual Spending
1	Operating expenditures	671.5	686.1	748.3	710.6
5	Capital expenditures	31.2	33.4	33.8	32.1
10	Grants and contributions	55.7	56.1	69.3	64.8
15	Payments to Queens Quay West Land Corporation	-	-	-	-
(S)	Minister of the Environment – salary and motor car allowance	0.1	0.1	0.1	0.1
(S)	Contributions to employee benefit plans	76.7	77.2	83.7	83.7
(S)	Spending of proceeds from the disposal of surplus Crown assets	-	-	0.7	0.4
(S)	Payment to the Federation of Canadian Municipalities	-	150.0	150.0	150.0
Total		**835.2**	**1,002.9**	**1,085.9**	**1,041.5**

Totals may differ between and within tables due to rounding of figures.

* Planned spending figures differ from the 2005–2006 *Report on Plans and Priorities* (RPP) because the $150 million one-time grant for the Green Municipal Funds was originally anticipated in 2004–2005 forecast spending.

Note: Excludes respendable revenues

Table 4: Services Received Without Charge

This table is designed to show the services received without charge by the Department.

($ millions)	2005-2006
Accommodation provided by Public Works and Government Services Canada	36.2
Contributions covering employers' share of employees' insurance premiums and expenditures paid by the Treasury Board of Canada Secretariat (excluding revolving funds)	36.1
Workers' compensation coverage provided by the Department of Human Resources and Social Development Canada	1.5
Salary and associated expenditures of legal services provided by the Department of Justice Canada	1.6
Total 2005-2006 services received without charge	**75.4**

Totals may differ between and within tables due to rounding.

Table 5: Sources of Spendable and Non-Respendable Revenue

Respendable Revenue

($ millions)	Actual Spending 2003-2004	Actual Spending 2004-2005	2005-2006			
			Main Estimates	Planned Revenue	Total Authorities	Actual
Reduced greenhouse gas emissions						
Scientific and Professional Services	1.2	0.7	0.5	0.5	0.5	0.1
Subtotal	1.2	0.7	0.5	0.5	0.5	0.1
Improved air quality						
Scientific and Professional Services	0.8	1.0	1.2	1.2	1.2	1.1
Realty (Accommodation)	0.0	0.0	0.1	0.1	0.1	0.0
Subtotal	0.8	1.0	1.3	1.3	1.3	1.1
Reduced risk from toxics and other substances of concern						
Scientific and Professional Services	5.5	5.4	4.3	4.3	4.3	3.9
Information Products	0.1	0.0	0.2	0.2	0.2	0.0
Realty (Accommodation)	0.2	0.1	0.2	0.2	0.2	0.2
Regulatory Services	1.6	2.0	2.4	2.4	2.4	2.2
Miscellaneous	0.0	-	0.1	0.1	0.1	-
Subtotal	7.4	7.6	7.1	7.1	7.1	6.3
Biological diversity is conserved						
Scientific and Professional Services	0.6	0.9	0.9	0.9	0.9	0.5
Information Products	0.0	0.0	0.1	0.1	0.1	0.1
Realty (Accommodation)	0.1	0.1	0.1	0.1	0.1	0.1
Regulatory Services	0.3	0.3	0.3	0.3	0.3	0.2
Subtotal	1.0	1.3	1.4	1.4	1.4	0.9
Clean, safe and secure water for people and ecosystems						
Scientific and Professional Services	2.9	3.3	4.2	4.2	4.2	2.8
Information Products	0.2	0.3	0.0	0.0	0.0	0.3
Realty (Accommodation)	0.1	0.1	0.5	0.5	0.5	0.1
Subtotal	3.2	3.7	4.7	4.7	4.7	3.2
Priority ecosystems are conserved and restored						
Scientific and Professional Services	2.2	0.9	0.5	0.5	0.5	0.6
Information Products	0.1	0.1	0.1	0.1	0.1	0.1
Realty (Accommodation)	0.3	0.3	0.2	0.2	0.2	0.2
Subtotal	2.6	1.3	0.8	0.8	0.8	0.9
Reduced impact of weather and related hazards						
Scientific and Professional Services	9.1	9.2	10.3	10.3	10.3	13.5
Information Products	35.4	34.4	36.7	36.7	36.7	42.0
Realty (Accommodation)	0.9	0.3	0.9	0.9	0.9	0.6
Regulatory Services	0.1	-	-	-	-	-
Co-marketing Initiatives***	0.0	0.3	0.0	0.0	0.0	0.0
Subtotal	45.5	44.1	47.9	47.9	47.9	56.1
Adaptation to environmental changes						
Scientific and Professional Services	3.9	3.8	4.4	4.4	4.4	0.9
Information Products	10.6	10.4	10.8	10.8	10.8	1.4
Realty (Accommodation)	0.0	0.1	0.3	0.3	0.3	0.1
Co-marketing Initiatives***	0.0	-	0.1	0.1	0.1	-
Miscellaneous	-	0.2	-	-	-	0.0
Subtotal	14.5	14.5	15.5	15.5	15.5	2.4
Total respendable revenue	76.1	74.3	79.3	79.3	79.3	71.0

Non-respendable Revenue

($ millions)	Actual Spending 2003–2004	Actual Spending 2004–2005	2005–2006 Main Estimates	Planned Revenue	Total Authorities	Actuals
Reduced greenhouse gas emissions						
Royalties	0.1	0.2				0.1
Subtotal	0.1	0.2				0.1
Improved air quality						
Proceeds from the disposal of surplus Crown assets	0.0	0.0	-	-	-	0.2
Subtotal	0.0	0.0	0.0	0.0	0.0	0.2
Reduced risk from toxics and other substances of concern						
Proceeds from the disposal of surplus Crown assets	0.0	0.0	-		-	0.1
Royalties	0.1	0.1	-			0.1
Miscellaneous	0.3	0.2	0.1	0.1		0.3
Subtotal	0.4	0.4	0.1	0.1		0.5
Biological diversity is conserved						
Fines	0.1	0.1	-	-	-	0.1
Licences and Permits	3.6	2.8	-	-	-	3.2
Proceeds from the disposal of surplus Crown assets	0.0	0.0	-	-	-	0.1
Regulatory Services	0.2	0.2	4.4	4.4	4.4	0.2
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.5
Subtotal	3.9	3.1	4.4	4.4	4.4	4.1
Clean, safe and secure water for people and ecosystems						
Scientific and Professional Services	-	-	0.5	0.5	0.5	-
Miscellaneous	-	0.0	-	-	-	0.1
Third Party Agreements	0.2	0.2	0.0	0.0	0.0	0.2
Subtotal	0.2	0.2	0.5	0.5	0.5	0.3
Priority ecosystems are conserved and restored						
Miscellaneous	0.0	0.0	-	-	-	0.1
Subtotal	0.0	0.0	-	-	-	0.1
Reduced impact of weather and related hazards						
Royalties	0.1	0.1	0.0	0.0	0.0	0.4
Information Products	0.2	1.1	1.6	1.6	1.6	1.6
Proceeds from the disposal of surplus Crown assets	0.0	0.0	-	-	-	0.1
Miscellaneous	2.4	2.7	3.7	3.7	3.7	3.1
Subtotal	2.7	3.9	5.4	5.4	5.4	5.2
Adaptation to environmental changes						
Royalties	0.0	0.1	0.0	0.0	0.0	0.1
Information Products	0.1	0.3	0.4	0.4	0.4	-
Miscellaneous	0.6	0.7	1.0	1.0	1.0	0.1
Subtotal	0.7	1.1	1.4	1.4	1.4	0.2
Total non-respendable revenue	8.0	9.0	11.8	11.8	11.8	10.7
Total respendable and non-respendable revenue**	84.2	83.3	91.2	91.2	91.2	81.7

* In 2003–2004 and 2004–2005, proceeds from the disposal of surplus Crown assets are included under the Miscellaneous or Realty categories.
** Totals may differ between and within tables due to rounding of figures.
*** Referred to as Sale of Sponsorships in previous Report on Plans and Priorities and related to commercial advertising on Environment Canada's Automated Telephone Answering Device System.

This table lists various sources of respendable and non-respendable revenue. To clarify the types of revenues that fall under these sources, short definitions are given below:

Scientific and Professional Services: Research and analysis, telecommunications, hydrometrics, consulting services, training, and wildlife studies and surveys.
Information Products: Data extracts and access, publications, and hydrometric and weather products.
Miscellaneous: Employee Benefit Plan (EBP) recoveries and student parking fees.
Regulatory Services: ocean disposal permit applications and monitoring fees, new chemical notification, and other permits and fees.
Realty (Accommodation): Living accommodations, rentals, entry fees, concessions, and National Water Research Institute building recoveries.
Royalties: revenues collected from the licensing of intellectual property.
Co-marketing Initiatives: Marketing and advertising sales.
Licences and permits: Migratory bird hunting permits and stamps and taxidermy and aviculture permits.
Fines: fines levied under the *Canadian Environmental Protection Act* and other miscellaneous fines.
Third Party Agreements: Agreements for Water Management Services under the authority for Lake of the Woods Control Board (salaries) and Ottawa River Regulation Secretariat (salaries).
Proceeds from the disposal of surplus Crown assets: gains on the sale of non-capital assets and proceeds from the sale of capital assets excluding real property.

Respendable Revenues:
The most significant decline in anticipated revenue was under the contract between Environment Canada and NAV CANADA as well as with its intradepartmental agreements with the Canadian Coast Guard and National Defence. Some projects from DND Search and Rescue funds entering the Department through Supplementary Estimates were unfunded last year due to the cancellation of Supplementary Estimates. The other minor variances in the other Program Activities are mainly due to lower overall commercial revenues.

Non-Respendable Revenues:
The majority of the decrease in non-respendable revenues was in part due to fewer receipts against the NAV CANADA capital advance as well as less revenues collected under the Migratory Bird Program.

Table 6A: *User Fees Act*

Regulatory Services

Fee Name	**Ocean Disposal Permit Application Fees**			
Fee Type	Regulatory (R)			
Fee Setting Authority	CEPA 1999, ss.135(1); *Disposal at Sea Regulations*			
Date Last Modified	2001			
Performance Standards	Under the application fee, each application is reviewed according to Schedule 6 of CEPA 1999 and the *Disposal at Sea Regulations*. This involves public notice, an application that provides detailed data, scientific review and payment of fees. Each permit is published in the *Canada Gazette* within about 120 days of applying if the application is complete and there are no issues from other stakeholders. Under the permit fee, Environment Canada is committed to holding annual client meetings to review monitoring plans; conducting representative disposal-site monitoring according to *National Guidelines for Monitoring Dredged and Excavated Material at Ocean Disposal Sites*; producing an annual report on activity; producing a financial summary of revenues, expenses and value for clients; and reporting results of monitoring to the Office for the London Convention.			
Performance Results	Met service standards. Applications were reviewed within the 120-day time frame. Advice was provided to applicants to assist timely permit reviews. Monitoring plans were reviewed with clients in each region. Disposal-site monitoring was conducted and reported. For further details see http://www.ec.gc.ca/seadisposal/.			
(Thousands of dollars)	**2005–2006**	**2006–2007**	**2007–2008**	**2008–2009**
Forecast Revenue	150.0	150.0	150.0	150.0
Actual Revenue	329.0	Not applicable	Not applicable	Not applicable
Estimated Full Cost	unknown (1)	unknown	unknown	unknown

Fee Category	**Ocean Disposal Site Monitoring Fees**
Fee Type	Regulatory (R)
Fee Setting Authority	FAA, par. 19.1(a); *Ocean Dumping Permit Fee Regulations* (Site Monitoring)
Date Last Modified	2001
Performance Standards	The permittee has access to a permitted site and ability to dispose of 1000 m^3 of dredged or excavated material for each $470 paid. The collected revenue is used by the Disposal at Sea Program to operate a representative national disposal-site monitoring program that allows the client group as a whole to continue to have access to suitable disposal sites and demonstrates that the resource is used sustainably for the Canadian public.

Performance Results	Met the service standards. Permittees disposed of dredged and excavated material as authorized by their permits. Representative monitoring was carried out in accordance with monitoring guidelines.			
	2005–2006	**2006–2007**	**2007–2008 (2)**	**2008–2009 (2)**
Forecast Revenue	1,300.0	1,200.0	1,500.0	1,500.0
Actual Revenue	1,091.7	Not applicable	Not applicable	Not applicable
Estimated Full Cost	1,300.0	1,300.0	1,600.0	1,600.0

Fee Category	**New Substance Notification**			
Fee Type	Regulatory (R)			
Fee Setting Authority	CEPA 1999, s. 328, *New Substances Fees Regulations*			
Date Last Modified	2002			
Performance Standards	Notifications are processed within regulatory time frames 100 percent of the time. Requests are acknowledged by letter, email or fax within 10 business days of receipt.			
Performance Results	All new substances notifications were processed and assessed within the legislated time period. Responses to requests made by letter, email or fax were sent within 10 days 95 percent of the time.			
	2005–2006	**2006–2007**	**2007–2008**	**2008–2009**
Forecast Revenue	400.0	400.0	400.0	400.0
Actual Revenue	578.1	Not applicable	Not applicable	Not applicable
Estimated Full Cost	2,200.0	2,200.0	2,200.0	2,200.0

Fee Category	**Migratory Bird Program - Migratory Game Bird Hunting Permit (3)**
Fee Type	Regulatory (R)
Fee Setting Authority	MBCA 1994, s. 12; *Migratory Bird Regulations* C.R.C., c. 1035
Date Last Modified	1998 - SOR/98-314
Performance Standards	Hunting permits are sold for $8.50 at Canada Post offices and selected provincial and private vendors from August 1st until March 10th of the following year. The performance standard is to ensure adequate numbers of permits are available for distribution within that time frame. Permits validated by the Habitat Conservation Stamp are mandatory for migratory game bird hunting. The hunter or his/her representative must physically go to a vendor that sells the permit. The permit is purchased on the spot, therefore, the service standard is that the hunter can get a hunting permit upon request. People purchasing the permit should receive one within minutes of completing the transaction.
Performance Results	As regards meeting hunter demand, 99.9 percent of permits were available within the specified time period. All permits that were purchased were delivered within minutes of the purchase.

	2005–2006	2006–2007	2007–2008	2008–2009
Forecast Revenue	2,006.0	2,006.0	2,006.0	2,006.0
Actual Revenue	1,501.0	Not applicable	Not applicable	Not applicable
Estimated Full Cost	960.0	960.0	960.0	960.0

Fee Category	**Migratory Bird Program – Habitat Conservation Stamp**			
Fee Type	Regulatory (R)			
Fee Setting Authority	MBCA 1994, s. 12; *Migratory Bird Regulations*			
Date Last Modified	1998			
Performance Standards	Conservation Stamps are sold for $8.50 each and must be affixed to the Migratory Game Bird Hunting Permit to validate it. The performance standard is to ensure adequate numbers of stamps are available for distribution at Canada Post offices and selected provincial and private vendors from August 1–March 10 of the following year. Stamps are also sold as collectables through Canada Post offices and vendors selected by Wildlife Habitat Canada (WHC). One cannot purchase a permit without the stamp pre-affixed to it, and therefore, the hunter and/or his/her representative must physically go to a vendor that sells the permit. The permit is bought on the spot, thus the service standard is that the hunter receives a wildlife stamp affixed to the permit. People purchasing the permit should receive the stamp within minutes of doing the transaction. For collectors: stamps bought from Canada Post can be purchased by mail order, telephone, FAX and at selected Canada Post offices and require a two-week processing period. Stamps bought from WHC selected vendors can be ordered in person, by telephone and mail order. Processing time is two weeks if not bought in person.			
Performance Results	Enough stamps to meet hunter and collector demands were available for purchase within the specified time period. Stamps bought from Canada Post by mail order, telephone, fax and at selected Canada Post offices were processed within the two-week processing period. Stamps bought from WHC selected vendors either in person, by telephone and mail order were processed within the two-week processing period. With funds generated from stamp revenue, Wildlife Habitat Canada funds several habitat conservation programs and projects that contribute to Environment Canada's key program activity "Biological diversity is conserved."			
	2005–2006	**2006–2007**	**2007–2008**	**2008–2009**
Forecast Revenue	2,200.0	2,200.0	2,200.0	2,200.0
Actual Revenue	1,627.9	Not applicable	Not applicable	Not applicable
Estimated Full Cost	1,627.9	2,200.0	2,200.0	2,200.0

Fee Category	Migratory Bird Program – Avicultural permits, Taxidermist permits and Eiderdown permits			
Fee Type	Regulatory (R)			
Fee Setting Authority	MBCA 1994, s. 12; *Migratory Bird Regulations*			
Date Last Modified	prior to 1978			
Performance Standards	These permits are issued by Environment Canada regional offices for a fee of $10.00 each after reviewing applications from the public. To be successful, applicants must meet the requirements described in the Canadian Wildlife Service permit policy. For example, with respect to aviculture, a person must demonstrate that they will keep the birds in an enclosure or clip their wings to prevent mixing with wild populations. Each region can attach specific conditions to each permit. Permits generally expire December 31st of the year issued. The performance standard is to review all applications received and issue permits or notify applicants of the reasons a permit is denied within 30 days of receiving the application.			
Performance Results	All applications were processed within the 30-day time frame unless site inspections were required. In those cases (10 percent of all the applications), an additional 30 days were required to process the application.			
	2005–2006	**2006–2007**	**2007–2008**	**2008–2009 (2)**
Forecast Revenue	10.0	10.0	10.0	10.0
Actual Revenue	19.6	Not applicable	Not applicable	Not applicable
Estimated Full Cost	105.1	115.5	127.0	139.8

Fee Category	Cap Tourmente National Wildlife Area - Permit Sales			
Fee Type	Regulatory (R)			
Fee Setting Authority	CWA, s. 12; *Canada Wildlife Act*; *Wildlife Area Regulations*			
Date Last Modified	2001			
Performance Standards	To meet the needs of hunters during the hunting season in Cap-Tourmente, we ensure that facilities such as attractive trails, convenient meal areas that meet hunters expectations, sufficient parking and washrooms, are well maintained. These facilities are necessary to make their hunting trips enjoyable and ensure that they return year after year.			
Performance Results	According to a survey of permit holders conducted in 2005, hunters were very satisfied with the quality of the facilities.			
	2005–2006	**2006–2007**	**2007–2008**	**2008–2009 (2)**
Forecast Revenue	190.0	190.0	190.0	190.0
Actual Revenue	162.7	Not applicable	Not applicable	Not applicable
Estimated Full Cost	225.3	225	225	225

Other Products and Services

Fee Category	**Fees charged for the processing of access requests filed under the *Access to Information Act***			
Fee Type	Other (O)			
Fee Setting Authority	ATIA, ss. 11(1) and par. 77(1)d); *Access to Information Regulations*			
Date Last Modified	1992			
Performance Standards	A response is to be provided within 30 days following receipt of request; the response time may be extended pursuant to section 9 of the ATIA. A notice of extension must be sent within 30 days after receipt of the request. The ATIA provides further details: http://laws.justice.gc.ca/en/A-1/218072.html.			
Performance Results	Statutory deadlines were met 88 percent of the time.			
Notes	It is the Department's practice to waive fees where the total owing per request amounts to less than $25.			
	2005–2006	**2006–2007**	**2007–2008**	**2008–2009 (2)**
Forecast Revenue	11.6	12.7	13.1	13.6
Actual Revenue	11.2	Not applicable	Not applicable	Not applicable
Estimated Full Cost	733.6	900.0	970.0	1,000.0

Fee Category	**Cap Tourmente National Wildlife Area - Entry Sales**			
Fee Type	(O)			
Fee Setting Authority	CWA, s. 12; *Canada Wildlife Act. Wildlife Area Regulations*			
Date Last Modified	2003			
Performance Standards	To meet the needs of hunters during the hunting season in Cap-Tourmente, we ensure that facilities such as attractive trails, convenient meal areas that meet hunters expectations, sufficient parking and washrooms, are well maintained. These facilities are necessary to make their hunting trips enjoyable and ensure that they return year after year.			
Performance Results	According to a survey of permit holders conducted in 2005, hunters were very satisfied with the quality of the facilities.			
	2005–2006	**2006–2007**	**2007–2008**	**2008–2009 (2)**
Forecast Revenue	231.0	226.0	226.0	226.0
Actual Revenue	238.3	Not applicable	Not applicable	Not applicable
Estimated Full Cost	264.6	260.0	260.0	260.0

Totals	2005–2006	2006–2007	2007–2008	2008–2009 (2)
Forecast Revenue (R)	**6,256.0**	6,156.0	6,456.0	6,456.0
Actual Revenue (R)	**5,309.9**	Not applicable	Not applicable	Not applicable
Estimated Full Cost (R)	**6,418.3**	7,000.5	7,312.0	7,324.8
Forecast Revenue (O)	**242.6**	238.7	239.1	239.6
Actual Revenue (O)	**249.5**	Not applicable	Not applicable	Not applicable
Estimated Full Cost (0)	**998.2**	1,160.0	1,230.0	1,260.0
Total Forecast Revenue	**6,498.6**	6,394.7	6,695.1	6,695.6
Total Actual Revenue	**5,559.4**	Not applicable	Not applicable	Not applicable
Total Estimated Full Cost	**7,416.5**	8,160.5	8,542.0	8,584.85

Notes:
(1) An analysis to determine the current cost of reviewing a permit, by type, is anticipated to commence in September 2006.
(2) Amount is expected to increase if ocean disposal activities, and therefore monitoring requirements, increase in the North.
(3) Fees for rights and privileges may exceed the cost of administering the program ensuring a fair market return for Canadian citizens.

Legend:
CEPA 1999 = *Canadian Environmental Protection Act, 1999*
CWA = *Canada Wildlife Act*
FAA = *Financial Administration Act*
MBCA 1994 = *Migratory Birds Convention Act, 1994*
O = Other Products and Services
R = Regulatory

Table 6B: Service Standards for External Fees

A. External Fee	Service Standard	Performance Result	Stakeholder Consultation
Ocean Disposal Permit Application Fees	Under the application fee, each application is reviewed according to Schedule 6 of CEPA 1999 and the *Disposal at Sea Regulations*. This involves public notice, an application that provides detailed data, scientific review and payment of fees. Each permit is published in the *Canada Gazette* within about 120 days of applying if the application is complete and there are no issues from other stakeholders. Under the permit fee, Environment Canada is committed to holding annual client meetings to review monitoring plans; conducting representative disposal-site monitoring according to the *National Guidelines for Monitoring Dredged and Excavated Material at Ocean Disposal Sites*; producing an annual report on activity; producing a financial summary of revenues, expenses and value for clients; and reporting results of monitoring to the Office for the London Convention.	Environment Canada met the service standards. Applications were reviewed within the 120-day time frame. Advice was provided to applicants to assist timely permit reviews. Monitoring plans were reviewed with clients in each region. Disposal-site monitoring was conducted and reported. For further details see: http://www.ec.gc.ca/seadisposal/	Application fees, set in 1993, were rolled over in 2001. A Regulatory Impact Assessment Statement and multi-stakeholder consultations were conducted before each regulation was enacted. Multi-stakeholder consultations were carried out in 1996–1998 for setting the permit fee. There was general acceptance of the fee, but concern for how it would be set. Permittees indicated that a proportional volume-based fee was preferred. As well, Environment Canada committed to holding regular meetings with permit holders, to reporting, and to reviewing the fee three years after implementation. The review was done in 2003 and its report concluded that no change to the fee was needed. All consultations from 1993 to 2003 involved discussion papers, public meetings and final reports. For further details see: www.ec.gc.ca/seadisposal/regs/min_reg_g2_e.html
Ocean Disposal Site Monitoring Fees	The permittee has access to a permitted site and ability to dispose of 1000 m^3 of dredged or excavated material for each $470 paid. The collected revenue is used by the Disposal at Sea Program to operate a representative national disposal-site monitoring program that allows the client group as a whole to continue to have access to suitable disposal sites and demonstrates that the resource is used sustainably for the Canadian public.	Environment Canada met the service standards. Permittees disposed of dredged and excavated material as authorized by their permits. Representative monitoring was carried out in accordance with monitoring guidelines.	Multi-stakeholder consultations were carried out in 1996–1998 for setting the permit fee. There was general acceptance of the fee, but concern for how it would be set. Permittees indicated that a proportional volume-based fee was preferred. As well, Environment Canada committed to holding regular meetings with permit holders, to reporting, and to reviewing the fee three years after implementation. The review was done in 2003 and its report concluded that no change to the fee was needed. Further consultations were undertaken from 1993 to 2003 involving discussion papers, public meetings and final reports. For further details see: www.ec.gc.ca/seadisposal/regs/min_reg_g2_e.html. Consultations examining ways of reducing or improving delivery of the fees are under way, primarily by means of a discussion document.
New Substances Notification	Notifications are processed within regulatory time frames 100 percent of the time. Requests are acknowledged by letter, email or fax within 10 business days of receipt.	All new substances notifications were processed and assessed within the legislated time period. Responses to requests made by letter, email or fax were sent within 10 days 95 percent of the time.	Amendments to the *New Substances Notification Regulations* were published in the *Canada Gazette*, Part II, in September 2005. Under the Service Delivery Improvement Strategy of the New Substances Branch, a service charter was developed. Other government departments, regional compliance promotion groups and industry had an opportunity for input into the service charter and standards. The service charter and standards will be published in 2006.

Migratory Bird Program - Migratory Game Bird Hunting Permit	Hunting permits are sold for $8.50 at Canada Post offices and selected provincial and private vendors from August 1st until March 10th of the following year. The performance standard is to ensure adequate numbers of permits are available for distribution within that time frame. Permits validated by the Habitat Conservation Stamp are mandatory for migratory game bird hunting. The hunter or his/her representative must physically go to a vendor that sells the permit. The permit is purchased on the spot, therefore, the service standard is that the hunter can get a hunting permit upon request. People purchasing the permit should receive one within minutes of completing the transaction.	As regards meeting hunter demand, 99.9 percent of permits were available to meet hunter demand within the specified time period. All permits were delivered within minutes of the purchase.	No recent consultations have been conducted because revenues still adequately cover program costs and no significant complaints have arisen. There is an average of 4-5 complaints each year that permits were not available from Canada Post because the Canada Post outlet did not re-order more stock. Issues like this are rectified by Canada Post within 2 days.
Migratory Bird Program - Habitat Conservation Stamp	Conservation stamps are sold for $8.50 each and must be affixed to the Migratory Game Bird Hunting Permit to validate it. The performance standard is to ensure that adequate numbers of stamps are available for distribution at Canada Post offices and selected provincial and private vendors from August 1st until March 10th of the following year. Stamps are also sold as collectables through Canada Post offices and vendors selected by Wildlife Habitat Canada (WHC). One cannot purchase a permit without the pre-affixed stamp, therefore the hunter or his/her representative must physically go to a vendor that sells the permit. The permit is purchased on the spot, thus the service standard is that the hunter receives a wildlife stamp affixed to the permit. People purchasing the permit should receive the stamp within minutes of completing the transaction. For collectors: Stamps bought from Canada Post can be purchased by mail order, telephone, fax and at selected Canada Post offices and require a two-week processing period. Stamps bought from WHC selected vendors can be ordered in person, by telephone and mail order. Processing time is two weeks if not bought in person.	Enough stamps to meet hunter and collector demands were available for purchase within the specified time period. Stamps bought from Canada Post by mail order, telephone, fax and at selected Canada Post offices were processed within the two-week processing period. Stamps bought from WHC selected vendors either in person, by telephone and mail order were processed within the two-week processing period. With funds generated from stamp revenue, WHC funds several habitat conservation programs and projects that contribute to Environment Canada's key program activity "Biological diversity is conserved."	The CWS (Canadian Wildlife Service) conducted a program evaluation in 2005–2006 of WHC and the stamp program. Stakeholders within the federal/provincial governments as well as those in non-governmental organizations were interviewed. The published results can be found on Environment Canada's Audit and Evaluation website (www.ec.gc.ca/ae-ve). The price of single stamps is fixed by regulation. Booklets of stamps, etc. are sold at a retail price mutually agreed on by Environment Canada and WHC and in accordance with established practices of the philatelic industry; Treasury Board reapproved the contribution agreement in 2002 (see http://www.cws-scf.ec.gc.ca/birds/status/index_e.cfm). No complaints have been received that stamps were unavailable. Stamp fees increased by $1.00 in 1991.

Migratory Bird Program - Avicultural Permits, Taxidermist Permits and Eiderdown Permits	These permits are issued by Environment Canada regional offices for a fee of $10.00 each after reviewing applications from the public. To be successful, applicants must meet the requirements described in the CWS permit policy. For example, with respect to aviculture, a person must demonstrate that they will keep the birds in an enclosure or clip their wings to prevent mixing with wild populations. Each region can attach specific conditions to each permit. Permits generally expire December 31st of the year issued. The performance standard is to review all applications received and issue permits or notify applicants of the reasons a permit is denied within 30 days of receiving the application.	All applications were processed within the 30-day time frame unless site inspections were required. In those cases (10 percent of all the applications), an additional 30 days were required to process the application.	Since revenues and cost are insignificant and since no complaints occurred, consultations are not currently planned.
Cap Tourmente National Wildlife Area - Permit Sales	To meet the needs of hunters during the hunting season in Cap-Tourmente, we ensure that facilities such as attractive trails, convenient meal areas that meet hunters' expectations, sufficient parking and washrooms, are well maintained. These facilities are necessary to make their hunting trips enjoyable and ensure that they return year after year.	According to a survey of permit holders conducted in 2005, hunters were very satisfied with the quality of the facilities.	According to a survey of permit holders conducted in 2005, hunters were very satisfied with the quality of the facilities.
Hydrometric Data	Services include individually negotiated contractual arrangements with a wide variety of users for climate data (e.g. minimum and maximum temperature). Charges are generally for delivery and packaging of data. Some products are delivered via monthly subscriptions for data.	Environment Canada met service standards as established in contract (e.g. quality control).	Consultation is done directly with clients (for contracts) during which the recourse mechanism is defined and client representatives are identified. During negotiations, stakeholders and Environment Canada agree on all terms before the contract is signed.
Weather Data	Services include individually negotiated contractual arrangements with a wide variety of users for climate data (e.g. minimum and maximum temperature). Charges are generally for delivery and packaging of data. Some products are delivered via monthly subscriptions for data.	Environment Canada met service standards as established in contract (e.g. quality control).	Consultation is done directly with clients (for contracts) during which the recourse mechanism is defined and client representatives are identified. During negotiations, stakeholders and Environment Canada agree on all terms before the contract is signed.

Weather Forecasts and Products	Services include individually negotiated contracts for weather forecasts, products and services (e.g. consultations with meteorologists, graphic or weather products).	All products and services are unique in nature. Service standards are established under contract. Most products are monitored for accuracy and consistency, and many contractual agreements include access to forecasters and service representatives if issues arise.	Contractual agreements are negotiated with the clients. A client representative is identified for recourse mechanism and dispute resolution purposes. Draft standards are being developed for more standardized products such as 1-900 telephone consultation.
Laboratory and Other Scientific Services	Services include individually negotiated contracts for tests and/or analysis on crude oil samples and weathered oils; air quality; exhaust emissions; and fuel consumption. Environment Canada details the service standards in the agreement. Generally, Environment Canada provides sample bottles (washed and free of contaminants); logs samples and all pertinent field information on the Laboratory Information Management System; carries out all necessary laboratory quality assurance / quality control testing (the lab is accredited by the Canadian Association for Environmental Analytical Laboratories, under International Organization for Standardization 17025); prepares and submits reports (hard copy or spreadsheet format) on samples submitted; and provides statistical analysis of results. The number of days that the lab has to deliver results varies according to the contract.	All services are unique in nature. Environment Canada met service standards as established in the contracts (standards, methodology, and protocols to be followed are described in the contract). Internal control processes are followed, sample results are delivered in a timely manner and discussions are held with clients to ensure that there are no complaints or concerns. Results were delivered within the time frame previously agreed upon in 100 percent of the contracts.	Consultations are done through contractual agreements negotiated with the clients—clauses on schedule, quantity (e.g. number of samples), cost and standards/methodology/protocols to be followed are included in the contract. Stakeholders and Environment Canada agree on all terms before the contract is signed. Work does not commence until both parties have signed the agreement.
Quality Assurance Program	Services include individually negotiated agreements and contracts with provincial, territorial and non-government agencies (e.g. providing all the documentation for quality systems).	All services and products are unique in nature. Service standards are negotiated in the contract or agreement.	Consultation is done directly with clients (e.g. determining analysis output). The recourse mechanism is defined in existing contracts and agreements, with client representatives identified.
Water Management Services	Services include individually negotiated agreements and contracts with provincial, territorial and non-governmental agencies (e.g. determining the success of remediation by monitoring concentrations of polycyclic aromatic hydrocarbons in water samples).	All services and products are unique in nature. Service standards are negotiated in the contract or agreement.	Consultations are done directly with clients (e.g. number of samples to be analyzed). The recourse mechanism is defined in existing contracts and agreements, with client representatives identified.
Fees charged for the processing of access requests filed under the *Access to*	A response provided within 30 days following receipt of request; the response time may be extended pursuant to section 9 of the ATIA. A notice of extension must be sent within 30 days	Statutory deadlines were met 88 percent of the time	The service standard is established by the ATIA and the *Access to Information Regulations*. Consultations with stakeholders were undertaken by the Department of Justice and the Treasury Board of Canada Secretariat.

Information Act (ATIA)	after receipt of the request. The ATIA provides further details: http://laws.justice.gc.ca/en/A-1/218072.html.		
Cap Tourmente National Wildlife Area - Entry Sales	To meet the needs of hunters during the hunting season in Cap-Tourmente, we ensure that facilities such as attractive trails, convenient meal areas that meet hunters expectations, sufficient parking and washrooms, are well maintained. These facilities are necessary to make their hunting trips enjoyable and ensure that they return year after year.	According to a survey of permit holders conducted in 2005, hunters were very satisfied with the quality of the facilities.	According to a survey of permit holders conducted in 2005, hunters were very satisfied with the quality of the facilities.
Entry fees - Montréal Biosphère	Year round, visitors to the Biosphère have access to services including reception, information on interpretive exhibits, activities covering various environmental themes, and educational workshops intended particularly for large groups, as well as installations such as exhibition rooms, rest areas, scenic viewpoints, and parking.	Based on written comments collected daily from visitors and evaluation forms completed by visiting group leaders, clients are generally very satisfied with their experience visiting the Biosphère and with the different services available.	Groups visiting the Biosphère are asked to fill out a questionnaire (submitted to the leader, generally a teacher) assessing their level of satisfaction with the services provided to them. A random sampling of individual visits is surveyed every three years.
Haying and Grazing (Canadian Wildlife Service Agricultural Activity)	A standing request list—"Notice of Interest"—is searched to identify applicants interested in the activity (e.g. haying, grazing, crop activities). If no interest is shown then a call for applications is made through ads in local papers or other suitable means. Interested persons are asked to fill out a Canadian Wildlife Service (CWS) agricultural activity application form. Application forms are reviewed to determine the most suitable candidate and a reference check of the candidate(s) is conducted. The current CWS agricultural permit application form was developed in 1984 and based on the Saskatchewan Environment and Resource Management and Saskatchewan Agriculture and Food permit process. It was revised in 1988 in response to drought conditions. Permits are issued for a period of less than one year and expire on December 31st of the year issued. The fee structure for haying and grazing is based upon the current rates used by Saskatchewan Environment and Resource Management and Saskatchewan Agriculture and Food to ensure that "equal service for equal fee" between departments is achieved.	Federal lands are monitored to ensure that permit conditions are being met and habitat management goals (e.g. maintaining native plant community and habitat for wildlife and reducing weed and exotic species invasion) are achieved through the activity. If so, the permit will be granted in subsequent years (subject to annual review).	The most suitable applicant is contacted to confirm his or her interest in obtaining a permit. Discussions are held to ensure the applicant understands and agrees to all conditions that will be on the permit. It is also ensured that the applicant understands that the permit is only for one season, and that if any conditions of the permit are not followed, the permit may be immediately revoked by the Minister. Prospective grazing patrons must also submit a grazing plan, which is reviewed and refined if required. Changes are reviewed with the patron to make sure they understand and agree with the final grazing plan and permit conditions.

National Pollutants Release Inventory Workshops and Seminars	The number of workshops and their length (i.e. half-day, full-day) is determined by the changes in the program each year. The changes in the program influence the needs of the participants (e.g. no change means a moderate interest in workshops; a lot of change generates a high interest in workshops). A high volume of requests from participants through phone, email, etc. indicates a significant need for workshops. Each year Environment Canada assumes that 80 percent of the participants will be satisfied with the workshops; some participants are looking for more detail while others are looking for less. Environment Canada tries to rectify this by offering two types of workshops, one for experienced reporters and another for inexperienced reporters; however, some participants can only attend based on date and availability and therefore end up in a workshop that does not provide them with full satisfaction.	An 80 percent satisfaction rate was registered from the survey.	Participants provided input through the evaluation sheet on course material, course delivery and facilities handed out at the end of the workshop. Areas of improvement were identified from participants' feedback from the survey. A report was also compiled from the survey and submitted to headquarters.
Sable Island Logistical Support Fees	Logistical support fees are charged to visitors of Sable Island for such things as aircraft landing, fuel, accommodations and access to food supplies. Recovery of costs is for work performed on the island for various projects. Specific fees are included in the Canadian Coast Guard visitors guidelines provided to clients when they initially request permission to visit.	Operational groups that work on Sable Island are satisfied with the services they receive and the subsequent fees that are charged. All fees are derived by computing true costs of delivering the service(s). Fees are presented to clients in a transparent manner so that they are fully aware of which service they are paying for and the associated cost. Some short-term visitors have expressed their unhappiness with the costs, due to their limited resources. Again, these fees are supported by the fact that they reflect the true costs of delivering the service(s). Nevertheless, close to 95 percent of our clients have been satisfied this year.	Fees are calculated on a purely cost-recovery basis; there is no profit being generated for Environment Canada. Stakeholders are advised of logistical fees before using services on Sable Island.

Publications and Publication Services	Publications are sold to cover the printing costs of the publications section and to underwrite the cost of production (translation, editing, design and layout). Publications are promoted through various vehicles and tools, including catalogue (print), catalogue (online), conferences, trade fairs, promotional flyers and the *Canada Gazette*. Clients include departments, corporations and institutions, as well as the public. Orders are received online via an ordering site, or by phone, email and facsimile. Each order is treated chronologically and an order-tracking system is in place. Orders are categorized by priority, with those involving legal statutes, ministerial enquiries and rush orders being treated as high priorities. Turn-around time for individual orders (actual invoicing, packaging and shipping) is within 3–5 working days. The packaging and shipping is done at a separate location (Distribution Centre – 151 Jean-Proulx, Gatineau QC, K1A 0H3). Items are, for the most part, shipped by Canada Post unless the client chooses alternative means, for which the associated cost is fully recovered by the Department. In addition to direct mail, publications are also distributed through government bookstores, electronic distribution and conferences.	The online ordering setup has a built-in tracking system. For audit purposes, all supporting documentation (purchase orders, requests, etc.) are attached to the invoice. Most items are prepaid, with the exception of other government departments and Canadian companies set up for purchase orders. For international orders, Environment Canada asks for prepayment before shipping the items, in an effort to prevent minimal recoveries at year-end. The only delays that Environment Canada has experienced in the past are on the reprinting end. The online order-tracking system allows us to view the orders, post invoicing, work order and shipping information, and to chronologically list all correspondence with the client. Items are categorized as PENDING, PROCESSING and COMPLETED and are viewed on a daily basis to make sure that all orders are completed in a timely fashion.	Clients may voice their concerns or complaints by calling our 1-800 number.

Table 7: Major Regulatory Initiatives

Regulations	Expected Results	Performance Measurement Criteria	Results Achieved
Canadian Environmental Protection Act, 1999 (CEPA 1999) Regulatory Initiatives (2005–2006)			
Amendments to the *New Substances Notification Regulations (Chemicals and Polymers)* (targeting publication in the *Canada Gazette*, Part II)	Reduced risk from toxics and other substances of concern (pollution prevention). Consequential amendments to the *New Substances Notification Regulations (Organisms)* and the *New Substances Fees Regulations* are also being made as a result of these amendments.	Regulatory instruments are in place to more efficiently address products of biotechnology.	*New Substances Notification Regulations (Chemicals and Polymers)* were published in the *Canada Gazette*, Part II, on September 21, 2005. (http://canadagazette.gc.ca/partII/2005/20050921/html/sor247-e.html) The purpose of the *New Substances Notification Regulations (Organisms)* is to implement part of a new regulatory structure for new substances notification under CEPA 1999. The regulatory structure carves out the provisions related to organisms in the previous *New Substances Notification Regulations*. The regulations were published in the *Canada Gazette*, Part II, on August 31, 2005. (http://canadagazette.gc.ca/partII/2005/20050921/html/sor248-e.html) The review of the *New Substances Notification Regulations (Organisms)* starts with the research and development exemption for living organisms other than micro-organisms. There is ongoing consultation to improve efficiency of sections related to this matter. (http://www.ec.gc.ca/substances/nsb/eng/consultations_e.shtml#bio) To reflect changes in regulations mentioned above, *Regulations Amending the New Substances Fees Regulations* were published in the *Canada Gazette*, Part II, on September 21, 2005. (http://canadagazette.gc.ca/partII/2005/20050921/html/sor286-e.html)
Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations (*Canada* Gazette, Part I (targeting publication in the *Canada Gazette*, Part II, in the fall of 2005)	Control air releases of hexavalent chromium from the electroplating sector either by limiting release at a point source or by specifying the conditions of use. These Regulations will result in a uniform approach to the control of hexavalent chromium releases from this sector in Canada.	There is compliance with the regulations.	Published in the *Canada Gazette*, Part I, November 6, 2004. Publication in the *Canada Gazette*, Part II, is expected in the fourth quarter of 2006–2007.
Ministerial Order to add hexachlorobutadiene (HCBD) to the Virtual Elimination List (targeting publication in the *Canada Gazette*, Part II)	Enacts the virtual elimination of HCBD in releases to the environment. This will result in the ultimate reduction of the quantity or concentration of HCBD in releases to below the level of quantification specified by the ministers in the List.	Regulatory instrument to reduce HCBD is in place.	Publication is expected in the fall of 2006.
Federal Petroleum Products and Allied Petroleum Products Storage Tank Systems Regulations (targeting publication	Provide a more comprehensive framework in order to effectively prevent soil and groundwater contamination from	There is an increase in the percentage of storage tank systems meeting the technical	Development of the regulations is ongoing. Final consultations with the regulated community were conducted in 2005–2006. Pre-publication of the proposed regulations in the *Canada Gazette*, Part I, is targeted for December 2006.

in the *Canada Gazette*, Part I, in June 2005)	storage tank systems of the Federal House and on Aboriginal lands. It will also fill the regulatory gap, as provincial regulations generally do not apply to federal and Aboriginal lands.	requirements of the regulations. There is a decrease in the number of spills reported and a decrease in the total volume of product spilled.	
Amendments to the *Metal Mining Effluent Regulations* (MMER) (targeting publication in the *Canada Gazette*, Part I, in the fall of 2005)	Environment Canada is planning to amend the MMER to address some technical matters that have been identified through implementation experience; improve the clarity of interpretation; harmonize some MMER requirements with relevant components of the recently amended *Pulp and Paper Effluent Regulations*; and address issues related to the process for scheduling of tailings impoundment areas.	An assessment of quarterly monitoring reports is prepared by the regulated committee along with annual summary reports for release to the public and stakeholders.	Published in the *Canada Gazette*, Part I, on April 8, 2006.
Regulations Limiting Greenhouse Gas Emissions from Large Final Emitters (targeting publication in the *Canada Gazette*, Part I) including the Final Order to add greenhouse gases to Schedule 1 of CEPA 1999 (published in the Canada Gazette, Part II)	Complete consultations on regulatory framework for large final emitters. Complete sector-specific consultation to determine targets for most of the sectors. Complete development of draft rules for a complementary offset system. Complete monitoring and reporting framework to develop regulations.	Draft cross-cutting regulations developed through consultation. Draft regulations for individual sectors developed through consultation. Develop rules and guidance for an offset crediting system. Develop monitoring and reporting framework in support of the regulations.	A proposed regulatory framework for greenhouse gas emissions from industrial sectors was elaborated in the Notice of Intent to Regulate Greenhouse Gas Emissions by Large Final Emitters, published in the *Canada Gazette*, Part I, on July 16, 2005. Detailed discussions were undertaken with individual sectors to define emission intensity targets to be set out in sectoral regulations. A draft of the cross-cutting provisions for the proposed regulations was developed and released for consultation. Development of a proposed single-window quantification and reporting system was pursued in collaboration with provinces and stakeholders. A proposed design for the offset crediting system was published and national consultations were conducted. Draft rules and guidance for offset program elements were developed, and drafting of quantification protocols for a number of key project types was initiated in collaboration with provinces and stakeholders. On November 21, 2005, the Final Order to add greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride) to Schedule 1 of CEPA 1999, was published in the Canada Gazette, Part II.
Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (targeting publication in the *Canada Gazette*, Part II)	Revise the existing *Export and Import of Hazardous Waste Regulations* (1992) and introduce new elements necessary to further contribute to the protection of the environment and human health from the risks posed by the transboundary movement of hazardous wastes and hazardous recyclable materials.	There is compliance with regulations.	The *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* were published in the *Canada Gazette*, Part II, on June 1, 2005, and came into force on November 1, 2005.

Polychlorinated Biphenyl (PCB) Regulations (targeting publication in the *Canada Gazette*, Part I)	Modernize the framework to control the use and storage of PCBs and their release into the environment by phasing out, by specific dates, PCB equipment still in use, implementing new tracking provisions for the PCBs currently in use and implementing time limits for storing PCBs.	There is compliance with regulations.	Publication in the *Canada Gazette*, Part I, is expected in the fall of 2006.
Amendment to the *Prohibition of Certain Toxic Substances Regulations, 2005* (targeting publication in the *Canada Gazette*, Part I)	Restrict toxic substances (2-methoxyethanol (2-ME), tetrachlorobenzenes and pentachlorobenzene) that pose serious risks to Canadians' health or their environment, to ensure that the environment and health of Canadians is protected from the potential harmful effects attributed to these toxic substances.	The quantity of 2-ME imported into Canada is reduced.	The amendments were published in the *Canada Gazette*, Part I, on July 9, 2005. The comment period ran from July 9, 2005 to September 7, 2005. Publication in the *Canada Gazette*, Part II, is expected in the fall of 2006.
Marine Spark-Ignition Engine and Off-Road Recreational Vehicle Emission Regulations (targeting publication in the *Canada Gazette*, Part I and II)	New regulations to establish emission standards for 2008 and later model year outboard engines, personal watercraft, snowmobiles, off-road motorcycles and all-terrain vehicles. These regulations would align emission standards with those of the U.S. and set stringent emissions limits for nitrogen oxides, hydrocarbons and carbon monoxide.	Regulations are in place to align to emission standards with those of the U.S and set stringent emission limits.	Publication of the *Marine Spark-Ignition Engine and Off-Road Recreational Vehicle Emission Regulations* in the *Canada Gazette*, Part I, is expected in the fall of 2006.
Amendments to the *Off-Road Compression-Ignition Engine Emission Regulations* (targeting publication in the *Canada Gazette*, Part I)	Establish more stringent "Tier 4" emission standards for the 2008 and later model year diesel engines used in construction, agriculture, mining, and forestry equipment. These planned amendments are required to maintain alignment with the emission standards of the U.S. and will reduce allowable emission levels by up to 95 percent for particulate matter and up to 40 percent for nitrogen oxides and hydrocarbons.	Regulations are in place to align to emission standards with those of the U.S.	Publication of the amendments to the *Off-Road Compression-Ignition Engine Emission Regulations* in the *Canada Gazette*, Part I, is expected in February 2007.

Regulations Respecting 2-Butoxyethanol Content in Consumer Products (targeting publication in the *Canada Gazette*, Part I)	Reduce concentrations of 2-butoxyethanol (2-BE) in indoor air during the use of consumer products containing the substance to below an established tolerable concentration.	An increased number of products containing 2-BE are below established limits.	The document was published in the *Canada Gazette*, Part I, on July 9, 2005. The comment period ran from July 9, 2005 to September 7, 2005. Publication in the *Canada Gazette*, Part II, is expected in the fall of 2006.
Biodiversity Conservation Regulatory Initiatives			
Amendments to the *Species at Risk Act* to modify the legal list of species and other provisions, as needed (publish regulations in 2005–2006)	Amend Schedule 1 and put in other provisions as required.	Amendment is completed within prescribed timelines	The list of wildlife species at risk was amended to include 39 new species in July 2005.
Annual hunting regulations, through the *Migratory Bird Conservation Act,* establishing hunting season dates and bag and possession limits for migratory game birds (publish regulations by the first quarter of 2005–2006)	Through best available science, allow hunting at sustainable levels.	Regulations on 2005 migratory bird hunting are published by the 1st quarter of 2005-2006	Regulations concerning the hunting of migratory birds were published in June 2005.
Overabundant Snow Goose regulation, through the *Migratory Bird Conservation Act*, to establish special conservation seasons (publish regulation by the fourth quarter of 2005–2006).	Maintain a spring hunting season for Snow Geese as a population control measure where needed.	Regulations on 2006 spring hunting Overabundant Snow Goose are published by the 4th quarter of 2005-2006	Regulations concerning the hunting of overabundant Snow Geese were published in March 2006
Permit and inspection fees, record keeping, marking of specimens, and designated ports of entry (publish regulations by the fourth quarter of 2005–2006).	Provide for more efficient administration of the *Convention on International Trade in Endangered Species* by Canada.	Assessments are provided on all legislative and regulatory needs for amendment of the the*Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (* WAPPRIITA) and *Wild Animal and Plant Trade Regulations* (WAPTR)	Assessment papers for proposed regulatory changes were completed.

Provisions for pre-Convention and ranched specimens (publish regulations by the fourth quarter of 2005–2006).	Provide an exemption regulation for certain specimens as authorized under the Convention.	Provide assessments on all legislative and regulatory needs for amendment the WAPPRIITA and WAPTR	Assessment papers for proposed regulatory changes were completed.
Amendments to Canada Wildlife Area Regulations through the *Canada Wildlife Act* (CWA).	To convert Migratory Bird Sanctuaries to National Wildlife Areas (NWAs)and to establish Canada's first Marine Wildlife Area (Scott Islands NWA) and two new National Wildlife Areas (Igaliqtuuq NWA and Cape Searle/Reid Bay NWA).	Amended regulations are in place	Amendments to CWA regulations are no longer a high priority as equivalent protection can in many cases be achieved through a Migratory Bird Sanctuary. The two new wildlife areas will be established once the Inuit Impact and Benefits Agreement (IIBA) is finalized with Inuit organizations. Discussions with British Columbia over establishing Scott Islands are ongoing.

Table 8: Details on Project Spending

In 2005–2006, Environment Canada managed the following projects that exceeded their delegated project approval level.

1. Weather station construction Eureka, Northwest Territories (effective project approval – EPA)

2. Hydrometric Program (EPA)

3. Canadian Meteorological Centre – Facility Extension (EPA)

4. Modernization of the Climate Observing Program (EPA)

Additional information on project spending can be found at http://www.tbs-sct.gc.ca/est-pre/estime.asp.

Table 9: Details on Transfer Payment Programs

In 2005–2006, Environment Canada managed the following transfer payment programs in excess of $5 million:

1. Contributions to Support Environmental and Sustainable Development Initiatives

2. Habitat Stewardship Contribution Program

3. Contribution to EcoAction 2000 – Community Funding Initiative

4. Contributions for the Opportunities Envelope Program

Additional information on Environment Canada's transfer payment programs can be found at http://www.tbs-sct.gc.ca/est-pre/estime.asp.

Table 10: Foundations (Conditional Grants)

Environment Canada has provided conditional grants to the independent foundations identified below:

1. Canadian Foundation for Climate and Atmospheric Sciences
2. Sustainable Development Technology Canada
3. The Federation of Canadian Municipalities Green Municipal Funds
    a. The Green Municipal Enabling Fund
    b. The Green Municipal Investment Fund
4. Clayoquot Biosphere Trust

Additional information on these foundations (conditional grants) can be found at: http://www.tbs-sct.gc.ca/est-pre/estime.asp.

Table 11: Horizontal Initiatives

In 2005–2006, Environment Canada contributed to the following horizontal initiatives:

1. An Action Plan for Federal Contaminated Sites (lead)
2. Canadian Biotechnology Strategy (partner)
3. Canadian Rural Partnership (partner)
4. Climate Change (lead)
5. Great Lakes Action Plan (lead)
6. Implementation of the *Species at Risk Act* (lead)
7. Team Canada Inc. (partner)
8. Voluntary Sector Initiative (partner)
9. Youth Employment Strategy

Additional information on horizontal initiatives can be found at: http://www.tbs-sct.gc.ca/est-pre/estime.asp.

Table 12: Financial Statements

Statement of Management Responsibility

Responsibility for the integrity and objectivity of the accompanying financial statements for the year ended March 31, 2006 and all information contained in these statements rests with departmental management. These financial statements have been prepared by management in accordance with Treasury Board accounting policies which are consistent with Canadian generally accepted accounting principles for the public sector.

Management is responsible for the integrity and objectivity of the information in these financial statements. Some of the information in the financial statements is based on management's best estimates and judgment and gives due consideration to materiality. To fulfil its accounting and reporting responsibilities, management maintains a set of accounts that provides a centralized record of the department's financial transactions. Financial information submitted to the *Public Accounts of Canada* and included in the department's *Departmental Performance Report* is consistent with these financial statements.

Management maintains a system of financial management and internal control designed to provide reasonable assurance that financial information is reliable, that assets are safeguarded and that transactions are in accordance with the *Financial Administration Act*, are executed in accordance with prescribed regulations, within Parliamentary authorities, and are properly recorded to maintain accountability of Government funds. Management also seeks to ensure the objectivity and integrity of data in its financial statements by careful selection, training and development of qualified staff, by organizational arrangements that provide appropriate divisions of responsibility, and by communication programs aimed at ensuring that regulations, policies, standards and managerial authorities are understood throughout the department.

The financial statements of the department have not been audited.

Michael Horgan, Deputy Minister

Basia Ruta, ADM, Finance & Corporate, Chief Financial Officer

Gatineau, Canada
August 15, 2006

Environment Canada

Statement of Operations *(Unaudited)*

For the Year Ended March 31

	2006	2005
Expenses (Note 4)		
Reduced Impact of Weather and Related Hazards	247,365,000	218,113,296
Reduced Risk from Toxics and Other Substances of Concern	224,138,992	202,642,271
Biological Diversity is Conserved	150,029,578	133,327,664
Improved Air Quality	103,865,221	93,651,694
Adaptation to Environment Changes	100,032,079	89,907,249
Clean, Safe and Secure Water for People and Ecosystems	87,664,062	77,121,997
Reduced Greenhouse Gas Emissions	82,563,629	148,379,722
Priority Ecosystems are Conserved and Restored	72,231,493	68,505,794
Total Expenses	1,067,890,054	1,031,649,687
Revenues (Note 5)		
Reduced Impact of Weather and Related Hazards	63,526,631	62,366,531
Reduced Risk from Toxics and Other Substances of Concern	10,014,630	9,541,303
Biological Diversity is Conserved	5,373,730	5,846,122
Clean, Safe and Secure Water for People and Ecosystems	4,716,044	5,944,509
Adaptation to Environment Changes	2,380,654	3,162,765
Improved Air Quality	1,369,112	2,202,132
Priority Ecosystems are Conserved and Restored	1,332,617	2,383,220
Reduced Greenhouse Gas Emissions	243,298	1,020,335
Total Revenues	88,956,716	92,466,917
Net Cost of Operations	978,933,338	939,182,770

The accompanying notes form an integral part of these financial statements

Environment Canada

Statement of Financial Position *(Unaudited)*

At March 31

	2006	2005
ASSETS		
Financial assets		
Accounts receivable and advances (Note 6)	7,561,323	9,965,849
Total financial assets	**7,561,323**	**9,965,849**
Non-financial assets		
Prepaid expenses	1,841,278	1,969,770
Inventory	3,486,850	3,885,860
Tangible capital assets (Note 7)	335,513,930	343,004,893
Total non-financial assets	**340,842,058**	**348,860,523**
TOTAL	**348,403,381**	**358,826,372**
LIABILITIES		
Accounts payable and accrued liabilities	136,317,336	390,811,292
Vacation pay & compensatory leave	31,833,460	27,615,052
Deferred revenue (Note 8)	44,611	4,111
Lease obligation for tangible capital assets (Note 9)	15,780,415	16,169,993
Environmental liabilities	83,837,800	92,752,681
Employee severance benefits (Note 10)	100,722,879	84,905,062
Other liabilities	7,332,786	6,711,685
	375,869,287	**618,969,876**
Equity of Canada	(27,465,906)	(260,143,504)
TOTAL	**348,403,381**	**358,826,372**

Contingent Liabilities (Note 11)
Contractual Obligations (Note 12)

The accompanying notes form an integral part of these financial statements

Environment Canada

Statement of Equity of Canada *(Unaudited)*

For the Year Ended March 31

	2006	2005
Equity of Canada, beginning of year	(260,143,504)	(190,795,487)
Net cost of operations	(978,933,338)	(939,182,770)
Current year appropriations used (Note 3)	1,041,546,538	926,689,281
Revenue not available for spending	(11,958,896)	(14,194,245)
Change in net position in the Consolidated Revenue Fund (Note 3)	106,533,725	(114,873,047)
Services provided without charge by other government departments (Note 13)	75,489,569	72,212,764
Equity of Canada, end of year	**(27,465,906)**	**(260,143,504)**

The accompanying notes form an integral part of these financial statements

Environment Canada

Statement of Cash Flow *(Unaudited)*

For the Year Ended March 31

	2006	2005
Operating activities		
Net cost of operations	978,933,338	939,182,770
Non-cash items:		
Services provided without charge	(75,489,569)	(72,212,764)
Amortization of tangible capital assets	(35,340,897)	(34,902,360)
Adjustment to prior year amortization	–	39,001,302
Loss on disposal and write-down of tangible capital assets	(10,720,943)	(172,606)
Bad debt expense	(147,537)	22,821
Other Non-cash expenses	6,909,725	8,593,625
Variations in Statement of Financial Position:		
Increase (decrease) in accounts receivable and advances	(2,404,526)	868,143
Increase (decrease) in prepaid expenses	(128,492)	(63,087)
Increase (decrease) in inventory	(399,010)	455,227
Decrease (increase) in liabilities	234,185,707	(118,747,610)
Decrease (increase) in environmental liabilities	8,914,881	(3,436,288)
Cash used by operating activities	**1,104,312,677**	**758,589,173**
Capital investment activities		
Acquisitions of tangible capital assets	32,147,891	39,340,369
Proceeds from disposal of tangible capital assets	(339,201)	(307,553)
Cash used by capital investment activities	**31,808,690**	**39,032,816**
Financing activities		
Net cash provided by Government of Canada	(1,136,121,367)	(797,621,989)

The accompanying notes form an integral part of these financial statements

Environment Canada
Notes to the Financial Statements *(Unaudited)*

1. Authority and Objectives

Environment Canada (EC) was established under legislation by the *Department of the Environment Act*. Under this *Act*, the powers, duties and functions of the Minister of the Environment extend to and include matters relating to:

- The preservation and enhancement of the quality of the natural environment (including water, air and soil quality);
- Renewable resources, including migratory birds and other non-domestic flora and fauna;
- Water;
- Meteorology;
- Enforcement of any rules or regulations made by the International Joint Commission relating to boundary waters; and
- Coordination of the policies and programs of the Government of Canada respecting the preservation and enhancement of the quality of the natural environment.

Environment Canada delivers its mandate through 9 programs. The 9 programs combined help Environment Canada to fulfill its mission to reduce Greenhouse Gas emissions, Improve air quality, Reduce risk from toxics and other substances or concern, Conserve biological diversity, Clean-safe and secure water for people and ecosystems, Restore and conserve priority ecosystems, Develop and implement policy and communications, Reduce the impact of weather and related hazards and Adapt to environmental changes.

In addition, Environment Canada has authority under a number of pieces of legislation which affect how the department operates. The most significant *Acts* are as follows:

- *Antarctic Environmental Protection Act*
- *Canada Water Act*
- *Canada Wildlife Act*
- *Canadian Environment Week Act*
- *Canadian Environmental Assessment Act*
- *Canadian Environmental Protection Act, 1999*
- *Department of the Environment Act*
- *Fisheries Act* (Sections 36-42)
- *International River Improvements Act*
- *Migratory Birds Convention Act, 1994*
- *National Wildlife Week Act*
- *Species at Risk Act*
- *Weather Modification Information Act*
- *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*

2. Summary of Significant Accounting Policies

The financial statements have been prepared in accordance with Treasury Board accounting policies which are consistent with Canadian generally accepted accounting principles for the public sector.

Significant accounting policies are as follows:

(a) Parliamentary appropriations – the Department is financed by the Government of Canada through Parliamentary appropriations. Appropriations provided to the department do not parallel financial reporting according to generally accepted accounting principles since appropriations are primarily based on cash flow requirements. Consequently, items recognized in the statement of operations and the Statement of financial position are not necessarily the same as those provided through appropriations from Parliament. Note 3 provides a high-level reconciliation between the bases of reporting.

(b) Net Cash Provided by Government – The department operates within the Consolidated Revenue Fund (CRF). The CRF is administered by the Receiver General for Canada. All cash received by the department is deposited to the CRF and all cash disbursements made by the department are paid from the CRF. Net cash provided by Government is the difference between all cash receipts and all cash disbursements including transactions between departments of the federal government.

(c) Revenues – Revenues are accounted for in the period in which the underlying transaction or event occurred that gave rise to the revenues. Revenues that have been received but not yet earned are presented as deferred revenues (note 8).

(d) Change in net position in the Consolidate Revenue Fund is the difference between the net cash provided by Government and appropriations used in a year, excluding the amount of non respendable revenue recorded by the department. It results from timing difference between when a transaction affects appropriations and when it is processed through the CRF.

(e) Expenses – Expenses are recorded on the accrual basis:

- Grants are recognized in the year in which payment is due or in which the recipient has met the eligibility criteria. In the case of grants which do not form part of an existing program, the expense is recognized when the Government announces a decision to make a non-recurring transfer, provided the enabling legislation or authorization for payment receives parliamentary approval prior to the completion of the financial statements;

- Contributions are recognized in the year in which the recipient has met the eligibility criteria or fulfilled the terms of a contractual transfer agreement;

- Vacation pay and compensatory leave are expensed as the benefits accrue to employees under their respective terms of employment.

- Contributions to the Public Service Superannuation Plan are charged to expenses in the year incurred and represent the total departmental obligation to the Plan. Current legislation does not require the department to make contributions for any actuarial deficiencies of the Public Service Superannuation account.

- Services provided without charge by other government departments for accommodation, the employer's contribution to the health and dental insurance plans and legal services are recorded as operating expenses at their estimated cost.

(f) Employee future benefits

(i) Pension benefits: Eligible employees participate in the Public Service Pension Plan, a multiemployer administered by the Government of Canada. The department's contributions to the Plan are charged to expenses in the year incurred and represent the total departmental obligation to the Plan. Current legislation does not require the department to make contributions for any actuarial deficiencies of the Plan.

(ii) Severance benefits: Employees are entitled to severance benefits under labour contracts or conditions of employment. These benefits are accrued as employees render the services necessary to earn them. The obligation relating to the benefits earned by employees is calculated using information derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole.

(g) Accounts and loans receivables are stated at amounts expected to be ultimately realized; a provision is made for receivables where recovery is considered uncertain.

(h) Contingent liabilities – Contingent liabilities are potential liabilities which may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future event is likely to occur of fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded. If the likelihood is not determinable or an amount cannot be reasonably estimated, the contingency is disclosed in the notes to the financial statements.

(i) Environmental liabilities – Environmental liabilities reflect the estimated costs related to the management and remediation of environmentally contaminated sites. Based on management's best estimates, a liability is accrued and an expense recorded when the contamination occurs or when the department becomes aware of the contamination and is obligated, or is likely to be obligated to incur such costs. If the likelihood of the department's obligation to incur these costs is either not determinable or unlikely, or if an amount cannot be reasonably estimated, the costs are disclosed as contingent liabilities in the notes to the financial statements.

(j) Inventory – Inventory consist of parts, material and supplies held for future program delivery and not intended for re-sale. They are valued at cost. If they no longer have service potential, they are valued at the lower of cost or net realizable value.

(k) Tangible capital assets – All tangible capital assets and leasehold improvements having an initial cost of $10,000 or more are recorded at their acquisition cost. The department does not capitalize intangibles, works of art and historical treasures that have cultural, aesthetic or historical value, assets located on Indian Reserves and museum collections.

Capital assets are amortized on a straight-line basis over the estimated useful life of the asset as follows:

Asset Class	Amortization (Years)
Buildings	Maximum 25
Works and Infrastructure	20 to 40
Machinery and Equipment	1 to 15
Vehicles	3 to 25
Leasehold Improvements	Term of Lease
Assets under construction	Once in service, in accordance with asset type
Leased tangible capital assets	In accordance with asset type

(l) Measurement uncertainty – The preparation of these financial statements in accordance with accounting Treasury Board accounting policies which are consistent with Canadian generally accepted accounting principles for the public sector requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses reported in the financial statements. At the time of preparation of these statements, management believes the estimates and assumptions to be reasonable. The most significant items where estimates are used are contingent liabilities, environmental liabilities, the liability for employee severance benefits and the useful life of tangible capital assets. Actual results could differ from those estimated. Management's estimates are reviewed periodically and, as adjustments become necessary, they are recorded in the financial statements in the year they become known.

3. Parliamentary Appropriations

The Department receives most of its funding through annual Parliamentary appropriations. Items recognized in the statement of operations and the statement of financial position in one year may be funded through Parliamentary appropriations in prior, current or future years. Accordingly, the Department has different net results of operations for the year on a government funding basis than on an accrual accounting basis. The differences between net results of operations and appropriations are reconciled in the following tables.

(a) Reconciliation of net cost of operations to current year appropriations used:	**2006**	**2005**
Net cost of operations	978,933,338	939,182,770
Adjustments for items affecting net cost of operations but not affecting appropriations:		
Add (Less):		
Amortization of tangible capital assets	(35,340,897)	4,098,942
Services provided without charge	(75,489,569)	(72,212,764)
Vacation pay and compensatory leave	(3,798,982)	1,294,190
Bad debt	(147,537)	22,821
Refund of previous year's expenses	1,237,158	573,503
Loss on disposal and write-down of tangible capital assets	(10,815,027)	(371,997)
Justice Canada fees	(4,031,574)	(3,420,089)
Decrease (increase) in liability for contaminated sites	8,914,881	(3,436,288)
Employee Severance Benefits	(15,817,817)	(2,756,535)
Other amounts previously charged to appropriation (include inventories consumed)	154,207,086	9,811,301
Revenues not available for spending	11,958,896	14,194,245
	1,009,809,956	886,980,099
Adjustments for items not affecting net cost of operations but not affecting appropriations:		
Add (Less): Acquisition of tangible capital assets	31,715,817	39,340,369
Capital lease	20,765	368,813
Current year appropriations used	1,041,546,538	926,689,281

(b) Appropriations provided and used	**Appropriations Provided**	
	2006	**2005**
Vote 1 - Operating expenditures	748,334,367	689,044,684
Vote 5 - Capital expenditures	33,822,100	41,457,915
Vote 10 - Grants & Contributions	69,250,340	72,719,457
Statutory amounts	234,455,327	176,737,144
Less:		
Appropriations available for future years	(321,064)	(236,068)
Lapsed appropriations	(43,994,532)	(53,033,851)
Total appropriations used	1,041,546,538	926,689,281

(c) Reconciliation of net cash provided by Government to current year appropriations used	**2006**	**2005**
Net Cash provided by Government	1,136,121,367	797,621,989
Revenues not available for spending:	11,958,896	14,194,245
Change in net position in the Consolidated Revenue Fund		
Variation in accounts receivable and advances	2,533,018	(805,055)
Variation in accounts payable and accrued liabilities	(104,262,433)	120,025,726
Variation in deferred revenue	40,500	–
Other adjustments	(4,844,810)	(4,347,624)
	(106,533,725)	114,873,047
Current year appropriations used	1,041,546,538	926,689,281

Environment Canada

Notes to the Financial Statements *(Unaudited)*

4. Expenses

	2006	2005
Operations and Administration		
Salaries and Employee Benefits	601,054,520	534,009,510
Professional and Special Services	92,970,773	89,448,414
Travel	44,715,033	37,629,527
Machinery & Equipment	39,876,531	36,716,817
Other Contracted Services	37,538,678	30,968,231
Amortization	35,340,897	34,902,360
Adjustment to prior year amortization	–	(39,001,302)
Rentals	31,176,215	23,468,944
Materials and Supplies	26,470,187	25,375,378
Telecommunications	15,592,954	15,646,628
Equipment Repair and Maintenance	13,451,732	11,282,979
Other	7,757,982	3,097,826
Information Services - Communications	6,674,059	6,700,323
Loss on disposal of capital assets	6,452,319	371,997
Accommodation	41,400,094	38,904,049
Loss on write-down	4,362,708	–
Postage	3,696,858	3,900,076
Environmental Liabilities	(8,914,881)	3,436,288
Total Operations and Administration	999,616,659	856,858,045
Transfer payments		
Non-Profit Organizations	48,253,799	147,990,540
Other Countries and International Organizations	11,803,093	11,682,789
Other to individuals	3,662,184	3,802,621
Industry	2,659,000	2,873,226
Other Levels of Governments within Canada	1,895,319	8,442,466
Total Transfer Payments	68,273,395	174,791,642
Total Expenses	1,067,890,054	1,031,649,687

5. Revenues

	2006	2005
Sales of Goods and Services		
Sales of goods and information products	43,806,172	45,701,485
Services of a non-regulatory nature	25,027,367	27,137,408
Services of a regulatory nature	5,733,486	5,725,019
Lease and Use of Public Property	1,238,084	1,118,074
Rights and Privileges	683,328	541,527
Other	11,214	12,032
Total sales	76,499,651	80,235,545
Joint Projects and Cost Sharing Agreements	4,681,754	5,413,915
Post Capitalization	4,400,939	2,739,604
Environmental Damages Fund	355,632	870,476
Gain on Disposal of Assets	237,393	317,397
Fines	60,389	102,184
Gain on Foreign Exchange	103,572	81,682
Interests and Penalties	75,059	26,983
Other	2,542,327	2,679,131
Total revenues	88,956,716	92,466,917

Environment Canada

Notes to the Financial Statements *(Unaudited)*

6. Accounts Receivable and Advances

	2006	2005
Cash in transit	373,783	386,750
External Parties	3,102,853	3,779,906
Other Government Departments	4,261,948	5,977,825
	7,738,584	10,144,481
Less: allowance for doubtful accounts on external receivables	(343,984)	(338,464)
Net accounts receivables	7,394,600	9,806,017
Advances to employees	166,723	159,832
Total	7,561,323	9,965,849

7. Tangible Capital Assets

	Cost					Accumulated amortization					
Capital asset class	**Opening balance**	**Acquisitions**	**Disposals and write-offs**	**Closing balance**	**Opening balance**	**Amortization**	**Disposals and write-offs**	**Closing balance**	**2006 Net book value**	**2005 Net book value**
Land	27,225,221	7,600	1,990,000	25,242,821	-	-	-	-	25,242,821	27,225,221
Buildings	146,259,586	23,854,538	21,778,700	148,335,424	84,040,872	6,206,221	17,436,877	72,810,216	75,525,208	62,218,714
Works and infrastructure	1,733,562	1,986,797	-	3,720,359	1,434,998	237,387	-	1,672,385	2,047,974	298,564
Machinery and equipment	374,314,756	27,213,621	2,562,570	398,965,807	251,915,644	23,525,198	2,436,672	273,004,170	125,961,637	122,399,112
Vehicles	32,123,874	4,209,457	1,630,526	34,702,805	20,710,600	3,202,322	1,342,367	22,570,556	12,132,249	11,413,274
Leasehold improvements	33,528,840	1,463,137	-	34,991,977	16,154,551	1,441,792	-	17,596,343	17,395,634	17,374,289
Assets under construction	86,060,247	19,782,055	43,921,390	61,920,912	-	-	-	-	61,920,912	86,060,247
Leased tangible capital assets	18,198,560	-	-	18,198,560	2,183,089	727,976	-	2,911,065	15,287,495	16,015,471
Total	719,444,646	78,517,204	71,883,186	726,078,664	376,439,753	35,340,897	21,215,916	390,564,734	335,513,930	343,004,893

Amortization expense for the year ended March 31, 2006 is $35,340,897 (2005 - $ 34,902,360).

8. Deferred Revenue

Deferred revenue represents the balance at year-end or unearned revenue stemming from donations, which are restricted to fund studies related to endangered species. Revenue is recognized each year in the amount of the total cost incurred. Details of the transactions related to this account are as follows:

	2006		2005
Opening balance	4,111	(1)	4,111
Donations received	40,500	(2)	–
Revenue recognized	–		–
Closing balance	44,611		4,111

(1) The source of these funds is a bequest by an individual, which must be used to revive a Who's Who campaign to inform Canadians on the importance of wildlife in Canada.

(2) The source of these funds is a bequest by individuals, which must be used by the Canadian Wildlife Services

9. Lease obligation for tangible capital assets

On October 13, 2000, the department has entered into an agreement to rent office and laboratory space from Carleton University, for the National Wildlife Research Centre (NWRC), under capital lease, with a cost of $18,198,560 and accumulated amortization of $2,911,065 as at March 31, 2006 ($18,198,560 and $2,183,089 respectively as at March 31, 2005).

The obligations for the upcoming years include the following:

Maturing year	**2006**	**2005**
2007	1,300,000	1,300,000
2008	1,300,000	1,300,000
2009	1,300,000	1,300,000
2010	1,300,000	1,300,000
2011 and thereafter	22,100,000	23,400,000
Total future minimum lease payments	27,300,000	28,600,000
Less: imputed interest (5.63%)	11,519,585	12,430,007
Balance of obligations under leased tangible capital assets	15,780,415	16,169,993

10. Deferred Revenue

a) Pension benefits: The department's employees participate in the Public Service Pension Plan, which is sponsored and administered by the Government of Canada. Pension benefits accrue up to a maximum period of 35 years at a rate of 2 percent per year of pensionable service, times the average of the best five consecutive years of earnings. The benefits are integrated with Canada/Québec Pension Plans benefits and they are indexed to inflation

Both the employees and the department contribute to the cost of the Plan. The 2005-06 expense amounts to $61,912,269 ($55,801,332 in 2004-05) which represents approximately 2.6 time the contributions by employees.

The department's responsibility with regard to the Plan is limited to its contributions. Actuarial surpluses or deficiencies are recognized in the financial statements of the Government of Canada, as the Plan's sponsor.

(b) Severance benefits: The department provides severance benefits to its employees based on eligibility, years of service and final salary. These severance benefits are not pre-funded. Benefits will be paid from future appropriations. Information about the severance benefits, measured as at March 31, is as follows:

	2006	2005
Accrued benefit obligation, beginning of year	84,905,062	82,148,527
Expense for the year	24,441,850	9,498,117
Benefits paid during the year	(8,624,033)	(6,741,582)
Accrued benefit obligation, end of year	**100,722,879**	**84,905,062**

11. Contingent liabilities

(a) Contaminated sites

Liabilities are accrued to record the estimated costs related to the management and remediation of contaminated sites where the department is obligated or likely to be obligated to incur such costs. The department has identified 40 sites (35 in 2005) where such action is possible and for which a liability of $83,837,800 ($92,752,681 in 2005) has been recorded. The department has estimated additional clean-up costs of $134,696,989 ($129,506,000 in 2005) that are not accrued, as these are not considered likely to be incurred at this time. The department's ongoing efforts to assess contaminated sites may result in additional environmental liabilities related to newly identified sites, or changes in the assessments or intended use of existing sites. These liabilities will be accrued by the department in the year in which they become known.

(b) Claims and litigation

Claims have been made against the department in the normal course of operations. Legal proceeding for claims totalling approximately 2.2 million (2.2 million in 2005) were still pending at March 31, 2006. Some of these potential liabilities may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future events is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded in the financial statements.

12. Contractual Obligations

The nature of the department's activities can result in some large multi-year contracts and obligations whereby the department will be obligated to make future payments when the services/goods are received. Significant contractual obligations that can be reasonably estimated are summarized as follows:

	2007	2008	2009	2010	2011	Thereafter	Total
Operating leases	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	233,000,000	272,500,000
Other	8,000,000	8,000,000	7,000,000	0	0	0	23,000,000
Total	15,900,000	15,900,000	14,900,000	7,900,000	7,900,000	233,000,000	295,500,000

13. Related Party Transactions

(a) Services provided without charge:

During the year the department received without charge from other departments, accommodation, the employer's contribution to the health and dental insurance plans, legal fees and Worker's compensation cost. These services without charge have been recognized in the department's Statement of Operations as follows:

	2006	2005
Worker's compensation cost	1,536,948	1,280,401
Legal services	1,640,289	2,881,379
Employer's contribution to the health and dental insurance plans	36,080,958	33,449,154
Accommodation	36,231,374	34,601,830
Total	75,489,569	72,212,764

The Government has structured some of its administrative activities for efficiency and cost-effectiveness purposes so that one department performs these on behalf of all without charge. The costs of these services, which include payroll and cheque issuance services provided by Public Works and Government Services Canada are not included as an expense in the department's Statement of Operations.

(b) Payables and receivables outstanding at year-end with related parties:

	2006	2005
Accounts receivable from other government departments and agencies	505,102	1,648,109
Accounts payable to other government departments and agencies	(14,865,070)	(6,967,514)

Table 13: Response to Parliamentary Committees and Audits and Evaluations for 2005–2006

Responses to the Auditor General including to the Commissioner of the Environment and Sustainable Development

April 2005 – Auditor General Report – Chapter 5 – Rating Selected Departmental Performance Reports

Summary: This audit assessed the quality of the performance reports of three departments—Environment Canada, Fisheries and Oceans Canada, and Natural Resources Canada—to determine the extent of progress made in improving the quality of their reports over the past decade and over the last two years. Environment Canada's *Departmental Performance Report* has been rated against a number of criteria in this report from fair to very good. Overall, the report is critical of the progress made in improving performance reporting to Parliament.

While there are no recommendations made to departments in this audit, the Treasury Board of Canada Secretariat (TBS) provided a government response to the effect that it will continue its efforts to improve performance reporting across departments. Environment Canada agrees that further improvements can be made in departmental performance reporting.

For more information on Chapter 5, including the government's response, visit: http://www.oag-bvg.gc.ca/domino/reports.nsf/html/20050405ce.html.

November 2005 – Auditor General Report – Chapter 4 – Managing Horizontal Initiatives

Summary: This audit looked at federal policies, government-wide guidance and the role of central agencies relative to horizontal initiatives. The audit specifically included the Canadian Biotechnology Strategy (CBS), the National Homelessness Initiative and the Vancouver Agreement. The audit is critical of the government's performance on issues repeatedly raised by both the Auditor General and the Commissioner of the Environment and Sustainable Development: the need to strengthen leadership and horizontality; the need to improve the definition of initiatives; and the need to improve planning, performance measurement and reporting to Parliament. The audit is highly critical of the governance and coordination of the CBS, particularly the lack of engagement by ministers, deputy ministers, the Privy Council Office (PCO) and the TBS in providing guidance and leadership. The report also points to a lack of adequate mechanisms for dealing with external advice such as from the Canadian Biotechnology Advisory Committee.

The audit has no direct impact on Environment Canada. All recommendations were made to PCO and TBS. The Treasury Board of Canada Secretariat and the Privy Council Office prepared the government response to the recommendations in consultation with the departments involved, including Environment Canada.

For more information on Chapter 4 including the government's overall response, visit: http://www.oag-bvg.gc.ca/domino/reports.nsf/html/20051104ce.html.

2005 – Report of the Commissioner of the Environment and Sustainable Development - Chapter 3: Canadian Biodiversity Strategy – A Follow-up Audit

Summary: This audit determined the extent to which the federal government has made progress in implementing selected aspects of the Canadian Biodiversity Strategy. The audit found that problems identified in two previous audits of the strategy still persist. The government still lacks a coherent plan for implementing the strategy, has not improved Canada's capacity to understand its biodiversity, and is unable to report on the state of Canada's biodiversity.

Recommendation: 3.53 Environment Canada should lead an assessment of the progress on the five goals of the Canadian Biodiversity Strategy. This assessment should conclude what has been achieved, what remains to be achieved, what are the lessons learned, and how further progress will be made.

Any plan for achieving further progress on the strategy should include the following:

- Clearly defined outcomes
- Indicators for measuring progress toward the outcomes
- Time frames
- Clear roles and responsibilities
- Resource requirements
- Mechanisms for assessing and reporting on results and making required adjustments in managing toward the outcomes

Departments could use their reports on plans and priorities, performance reports, and sustainable development strategies to set out and report on their contributions to advancing implementation of the Canadian Biodiversity Strategy.

Departmental Response: Environment Canada accepts the recommendation.

For more information on Chapter 3, including Environment Canada's detailed response, visit: *http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20050903ce.html*

2005 – Report of the Commissioner of the Environment and Sustainable Development – Chapter 4: Safety of Drinking Water – Federal Responsibilities

Summary: This audit examined key federal contributions towards safe drinking water in Canada. It found that the process for developing new guidelines is consistently slow; the federal government cannot provide assurance that drinking water provided to employees at all its sites and facilities is safe; the federal government cannot provide assurance that tap water on aircraft is safe and, while inspection protocols for cruise ships and trains are comprehensive, the communication of inspection results to passengers is not timely or comprehensive; and the government has not released the Federal Water Framework publicly and lacks an implementation plan.

Recommendation: 4.61 Environment Canada, in collaboration with other federal departments and agencies, should establish clear next steps on what the Federal Water Framework will be used for, particularly in relation to its five ultimate outcomes.

For more information on Chapter 4, including Environment Canada's detailed response, visit: *http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20050904ce.html*.

2005 – Report of the Commissioner of the Environment and Sustainable Development – Chapter 6: Green Procurement

Summary: The audit focused on the implementation of Sustainable Development Strategy (SDS) commitments related to green procurement. It found a lack of a federal green procurement policy or strategy; a lack of greening in key existing federal procurement policies; and no credible basis for assessing progress on green procurement government-wide. It also found that Public Works and Government Services Canada (PWGSC) had not made significant progress in greening the procurement services it offers to other federal departments. Environment Canada is implicated in five recommendations directed to "PWGSC and TBS in cooperation with other responsible departments."

***Recommendations*:**

6.10 Public Works and Government Services Canada and the Treasury Board of Canada Secretariat (TBS), in cooperation with other responsible departments and agencies, should take all necessary steps including setting milestones, allocating adequate resources, and assigning staff with appropriate expertise to ensure that the green procurement policy is completed, approved, and implemented by 2006. This is the time frame promised in the 2004 *Speech from the Throne*.

6.11 The money for procurement comes from the annual budgets of program managers. If they believe that "green" is more expensive, they and the procurement staff who assist them might be reluctant to consider green products and services. It is important that the policy and strategy provide clear direction on how to overcome the cost barriers, both perceived and real.

6.18 Through the green procurement policy and strategy, Public Works and Government Services Canada, in cooperation with other responsible departments and agencies, should promote the inclusion of green procurement expectations in the performance evaluation of managers with significant procurement responsibilities, and should require departments and agencies to report on implementation.
6.24 Public Works and Government Services Canada, in cooperation with other responsible departments, should ensure that the green procurement strategy sets out the role of the sustainable development strategies in green procurement. It should also ensure that guidance on green procurement is developed in time for the 2007 strategies, including a core set of practical and progressive green procurement objectives and targets that departments and agencies would be expected to incorporate.
6.27 Public Works and Government Services Canada and the Treasury Board of Canada Secretariat, in cooperation with other responsible departments, should

- ensure that the green procurement policy establishes clear accountability for reporting annually on progress; and
- develop a plan to improve green procurement reporting through the sustainable development strategies.

6.35 Public Works and Government Services Canada, in cooperation with other responsible departments, should ensure that

- the green procurement strategy establishes a consistent, co-ordinated approach to green procurement training and to the development and delivery of tools;
- green procurement is a required competency, and is a mandatory part of any required training program, for procurement personnel.

Departmental response: Environment Canada agrees with the recommendations.
For more information on Chapter 6, including Public Works and Government Services Canada's the overall response on behalf of the responsible departments and agencies, visit: http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20050906ce.html.

2005 – Report of the Commissioner of the Environment and Sustainable Development – Chapter 7: Sustainable Development Strategies
Summary: This audit assessed the effectiveness of central direction on priorities for SDSs and accountability for follow-through and found the Deputy Ministers' Environment and Sustainable Development DM Coordinating Committee on SDSs could not agree on priorities for the 2004 round of strategies. The audit also found that strategies have improved somewhat since 2001, but there was room for further improvement in identifying goals and performance measurement. As well, the government still does not have an action plan for its 2002 World Summit commitments.
Recommendation: 7.30 Environment Canada should clearly articulate the role of the Competitiveness and Environmental Sustainability Framework, and how it will involve departmental sustainable development strategies.
Departmental response: Environment Canada agrees with the recommendation.
For more information on Chapter 7, including Environment Canada's detailed response, visit: http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20050907ce.html.

2005 – Report of the Commissioner of the Environment and Sustainable Development – Chapter 8: Environmental Petitions
Summary: This chapter audited selected responses to environmental petitions including petitions 60A and 60B on insurance requirements under the *Nuclear Liability Act,* petitions 37 and 46 on hog farming and petition 61 on the *Species at Risk Act* relating to the species listing process and critical habitat protection. The audit found that the 2003 response to the petition on the *Nuclear Liability Act* committed to a review of the 30-year-old Act but that it had not commenced by the time the audit was conducted. The Commissioner of the Environment and Sustainable Development recommended that Natural Resources Canada submit policy proposals to commence the review to the Minister of Natural Resources by the end of 2005.

With respect to Environment Canada, the audit found that the Department had fulfilled its commitments with respect to petition 46 and had fulfilled its commitments with respect to petition 37 in the Ontario region. The audit of these two petitions also looked at compliance and enforcement activities across the country with respect to hog farming in particular, and more generally, with respect to intensive farming practices.

Recommendation: 8.58 In order to ensure that its compliance promotion and enforcement efforts related to hog farming are effective, Environment Canada should:

- identify the regulated community,
- gather data on a national basis to direct or prioritize resources,
- monitor the impacts of its efforts, and
- keep comprehensive records on budgets and expenditures.

Departmental response: Environment Canada agrees with the recommendation.

For more information on Chapter 8, including Environment Canada's detailed response, visit: http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c20050908ce.html.

External Audits or Evaluations
None

Internal Audits or Evaluations
Internal Audits
Accounts Payable – National Capital Region
Contribution Agreement with the Canadian Institute of Child Health
Capital asset valuation – Phase III
Sustainable Development Technology Canada
Environmental Technology Centre Construction
Casual and student hiring practices
Grants and contributions classes – Follow-up
Financial coding reliability
Canadian Meteorological Centre Renovation Project (Dorval)
Evaluations
Canadian Environmental Protection Act, 1999 (CEPA 1999)
Climate Change Action Fund
Wildlife Habitat Canada Conservation Stamp program

For further information on the above-mentioned internal audits and evaluations, visit:
http://www.ec.gc.ca/ae-ve/default.asp?lang=En&n=7B7953CB-1

Table 14: Sustainable Development Strategy 2004–2006

Environment Canada's Sustainable Development Strategy (SDS) 2004–2006 highlights for Canadians key commitments that the Department has been undertaking over the three-year period of the SDS to further our sustainable development objectives.

Sustainable Development Strategy 2004–2006 focuses on four themes that enhance Environment Canada's capacity for integrated decision making and that strengthen the sustainability of departmental operations:

- Information for Decision Making
- Innovative Instruments
- Partnerships for Sustainable Development
- Managing for Sustainable Development

The second report on progress for SDS 2004–2006 has been compiled and outlines results achieved during the period from April 1, 2005 to March 31, 2006. This information is intended to provide parliamentarians and Canadians with an accounting of results achieved and progress made during the second year of SDS implementation.

At the same time, performance reporting on SDS 2004–2006 will inform the renewal of the Department's SDS which is due to be tabled in Parliament in December 2006. The Department's fourth SDS, for the time period 2007–2009, will build on results achieved under the current Strategy, strengthen results-based performance measurement and reporting, and support the coordinated federal approach to the fourth round of sustainable development strategies. This is a government-wide initiative led by Environment Canada in the spring of 2006 that resulted in a set of federal sustainable development goals and a common reporting framework for departmental sustainable development strategies.

Sustainable Development Strategy 2004–2006 and performance information for the first two reporting periods may be viewed at: http://www.ec.gc.ca/sd-dd_consult/SDS2004/index_e.cfm.

Table 15: Procurement and Contracting

Department	Environment Canada
Points to Address	**Organization's Input**
Overview of how the department manages its contracting function	Environment Canada's Assets, Contracting and Environmental Management Directorate is responsible for ensuring an integrated approach to the management of procurement and contracting, consistent with departmental and central agency objectives.
Progress and new initiatives enabling effective and efficient procurement practices	Environment Canada created a Procurement Review Board (PRB) in October 2004. The PRB is the principal management review and approval forum within Environment Canada for the procurement of goods, services and construction. The PRB is primarily concerned with how the planned procurement is proposed to be actioned. All submissions to the PRB must be pre-approved by the accountable service/region for content, program priority, funds availability, and alignment to departmental plans. The PRB is accountable to the Department's Executive Management Council. The PRB is tasked with the review of procurement proposals and plans as follows: - contracts greater than $25,000 - specific Service Agreement greater than $50,000 - sole source contracts with a value of $10,000 and over, including those which may require Advance Contract Award Notices - amendments to any existing sole source contract which would bring the value over $25,000 - contract modifications representing an increase of 50 percent or more in relation to the original amount - others at the discretion of the PRB chair. Environment Canada identifies its contracts over $10,000 on the following website: http://www.ec.gc.ca/contracts-contrats/default.asp.

Table 16: Service Improvement

The Department continues to actively seek client views on departmental services. For example, in 2005-2006 the following studies were undertaken:

- Development of a Canada-wide health-risk based air quality index (Environics Research Group). This study gauges Canadians' awareness and perceptions of as well as behavioural responses to air quality, air pollution and the air quality index (AQI). The study consists of quantitative and qualitative research conducted in three phases between July 2004 and March 2005: post-air quality event surveys conducted with residents of the Greater Toronto Area, Montreal Island and Lower Fraser Valley; autumn 2004 national survey; and qualitative assessment of new AQI communications concepts. The study was done in collaboration with Health Canada.

- North of 60 and Remote Community Monitor 2005 (Environics Research Group). Ten questions were placed on an omnibus survey of a representative sample of adult Canadians living above the sixtieth parallel. The questions concerned types of weather information sought, use of weather information and weather warnings, sources of weather warnings, satisfaction with weather warnings, preparation for extreme weather events and understanding of the wind chill value.

Service improvement in weather and environmental prediction (which include the areas identified in EC's service improvement plan: weather warnings and precipitation reporting) continued in 2005-2006.

In 2005–2006, investments were made to Environment Canada's weather information website to increase its dependability and capacity. Demand for information on this site, continued to grow in 2005–2006 with an average of over 540 000 visits per day, about 100 000 more visits per day than received in 2004–2005. This site receives 40 percent of total visits of all federal government websites.

One of this site components, climate archive online at http://www.climate.weatheroffice.ec.gc.ca/, provides access to a wide variety of historical climate data and information. Interest in the site continues to grow as demonstrated by an annual increase of about 25 percent in user sessions. The site serves a wide variety of research, operational and educational purposes. Public traffic on the site increases during periods of prolonged significant weather, such as cold, snowy, windy winter weather. In March 2006, Reader's Digest named this site as one of the "best of the web" (http://www.readersdigest.ca/mag/2006/03/tool_kit.php?printer_version=1) for its usefulness at providing historical weather data

By early 2006, the first operational system for the management of data from the Road Weather Information Network (RWIN) was delivered. This system serves as the central repository for observational data collected by environmental sensors installed within and beside roads throughout the provinces and territories of Canada and ensures that the data and associated metadata are quality controlled and archived securely.

The data management facility delivers data in real time to provincial transportation agencies for use in forecasting pavement temperatures and conditions.

The measurement and verification of the Meteorological Service of Canada's (MSC) performance have grown in importance year after year as a necessary step of the goal to achieve more accurate forecasts and warnings. The MSC issues over 1.5 million public weather forecasts per year, the Department's most visible product. Additionally, there were approximately 10 300 severe weather warnings and 444 000 aviation forecasts.

The expectations of Canadians for improved and additional MSC products and services continue to increase. Using information and data from public opinion research, the MSC has been able to measure its forecast accuracy based on what is important to Canadians. This has been of particular use and benefit for training new meteorologists. Scoring and weighting algorithms are used based on what Canadians have said is important to them. Canadians have many avenues to respond to the MSC and provide feedback on performance. Those statistics and details are integrated with our public opinion research for analysis.

While work continues on capturing data on severe storms, a good base of information is being developed on which to run trend analyses. Performance verification for the aviation industry is handled using complex formulae as stipulated in collaboration with NAV CANADA. In the case of public weather forecasts, nine weather elements are being verified for forecast accuracy.

Table 17: Travel Policies

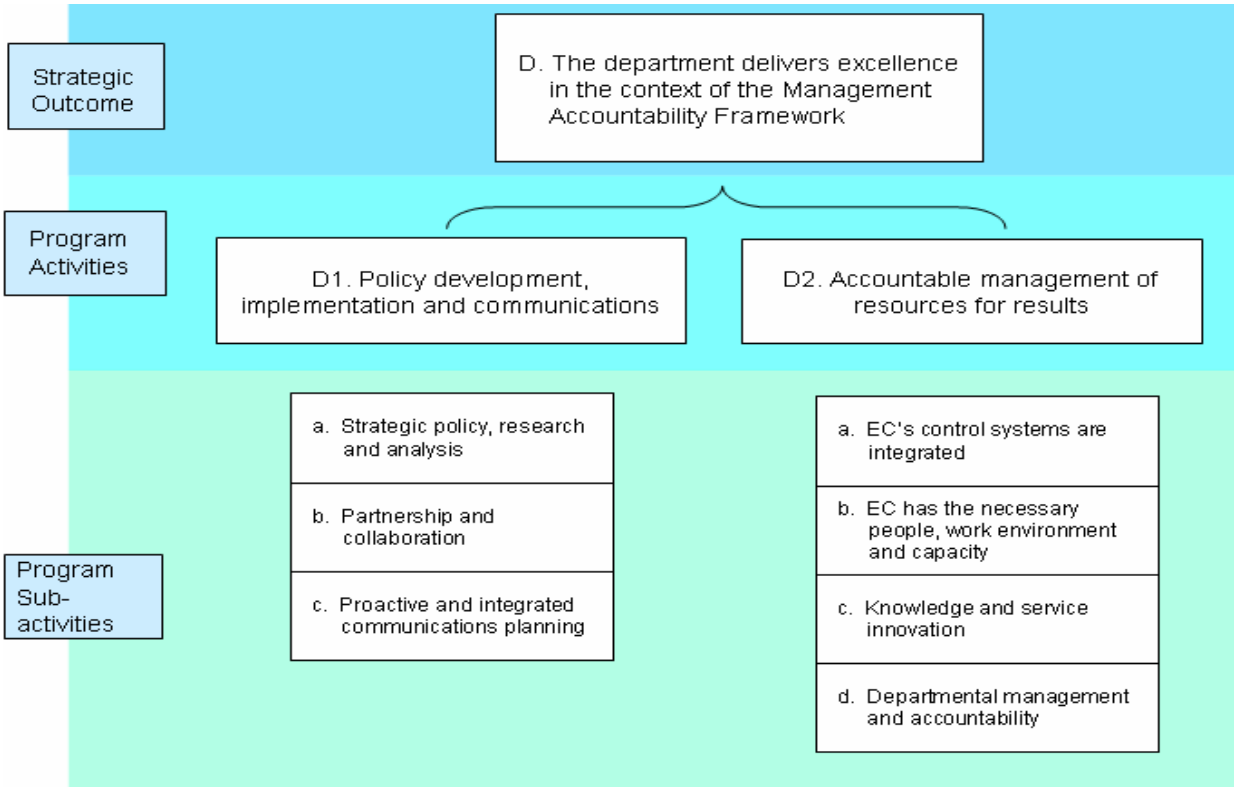
Environment Canada follows the Treasury Board of Canada Secretariat *Special Travel Authorities*.

Environment Canada follows the Treasury Board of Canada Secretariat *Travel Directive*, Rates and Allowances.

SECTION IV

OTHER ITEMS OF INTEREST

Management, Administration and Policy



What is the issue?

Environment Canada's operating context is complex. Environmental issues are global in nature, jurisdictions are shared and the challenge of integrating environmental considerations into economic and social decision making is significant. As such, it is important to have the appropriate people, processes, systems and relationships in place internally so that we can focus on embedding environmental considerations into decision making and addressing the environmental priorities of Canadians.

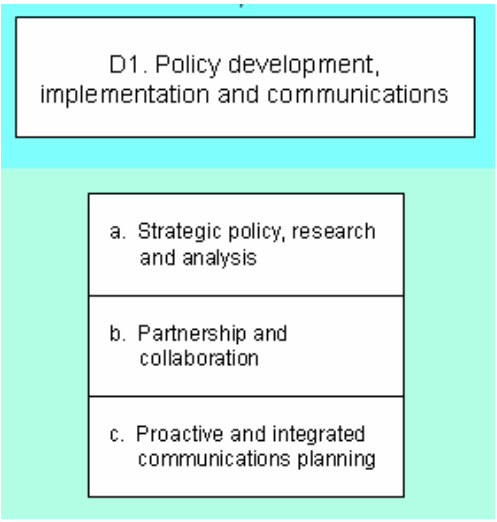
Transforming the way Environment Canada operates and manages and developing a clear policy agenda will help us focus our work, set priorities and build on our previous successes so that we can implement a comprehensive "one-department" approach to achieving our goals.

Transforming the way Environment Canada works will allow us to provide more informed and coherent advice, maximize the results we achieve for the investment made and become a more agile organization that knows its capacity, continues to evolve and can deploy its resources where needed to effectively address immediate and ongoing priorities.

What are we doing about it?

Corporate programs, services, initiatives and activities are being rethought and realigned as part of Environment Canada's focus on departmental transformation and our ongoing work to develop integrated policy and horizontal management agendas.

Policy development, implementation and communications



What is the issue?

Environmental issues are complex and global in nature. They also have widespread economic, social and local impacts.

Air pollution, acid rain and water quality do not respect jurisdictional boundaries and they all have serious impacts on human and ecosystem health. Reducing greenhouse gas emissions is a worldwide challenge and its solutions will likely have a major impact on our economy —in particular on our daily transportation and energy decisions.

The development of a coherent policy suite, appropriate partnerships, and effective communications tools help to embed environmental considerations into everyone's day-to-day decision making.

What are we doing about it?

Although environmental issues affect many departments, Environment Canada is the lead for the coordination of the Government of Canada's policies and programs with respect to the preservation and enhancement of the quality of the natural environment. This role places the Department in a unique position to influence the agenda of other departments. It also means that most of the Department's initiatives need the support of other departments to be successful because most of the levers for action rest with others. Recognizing this symbiotic relationship, the Department has taken a leadership role in the development of a government-wide environment and sustainable development agenda.

In this leadership role, the Department is developing innovative environmental policy tools that are tailored to the issues at hand. These tools include a mix of regulations, economic instruments and partnerships.

Are we succeeding?

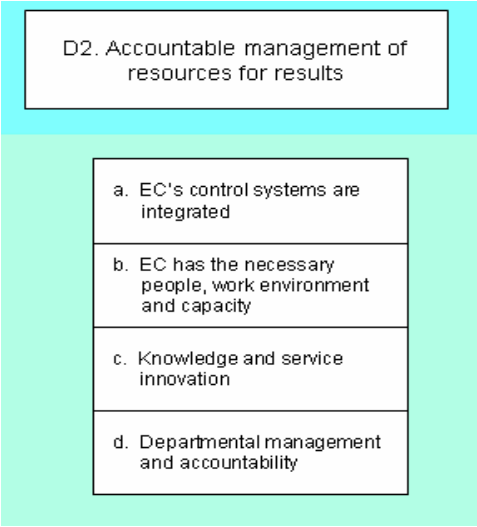
Environment Canada continues to play a leadership role on critical environmental issues that cut across numerous federal departments. For example, the Department is leading a multi-departmental effort to develop a comprehensive environmental agenda focused on clean air that will improve the health of Canadians. It has established four Sector Sustainability Tables, each one co-chaired by a different deputy minister. Environment Canada also led a government-wide initiative to improve coordination and consistency of departmental sustainable development strategies based on a set of federal sustainable development goals and a common reporting framework. The Department is also the chair of a senior level committee that helps to ensure that the Government of Canada's environmental policy is comprehensive and reflects the views of all departments.

Major programs and initiatives

Program Area: Strategic policy, research and analysis; Partnership and collaboration	
Activities: – Developing strategic approaches and tools and providing advice on formal and informal arrangements/negotiations with Aboriginal governments and organizations, provincial and territorial governments, and members of the international community (e.g. other governments, NGOs, international organizations). – Building internal and external capacity with Aboriginal governments and organizations and coordinating partnerships and consultations with industry, NGOs and other stakeholders, both domestic and international, to advance environmental priorities. – Coordinating partnerships with industry and NGOs to advance environmental priorities; coordinating federal/provincial/territorial activities with the regions, and central agencies.	
Expected Results	**Progress**
Strategic policy, research and analytical capacity and horizontal initiatives are developed to assure high quality policy options and advice.	Environment Canada Initiated work on a multi-departmental environmental agenda, focused on clean air, to protect the health of Canadians The Department continued to ensure that Environment Canada's policies reflect the linkages between the environment, the health of Canadians and the long-term competitiveness of Canada's economy. The Department established or initiated four Sector Sustainability Tables (SSTs)—Mining, Energy, Forestry, Cross-cutting Issues—for engaging key stakeholders from industry, civil society, Aboriginal peoples and provincial/territorial governments to provide advice on improving performance in a way that strengthens long-term competitiveness. The Sector Sustainability Table Secretariat was established. Comprehensive environmental scans for each of the SSTs, identifying each sector's impacts on the environment, were developed.
Canadian institutions and individuals make decisions that support sustainable development.[SDS1.1]	In advance of the preparation of the fourth round of departmental sustainable development strategies, Environment Canada led a government-wide initiative to improve coordination and consistency of these strategies based on a set of federal sustainable development goals and common reporting framework.
Partnership and collaboration facilitate the implementation of strategic directions.	Internal capacity was developed through the new results structure to improve partnerships, consultations and stakeholder relations throughout the Department. A contribution agreement was negotiated with Nature Canada to examine the possibility of creating the Canadian Nature Network. Canada, as led by Environment Canada, participated in the 9th special session of the Governing Council of the United Nations Environment Programme, where ministers focused on forging stronger partnerships in the areas of energy demand and future energy systems, renewable energy and energy efficiency. Ministers/heads of delegation also endorsed the newly completed Strategic Approach to International Chemicals Management. Environment Canada participated in the 14th session of the Commission on Sustainable Development in which countries shared experiences in tackling the challenges of climate change, sustainable energy and industrial development.

	Environment Canada played an active role in the process leading up to the G8 Leaders' Summit, and Environment Canada supported the Prime Minister in his participation in the G8 Leaders' Summit. Environment Canada actively participated in the development of a strategic plan for the Organisation for Economic Co-operation and Development (OECD) Environment Programme. The plan sets priorities and strategic direction for collaborative work on environmental policy at the OECD for the next five to ten years. As lead federal department, Environment Canada continues to support the work of the North American Commission for Environmental Cooperation and to implement the North American Agreement on Environmental Cooperation. This agreement was established in 1994 to foster conservation, protection and enhancement of the North American environment by facilitating cooperation and public participation.

Program Area: Proactive and integrated communications planning	
Activities: – Developing strategic approaches to departmental communications and ensuring that departmental priorities and policy directions are presented in a consistent, coherent and coordinated manner. – Providing communications advice, services and support to the Minister and senior departmental officials, including service and regional communications teams (including media analysis and relations, public opinion research, public environment analysis and issues management).	
Expected Results	**Progress**
Proactive and integrated communications planning provides Canadians with information that facilitates and promotes sound environmental decision making.	Work continues on developing the Department's presence on the Web. The "One Department – One Website" approach to Internet and intranet development will be fully operational in 2007. This website will provide greater coherence and consistency in how Environment Canada provides information to Canadians and will improve the quality of the products it delivers to the Canadian public. An Environment Canada corporate common look and feel is being developed for all communications activities, products and services. Public opinion research is updated on a regular basis to obtain information on how Canadians view the information and services Environment Canada provides. This research will need to be conducted regularly over the next few years to determine data trends. Strategic and operational communications plans have been developed in support of all key Government of Canada environmental priorities, policies and programs. Plain-language products that explain these policies and programs to Canadians have also been developed.
Canadian institutions and individuals make decisions that support sustainable development.[SDS1.1]	A large part of Environment Canada's scientific information is communicated through the publication of reports that are generated within the Department or from outside organizations using Environment Canada data. An Environment Canada reporting strategy is being put in place to promote more timely delivery of information to Canadians, to promote the corporate Environment Canada brand and to encourage well-informed decisions. An interdepartmental communications working group has been put in place to align interdepartmental consultation and collaboration on environmental issues and promote a consistent approach and messaging throughout the federal family.



Accountable management of resources for results

What is the issue?

Achieving results for Canadians is not just about the results or how much they cost but also about how those results are achieved through the organization and its people.

The Government of Canada is committed to strengthening public sector management especially in the areas of governance, accountability, transparency, people and financial management.

Environment Canada is transforming how it does its business so that it can meet the management expectations of parliamentarians and Canadians and deliver on its commitments in a meaningful and cost-effective way.

What are we doing about it?

Environment Canada is implementing a new governance structure that promotes decision making informed by perspectives across the organization. Under the Deputy Minister and the departmental Executive Management Council, Boards of Assistant Deputy Ministers and Regional Directors General are responsible for providing the leadership and direction required for Environment Canada to deliver on its mandate. The Strategic Integration and Departmental Management Services Boards contribute to delivering on Environment Canada's priorities in the areas of management, administration and policy.

Government-wide management initiatives are also helping Environment Canada transform how it does its business. Work related to populating the government-wide Expenditure Management Information System (EMIS) and departmental Program Activity Architecture and Management, Resources and Results Structures (MRRS) is being reinforced by the development of a comprehensive set of plans and the collection of detailed performance information to support internal management, priority-setting and allocation and reallocation decisions.

The introduction of human resource modernization at the public service level, coupled with the Department's reorganization and transition to a new governance model, created a special focus on people management. To this end, the Department developed a comprehensive Strategy for People, which sets the vision and direction for people management, and outlines its plans to modernize and institutionalize people management strategies in a nationally consistent manner, integrate the management of people and activities in the delivery of results, and facilitate the integration and alignment of human resources and business planning processes.

We are also using the Management Accountability Framework (MAF) to help us focus on the areas where we need to strengthen our management and accountability tools, systems, policies or practices.

Environment Canada' audit and evaluation functions are being strengthened. The Department has increased the capacity of the Audit and Evaluation Branch, in recognition of the critical role it plays in terms of improving departmental policies and program design, as well as decision making, related management practices, control systems and information.

The major initiatives below reflect how Environment Canada is organizing its work to provide accountable management of resources for results.

Are we succeeding?

The Department has successfully implemented a new management model that provides for management by and for results. The main elements of this model are:

1. Adoption of an integrated framework:

- Environment Canada has developed an overarching policy framework on competitiveness and environmental sustainability that encompasses a whole-of-government approach. Within the context of the policy framework, the Department has assessed the congruence of its existing Program Activity Architecture (PAA) at all levels, from strategic outcomes to sub-sub-activities and has made changes where necessary to ensure alignment.
- Environment Canada has identified the full scope, Department-wide, of resources and capacity to deliver the PAA. These are being reviewed by the senior management structures; the review includes consideration of shifts in priorities and their related reallocations, as well as alignment of investments to outcomes.
- The Department has also identified the range and scope of services that enable the achievement of results, and has consolidated these services to provide for better accountability and control and more consistent and equitable provision of support across the results structure.
- Assessment of progress will be significantly enhanced in the context of a Department-wide results management performance measurement framework which is under development. This framework will provide information on the state of the environment and changes and trends in indicators of environmental quality. The assessment of progress in this context will also support decision making with respect to relative work priorities and the most effective allocation of resources.

2. Establishment of management structures and processes that empower the Department to manage its resources in an integrated way:

- Environment Canada has established the Executive Management Council (EMC) as the principle decision-making body for the Department and the Policy and Program Brief as a forum to develop coordinated policy and consider program delivery issues from a Department-wide perspective. These structures are chaired by the Deputy Ministers and involve the senior managers from across the Department.
- Environment Canada has established Priority Management Boards that provide direction and oversight for the delivery of departmental work arrayed against policy framework outcomes, departmental priorities, and horizontal capacities.

The Boards are composed of Assistant Deputy Ministers (ADMs) and Regional Directors General (RDGs), selected as appropriate to the issues being addressed, and are accountable to EMC, and Policy and Program Brief. Through these boards the Department has been able to build and maintain an integrated approach to carrying out work and delivering results by bringing together the appropriate mix of senior-level capacity and expertise, within a "one-department" context

- The Department has also established integrated project management groupings, accountable to the boards, which will be responsible for developing and managing "projects" that align capacity and resources to deliver specific outputs. Project outputs and deliverables are directly related to departmental priorities and policy outcomes, coordination of horizontal capacities, or delivery of supporting functions.

3. Management of the organizational structure:

- We have realigned the organizational structure to ensure that the skills and expertise in the Department are brought together in a way that builds communities of expertise and competency, ensures more effective allocation of current available capacity, and encourages more effective long-term planning to address future needs.

The "one-department" approach allows for a collective voice for better interaction and integration with other departments and with other sectors and jurisdictions, particularly provinces and territories. Enhancing transparency in the allocation of resources will maximize cooperation and synergy and the potential for more efficient use of resources.

In the process of designing this new approach, and in its ongoing implementation, we have already seen change for the better: we have a Department that sees itself as being integrated nationally, with a clear understanding of our policy vision—we already deal with partners and clients with this new understanding; we are examining our work collectively and critically to make sure that what we are doing and what we will do is aligned with our policy vision and results structure; we have brought people together from across the Department in more flexible work structures that will allow them to contribute their skills and expertise to their maximum potential; and we have established a culture of collaboration that is leading to better decisions on work and eventually to better resource allocation.

The creation of the Chief Information Officer Branch (CIOB) in November 2005 as a result of the Department's transition towards a results-oriented organization brought together more than 600 Information Management / Information Technology (IM/IT) professionals from across the Department into one single entity. This consolidation of IM/IT capacities has created a critical mass of resources and will offer significant potential for efficiencies and savings through common standards, technologies and processes. A major effort, so far, has been to better align our people and processes to improve overall service to the Department.

The creation of the Human Resources Branch in November 2005 under the leadership of an Assistant Deputy Minister, as well as the allocation of additional resources and the rationalization of human resources staff across regions and the organization, positioned the Department to deliver on its people management objectives.

Major programs and initiatives

Program Area: Environment Canada's control systems are integrated	
Activities: Management of integrated administration, finance and informatics support systems including information management, technology and tools.	
Indicator: Assessment of Environment Canada against MAF stewardship indicators.	
Expected Result	Progress
Environment Canada's IM/IT systems and activities are integrated, effective and consistently improved and adapted to meet client needs.	The creation of Chief Information Officer Branch (CIOB) in November 2005 strengthened the management control and oversight of IM/IT activities in the Department. Work had been initiated to harmonize operations, and to move to common standards, technologies and processes to provide consistent service to staff across the Department. Efficiencies have been and will be found as efforts bear fruit (e.g. a request-for-volume-discount (RVD) process to acquire desktops/laptops produced significant savings for the Department). IT Infrastructure has been upgraded to better meet program requirements (e.g. supercomputer and related infrastructure used in support of environmental prediction and scientific research). Network infrastructure has been upgraded to better meet departmental requirements. This includes enhanced connections to the Canadian CANARIE research network Innovations have been made in service delivery to bring product/services directly to clients' workplaces (e.g. videoconferencing, availability of e-journals). The departmental file plan was deployed to help safeguard critical information assets. Quality IM/IT products and services were provided to departmental users.

Program Area: Environment Canada has the necessary people, work environment and capacity	
Activities: Human resource services, strategic tools and systems are maintained to ensure a motivated, skilled and representative workforce.	
Indicators: Assessment of Environment Canada against MAF people indicators.	
Expected Result	**Progress**
Environment Canada has the necessary people, work environment, capacity and leadership to deliver results.	The *Public Service Modernization Act* has been implemented; this includes the introduction of collective staffing, the establishment of an Office of Conflict Management and strategies for improving labour-management relations. Environment Canada increased resources and strengthened its policy framework to support the health and safety of employees. The Department developed an inclusiveness strategy that focuses on creating and sustaining a work environment where employees are actively engaged in, respected for, and proud of their contributions to the Department's mandate and mission. A Management Development Program was created to strengthen the Department's current and future leadership cadre.

	Environment Canada created various management structures, such as the Leadership Council and National Transition Committee, to support and guide change-management strategies and help with the transformation process.

Program Area: Knowledge and service innovation	
Activities: Internal and external services for knowledge management, knowledge sharing and service innovation.	
Indicators: Assessment of Environment Canada against MAF indicators related to learning innovation and change management.	
Expected Result	**Progress**
Knowledge is shared effectively and citizens, clients, and stakeholders are well served within Environment Canada, domestically and internationally.	The Department's performance against the Management Accountability Framework (MAF) indicators for learning, innovation and change management was "unrated" for 2005–2006. It has been noted that there is opportunity for improvement related to external service delivery strategy and reporting on user fees.

Program Area: Departmental management and accountability	
Activities: Planning and support activities to enhance management capacity (includes financial and non-financial planning and reporting functions, audit and evaluation, legal services, the development of leadership in environmental management and the assembling of an internal management capacity).	
Indicator: Assessment of Environment Canada against MAF indicators related to governance and strategic direction, stewardship and accountability.	
Expected Result	**Progress**
Departmental management is proactive, transparent, cost effective and accountable, and continues to improve.	The most recent assessment against the Management Accountability Framework (MAF) concluded that the Department had generally improved its rating. The Department will continue to address areas where further improvement is required.

For more information

Audit and Evaluation Branch	http://www.ec.gc.ca/ae-ve/default.asp?lang=En&n=7B7953CB-1

Key Electronic Resources

Name	URL
Environment Canada Home Page (The Green Lane)	http://www.ec.gc.ca
Atlantic Canada Severe Summer Weather Awareness	http://www.atl.ec.gc.ca/weather/severe/summer_e.html
Atmospheric and Climate Science Directorate	http://www.msc-smc.ec.gc.ca/acsd/index_e.html
Canadian Biodiversity Strategy	http://www.cbin.ec.gc.ca/issues/strategy.cfm?lang=e
Canadian Community Monitoring Network	http://www.ccmn.ca/english
CEPA 1999 Environmental Registry	http://www.ec.gc.ca/CEPARegistry
Clayoquot Biosphere Trust	http://www.clayoquotbiosphere.org/
Committee on the Status of Endangered Wildlife in Canada	http://www.cosewic.gc.ca/eng/sct5/index_e.cfm
Consultations on the CEPA 1999 *New Substances Notification Regulations* and New Substances Program	http://www.ec.gc.ca/CEPARegistry/documents/part/nsnr-nsp_con/toc.cfm
CWS Migratory Birds Regulatory Report Series	http://www.cws-scf.ec.gc.ca/birds/status/index_e.cfm
Ecological Monitoring and Assessment Network	http://www.eman-rese.ca/eman/naturewatch.html
Ecosystems	http://www.mb.ec.gc.ca/nature/ecosystems/index.en.html
Environment Canada: Clean Air	http://www.ec.gc.ca/cleanair-airpur/Home-WS8C3F7D55-1_En.htm
Environment Canada's Management Framework	http://www.ec.gc.ca/introec/dept_org.htm#mf
Environment Canada's National and Regional Websites	http://www.ec.gc.ca/regeng.html
Environment Canada's Science and Technology	http://www.ec.gc.ca/scitech/default.asp?lang=En&n=92CF755E-11
Environment Canada's 2004–2006 Sustainable Development Strategy	http://www.ec.gc.ca/sd-dd_consult/SDS2004/index_e.cfm
Environmental Acts and Regulations	http://www.ec.gc.ca/EnviroRegs
Envirozine: Environment Canada's online news magazine	http://www.ec.gc.ca/envirozine/english/home_e.cfm
Federal House in Order	http://www.fhio.gc.ca
Federation of Canadian Municipalities	http://www.fcm.ca
Freshwater Website	http://www.ec.gc.ca/WATER/e_main.html
Greening Government	http://www.greeninggovernment.gc.ca
Meteorological Service of Canada	http://www.weatheroffice.ec.gc.ca
National Pollutant Release Inventory	http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm
Nature Watch	http://www.naturewatch.ca
Pollution	http://www.ec.gc.ca/pollution_e.html
Regulatory Impact Analysis Statement	http://www.ec.gc.ca/seadisposal/regs/min_reg_g2_e.html
Science Assessment and Integration Branch	http://www.msc-smc.ec.gc.ca/saib
Species at Risk	http://www.speciesatrisk.gc.ca
State of the Environment Infobase	http://www.ec.gc.ca/soer-ree
Stewardship Canada	http://www.stewardshipcanada.ca
Sustainable Development Technology Canada	http://www.sdtc.ca
Sustaining the Environment and Resources for Canadians	http://www.environmentandresources.gc.ca
The Green Lane – Global Climate Change	http://www.ec.gc.ca/climate
Water Policy and Legislation	http://www.ec.gc.ca/water/en/policy/e_policy.htm
Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act	http://www.cws-scf.ec.gc.ca/publications/wappa/index_e.cfm