

# **Environment Canada**

**2004–2005**

**Estimates**

**Part III – Report on Plans and Priorities**

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**Stéphane Dion**  
**Minister of the Environment**

*How to Read this Report*

Section 1 and 2 of this report provide the Minister’s Message and an overview of the Department including its profile, accountability framework and program and service delivery approaches.

Section 3 provides the reader with the strategic context of the Department. It includes an overview of the perspectives influencing departmental plans and a summary of the Department’s response in terms of priorities over the next three years. A synopsis is provided of how Environment Canada’s priorities are supported by innovative approaches to policies and programs, and through integrated management practices. The role of science and technology as the foundation of the Department’s agenda is also described.

Readers who wish to learn more about the departmental plans and priorities should continue reading through Section 4 and the many Web site links provided at the end of the report. The Appendices contain details on the Department’s Sustainable Development Strategy, key regulations and foundations, financial information, and horizontal initiatives.

*Reader Feedback*

We would like to hear from Canadians who read this report. Your comments will help us provide relevant information that is easily understood. Please send your completed questionnaire or comments to the mail, e-mail address or fax number shown below.

1. Did you find the information you were looking for? <p style="text-align: center;">Yes / No</p>	...if not, what information were you looking for?
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*Thank you for your feedback.*

# Table of Contents

<b>SECTION 1 – MINISTER’S MESSAGE AND MANAGEMENT REPRESENTATION STATEMENT</b>	
1.1 Minister’s Message .....	1
1.2 Management Representation Statement.....	3
<b>SECTION 2 – DEPARTMENTAL OVERVIEW</b>	
2.1 Departmental Profile .....	4
2.2 Departmental Accountability Framework.....	5
2.3 Delivery of Programs and Services .....	7
<b>SECTION 3 – PLANNING OVERVIEW AND PRIORITIES</b>	
3.1 Planning Overview and Strategic Issues.....	9
3.2 Departmental Priorities.....	12
3.3 Taking an Innovative Approach to Departmental Priorities .....	17
3.4 S&T – The Foundations of Environment Canada’s Agenda.....	20
3.5 Conclusion .....	21
<b>SECTION 4 – PLANS AND PRIORITIES BY STRATEGIC OUTCOMES</b>	
4.1 Clean Environment Business Line .....	22
4.2 Nature Business Line .....	33
4.3 Weather and Environmental Predictions Business Line .....	50
4.4 Management, Administration and Policy Business Line.....	64
<b>SECTION 5 – FINANCIAL INFORMATION</b>	
5.1 Planned Spending Overview.....	72
5.2 Departmental Planned Spending Table .....	73
5.3 Summary of Capital Spending by Business Line Table .....	75
5.4 Details on Major Capital Project Spending Table.....	76
5.5 Summary of Transfer Payments Table.....	77
5.6 Details on Transfer Payments Programs Table .....	78
5.7 Sources of Respendable and Non-Respendable Revenue Table .....	80
5.8 External Charging Table.....	82
<b>SECTION 6 – REGULATORY AND DELEGATED ARRANGEMENTS</b>	
6.1 Major Regulatory Initiatives.....	83
6.2 Foundations .....	86
6.3 EC’s Sustainable Development Strategy 2004-2006 .....	90
<b>SECTION 7 – STRATEGIC CONTEXT CHART .....</b>	<b>95</b>
<b>SECTION 8 – OTHER INFORMATION</b>	
8.1 Horizontal Initiatives.....	96
8.2 Contacts for Further Information .....	99



# Section 1: Minister's Message and Management Representation Statement

## 1.1 Minister's Message



Environment Canada's Report of Plan and Priorities for 2004-2005 identifies how we intend to address the environmental issues of concern to Canadians over the next three years.

Canadians understand that clean air, water, and green spaces are prerequisites for safe and healthy communities. As Minister of the Environment, my goal is to enable Canada to attain the highest level of environmental quality as a means to enhance the health and well-being of Canadians, preserve our natural environment, and advance our competitiveness over the long term.

The government will follow an integrated approach to achieving our goal of building a strong, growing, 21<sup>st</sup> century economy for Canada and Canadians, founded on the principles of sustainable development. In a new world economy that is increasingly driven by sustainability imperatives and opportunities, we have no choice but to build on the progress that we have already made towards sustainability so that we can secure our future economic prosperity and quality of life. In the long term, this will mean that governments, industry and Canadians will need to work together towards shared responsibilities and shared outcomes.

We will continue to address climate change, ensure cleaner air and water, and work with industry to ensure that Canada reaps the benefits of new "green" technologies. We will also incorporate key environmental indicators into the government's decision making to promote more sustainable management decisions and practices across Government.

As you will see from this report, Environment Canada's priorities are clear and our progress will be measurable:

- Reduce the health and environmental impacts of pollution by promoting clean air and water, managing toxic substances and cleaning up contaminated sites;
- Move forward on climate change to ensure our competitiveness over the long term and the health and safety of Canadians;
- Sustain our natural environment by continuing to shape and promote a natural legacy agenda, including implementation of the Species at Risk Act; and

- Reduce risks from weather, environmental change and other hazards by focusing on concerns related to high-impact weather, modernization of meteorological services and public security.

The details of our action plans are in this report and I encourage you to read them all to become better acquainted with the steps Environment Canada is taking for environmental progress and healthy, sustainable communities.

Stéphane Dion, P.C., M.P.  
Minister of the Environment

## 1.2 Management Representation Statement

I submit, for tabling in Parliament, the 2004–2005 Report on Plans and Priorities (RPP) for Environment Canada.

This document has been prepared based on the reporting principles and disclosure requirements contained in the *Guide to the Preparation of the 2004-2005 Report on Plans and Priorities*:

- It accurately portrays the organization's plans and priorities.
- The planned spending information in this document is consistent with the directions provided in the Minister of Finance's Budget and by the Treasury Board Secretariat.
- It is comprehensive and accurate.
- It is based on sound underlying departmental information and management systems.

The reporting structure on which this document is based has been approved by Treasury Board Ministers and is the basis for accountability for the results achieved with the resources and authorities provided.

Name: \_\_\_\_\_  
Samy Watson

Title: Deputy Minister of the Environment

Date: \_\_\_\_\_

# Section 2: Departmental Overview

## 2.1 Departmental Profile

### Raison d'être: Mandate, Vision and Mission

#### MANDATE

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 (*Department of Environment Act*).

- ❖ 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>.

#### MISSION

Environment Canada's mission is to make sustainable development a reality in Canada. To this end, the Department's strategic approach involves:

- ❑ Providing leadership nationally and internationally on matters pertaining to the sustainability of the environment;
- ❑ Acting on behalf of all Canadians to address environmental issues of national concern and to administer and enforce federal environmental laws and regulations;
- ❑ Delivering services to Canadians that enable them to adapt to their environment in ways which safeguard their health and safety and optimize economic efficiency; and
- ❑ Building capacity throughout society to take decisions that lead to environmental sustainability and cooperating with others having similar objectives.

#### Our Vision

*At Environment Canada, we want to see a Canada where people make responsible decisions about the environment for the benefit of present and future generations.*

#### *A Focus on Science*

Environment Canada's science is fundamental to the delivery of its vision and mission. Departmental efforts include research, monitoring and assessment, technology and indicators development, and reporting activities. Environment Canada uses science to:

- ❑ Understand naturally-occurring aquatic, biotic, terrestrial and atmospheric processes and their interactions;
- ❑ Evaluate and assess the effects of known and emerging stressors on the environment;
- ❑ Design and evaluate policy options for pollution prevention, control, management and adaptation; and



- ❑ Communicate scientific knowledge and provide Canadians with tools to develop and evaluate actions to address environmental issues.
- ❖ Refer to Section 3.4 for further details of Environment Canada’s science-related initiatives.

## 2.2 Departmental Accountability Framework

### ORGANIZED TO DELIVER RESULTS

Environment Canada fulfills its mandate through the efforts of four results-based Business Lines:

- ❑ Clean Environment;
- ❑ Nature;
- ❑ Weather and Environmental Predictions (WEP); and
- ❑ Management, Administration and Policy (MAP).

Each Business Line is set up to deliver a long-term strategic outcome, and specific long-term key results, which, in turn, are divided into a series of distinct, achievable targets. This structure provides the framework for internal accountability and management as well as for external reporting. The key results also provide a stable, results-based strategic direction within which shorter-term priorities and pressures are addressed.

Each Business Line is led by an Assistant Deputy Minister who provides leadership by building shared ownership across the Department for priorities, strategies and performance commitments.

### Environment Canada’s Results Framework

<b>Strategic Outcome:</b> <i>Protect Canadians and their environment from domestic and global sources of pollution</i>	<b>Strategic Outcome:</b> <i>Conserve biodiversity in healthy ecosystems</i>
<b>Key results:</b> <ul style="list-style-type: none"> <li>▪ Reduced adverse human impact on the atmosphere and on air quality.</li> <li>▪ Reduce the environmental and human health impacts posed by toxic substances and other substances of concern.</li> </ul>	<b>Key results:</b> <ul style="list-style-type: none"> <li>▪ Conservation of biological diversity</li> <li>▪ Human impacts on the health of ecosystems are understood and reduced.</li> <li>▪ Conservation and restoration of priority ecosystems.</li> </ul>
<b>Delivered through Clean Environment Business Line</b>	<b>Delivered through Nature Business Line</b>
<b>Strategic Outcome:</b> <i>Help Canadians adapt to their environment in ways that safeguard their health, safety and security, optimize economic activity, and enhance environmental quality</i>	<b>Strategic Outcome:</b> <i>Provide strategic and effective departmental management to achieve environmental results</i>
<b>Key results:</b> <ul style="list-style-type: none"> <li>▪ Reduced impact of weather and related hazards on security, health, safety and the economy.</li> <li>▪ Adaptation to day-to-day and longer-term changes in atmospheric, hydrological and ice conditions.</li> </ul>	<b>Key results:</b> <ul style="list-style-type: none"> <li>▪ Strategic and integrated policy, priorities and plans.</li> <li>▪ A well-performing organization supported by efficient and innovative services.</li> </ul>
<b>Delivered through Weather and Environmental Predictions Business Line</b>	<b>Delivered through Management, Administration and Policy Business Line</b>

- ❖ A detailed description of Environment Canada’s planning, reporting and accountability framework can be found at: [http://www.ec.gc.ca/introec/dept\\_org.htm#mf](http://www.ec.gc.ca/introec/dept_org.htm#mf).

Business Lines are not isolated from each other. There are common areas of interest across Business Lines (e.g. air quality, water, climate change and environmental effects) where resources from Business Lines are applied cooperatively to achieve results.

Organizationally, the Department is divided into five headquarters services and five regions. Environment Canada's organizational structures cut across Business Lines in a matrix management approach. This allows for coordinated, consistent programming and direction, as well as client-centred delivery in a manner that respects regional differences.



## Matrix Management

This chart shows the 2004-2005 gross and net planned spending by Business Line and by organization under the matrix management system.

												Total \$ Millions	Total FTE	
	RDG Pacific and Yukon	RDG Prairie and Northern	RDG Ontario	RDG Quebec	RDG Atlantic	ADM HRSI	ADM P&C	Corporate Offices	ADM MSC	ADM EPS	ADM ECS			
\$ Millions														
Clean Environment	14.3	13.4	15.7	12.8	20.8	3.2	54.2	0.0	18.7	255.0	8.4	416.5	1,532	
Nature	17.2	19.1	27.3	24.6	11.1	3.4	0.0	0.0	0.0	0.0	112.3	215.0	1,325	
Weather and Environmental Predictions	19.5	38.6	17.7	13.2	12.4	0.0	0.0	0.0	180.6	0.0	0.4	282.4	1,740	
Management, Administration and Policy	11.0	9.3	10.2	6.0	6.0	52.3	22.7	4.9	1.2	1.7	0.5	125.8	1,274	
Gross Planned Spending	62.0	80.4	71.0	56.5	50.3	58.9	76.9	4.9	200.5	256.7	121.6	1,039.7		
Revenues	(6.2)	(7.4)	(4.8)	(2.8)	(2.3)	0.0	0.0	0.0	(45.1)	(7.7)	(4.7)	(81.0)		
Net Planned Spending	55.8	73.0	66.2	53.7	48.0	58.9	76.9	4.9	155.4	249.0	116.9	958.7		
% of dept'l spending	6.0	8.0	7.0	5.0	5.0	6.0	7.0	0.0	19.0	25.0	12.0	100.0		
FTEs	493.0	670.0	586.0	532.0	422.0	541.0	221.0	42.0	935.0	799.0	630.0	5,871		

ADM = Assistant Deputy Minister  
 RDG = Regional Director General  
 HRSI = Human Resources and Service Innovation

MSC = Meteorological Service of Canada  
 EPS = Environmental Protection Service  
 ECS = Environmental Conservation Service

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

## 2.3 Delivery of Programs and Services

Environment Canada is a science-based department and a significant national science and technology (S&T) performer. In fact, 70% of the Department's budget and 60% of its workforce are in science and technology-related positions. Relative to other government departments, our Department's financial contributions are very small and total about \$72 million. Recipients of these grants and contributions include international organizations, university-based research centres, and non-profit organizations.

The Department maintains capital assets of more than \$800 million which support the operation of 15 research institutes and laboratories, 49 National Wildlife Areas, and over 4,600 air, climate and water monitoring stations in all regions of the country (many of which are operated in partnership with provinces, Canadian universities and international scientific agencies).

There are four broad categories of capital assets, including:

- ❑ Specialized facilities and land holdings to conduct environmental science research, develop technologies and protect critical wildlife areas;
- ❑ Scientific equipment to conduct laboratory analyses, monitor the status of the atmosphere on a 24/7 basis and to monitor trends in the environment;
- ❑ Information technology infrastructure and equipment to run scientific equipment, facilitate communications and high volume data exchanges; and
- ❑ Fleet, including off-road vehicles, to transport personnel to study and monitoring sites, and meet needs for a speedy response.

Program delivery at Environment Canada draws on policy expertise and scientific and technical knowledge from across the Department, combined with a strong regional understanding of the environmental, social, cultural and economic factors that shape attitudes, perceptions and behaviour. Environment Canada's regional offices help inform and deliver the national vision for the environment and contribute to a sustainable society at the local level. They work in partnership with provinces, territories, communities and others across the country, and encourage partners to set goals sensitive to local and regional ecosystems and to make maximum use of knowledge of weather, climate, atmosphere and water to promote health, safety and economic prosperity. They provide science-based information, tools for action, and opportunities for sharing experiences and learning. Moreover, they help build the capacity of all the players involved to effect changes that will improve quality of life.

**2004-2005 Gross and Net Planned Spending  
(\$1,039.7M Gross Planned Spending; \$958.7M Net Planning Spending)**

This pie chart illustrates gross and net planned spending and the associated percentage of departmental planned spending for each key result. The 2004-2005 gross and net planned spending for each Business Line is also indicated, as well as the percentage in relation to the whole Department.

Management, Administration and Policy

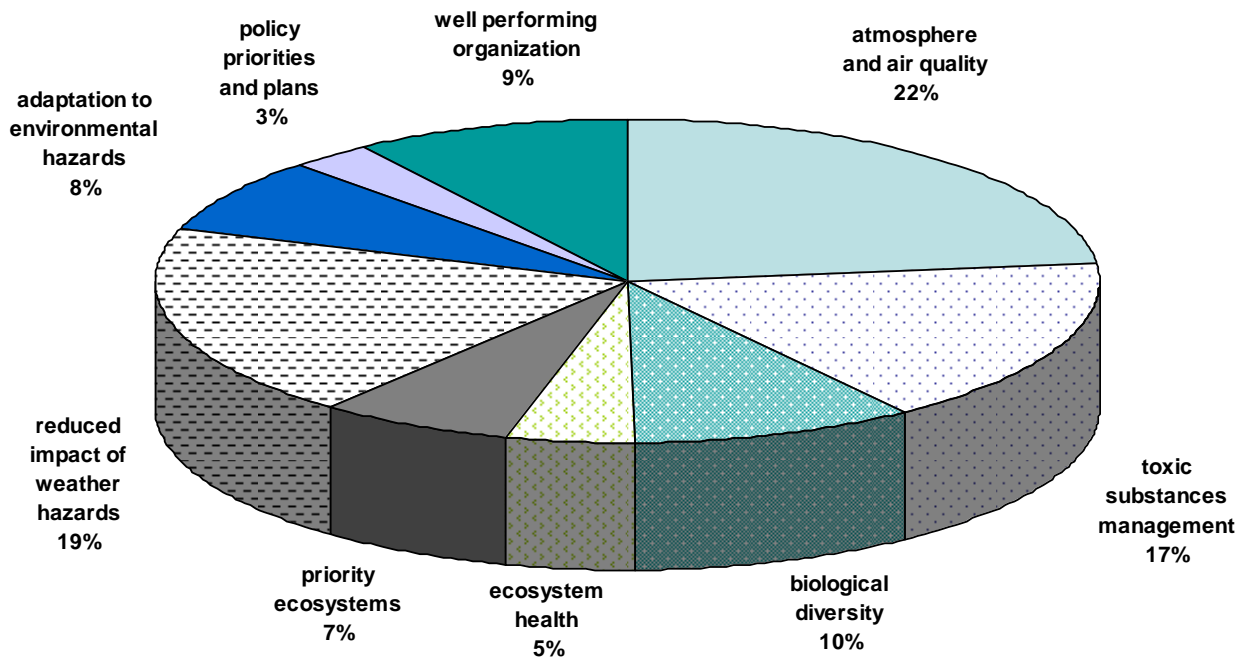
\$125.7M Gross Planned Spending (12%)  
\$124.9M Net Planned Spending (13%)

Strategic Outcome: Provide strategic and effective departmental management to achieve environmental results. Led by ADMs HRSI and P&C<sup>1</sup>.

Clean Environment

\$416.5M Gross Planned Spending (39%)  
\$407.3M Net Planned Spending (42%)

Strategic Outcome: Protect Canadians and their environment from domestic and global sources of pollution. Led by ADM EPS<sup>2</sup>.



Weather and Environmental Predictions

\$282.4M Gross Planned Spending (27%)  
\$218.3M Net Planned Spending (23%)

Strategic Outcome: Help Canadians adapt to their environment in ways that safeguard their health and safety, optimize economic activity and enhance environmental quality. Led by ADM Meteorological Service of Canada (MSC).

Nature

\$215.1M Gross Planned Spending (22%)  
\$208.2M Net Planned Spending (22%)

Strategic Outcome: Conserve biodiversity in healthy ecosystems. Led by ADM Environmental Conservation Service (ECS).

<sup>1</sup> Human Resources and Service and Innovation (HRSI) and Policy and Communications (P&C)

<sup>2</sup> Environmental Protection Service (EPS)

# Section 3: Planning Overview and Priorities

## 3.1 Planning Overview and Strategic Issues

### 3.1.1 Perspectives Influencing Plans and Priorities

Environment Canada's planning draws on a number of perspectives that provide the Minister of the Environment with a framework for assessing environmental and sustainable development issues. Some of the more significant factors that inform planning choices and priority-setting include the following areas:

- ❑ *Government Direction*  
Implementing strategic directions of the government as reflected in structural and mandate changes to departments and cabinet committees;
- ❑ *Science, Research and Analysis*  
Attending to the trends and signals derived from ongoing monitoring of the environment and research of issues both within the Department and by external organizations;
- ❑ *Perspectives of Canadians*  
Focusing on issues of immediate concern; identification with the natural environment; understanding the effects of high impact weather and related environmental events; the role of the federal government; attitudes towards the future of the environment; and
- ❑ *Collaborative approaches with other levels of government, Aboriginal Peoples, industry, academia, and other sectors of society*  
Recognizing that the environment is the ultimate horizontal issue that cuts across all jurisdictions; Canada as a partner with provinces, territories and other countries; the need for collective engagement; and building on the practical value and benefits of partnership approaches.

### 3.1.2 Public Context and Strategic Issues

#### ***Government Direction: Raised Expectations and Obligations for Environmental Results***

The federal government has placed the environment as a government-wide priority that extends across portfolios. It has also positioned the environment as a priority to be integrated across other agendas such as health, innovation, infrastructure, regional development and investments in science. The federal government has committed to develop a federal sustainable development strategy as a key means to promote an integrated approach across government.

The Government of Canada is moving forward in implementing environmental legislation and in addressing issues significant to Canadians. From the Kyoto Protocol to the *Canadian Environmental Protection Act 1999* and the *Species at Risk Act*, the federal government has challenging commitments that Canadians will be expecting leadership on from Environment Canada

### ***Science, Research, and Analysis: Environmental Trends***

Environmental science, particularly monitoring, is a cornerstone in detecting and tracking ecosystem and atmospheric changes. *The Environmental Signals: Canada's National Environmental Indicator Series 2003* and its companion report, *Headline Indicators*, contain a set of 14 key indicators that are intended to provide a broad overview of trends in Canada's environment in areas that are important to Canadians. Recently, a summary of indicator trends from these reports was published in a document tabled by the President of the Treasury Board in Parliament entitled *Canada's Performance 2003*. The following table, reproduced from that document, shows that trends for a number of environmental issue areas are mixed or continue to be a concern requiring action from all sectors of Canadian society.

### **Trends in Environmental Indicators in Canada**

<i>THE CANADIAN ENVIRONMENT</i>		
<b>Trend</b>	<b>Indicator</b>	<b>Performance Highlights</b>
↓	Climate Change	Despite a slight decrease (1.3%) between 2000 and 2001, Canadian greenhouse gas emissions have increased by 18.5% since 1990. <sup>1</sup>
↑	Air Quality	Although there have been improvements in levels of primary airborne pollutants, many parts of Canada, both urban and rural, continue to experience unacceptable air quality, especially in the summer.
↑	Water Quality	Wastewater treatment from municipal systems has shown continuous improvement. The percentage of the municipal population on sewers receiving secondary and/or tertiary treatment increased from 56% in 1983 to 78% in 1999. Despite these improvements, challenges remain.
↓	Biodiversity	During the period from 1985 to 2002, the status of most reassessed species considered at risk remained unchanged and the status of a quarter of the reassessed species deteriorated.
–	Toxic Substances in the Environment	Comparable National Pollutant Release Inventory (NPRI) data on on-site releases of 18 toxic substances indicates declines for 14 substances and increases for the remaining four during the period 1995 to 2001. This progress is even more significant given that in many cases, decreases were accompanied by increased reporting levels.

(Excerpt from: *Canada's Performance 2003 Annual Report to Parliament* – The Canadian Environment chapter, Treasury Board of Canada, Secretariat. Ottawa, Ontario. pp 46-58).

Knowledge and innovation are becoming watchwords of a competitive economy. Increasingly, there has been a spotlight on transformative technologies that are being positioned as the economic engines of the years to come. Within this context, Environment Canada needs to illustrate how protecting the environment can be a source of new profit potential as well as stimulating the effectiveness of key economic sectors. Environmental technologies and services are emerging as new drivers for the economy.

### ***Perspectives of Canadians: An Engaged Public Seeking Federal Leadership***

Canadians identify our natural environment as a fundamental part of their national identity. Eighty-eight per cent of Canadians say that the vastness and beauty of the landscapes tops the list

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<sup>1</sup> As of August 2004, Greenhouse gas emissions have risen by 20.1%.

of what makes them very proud to be Canadian (Centre for Research and Information on Canada, October 2003).

Against this backdrop, it is not surprising that the public consistently identifies the environment as a mid- to high-level priority for the government. When mapping public concern against views on the future of the environment (optimism/pessimism), the environment emerges as a high priority issue (high concern and high pessimism). Viewed from an international perspective, Canadians believe that environmental pollution is one of the most important problems facing the world today.

The fact that the federal government is generally seen to have a large role to play across all environmental issues, provides Environment Canada and its partner departments with a receptive public which is eager to see action taken on the environment, and open to playing an active role themselves.

The chief driver behind the public's concerns continues to be health. Canadians are pessimistic about the impact of environmental problems on the health of future generations, with public opinion research indicating that a majority feel that environmental problems will affect the health of their children and grandchildren a great deal. In this regard, Canadians are looking for protection from a range of environmental risks, chiefly reducing air pollution, reducing the use of toxic substances, improving water quality, and reducing greenhouse gas emissions.

Recent severe weather events, including hurricanes Juan and Isabel, have heightened Canadians' awareness of their potential vulnerability to environmental threats. It is increasingly evident that Environment Canada's sophisticated atmospheric monitoring, prediction and warning infrastructures, and its integrated Research and Development (R&D) programs, are indispensable to ensuring that citizens, weather-sensitive industries and communities get the information required to reduce their risks and to take action to reduce impacts during extreme and changing weather conditions and other airborne threats.

### ***Collaborative Approaches***

Taking action requires engaging many other partners as well: environmental non-governmental organizations (ENGOs), academia, industry, Aboriginal Peoples, and others have vital roles to play. The Department has learned that jurisdictional and sectoral differences can be minimized by building shared agendas that focus on the results to be achieved and by monitoring and reporting publicly on progress. The results-based structure of Environment Canada's Management Framework has been instrumental in aligning effort across jurisdictions and sectors of society to frame issues in a manner that allows for the development of shared agendas and partnerships for effective action to achieve desired environmental outcomes.

The federal government's international leadership and Canada's ratification of the Kyoto Protocol lends Canada renewed credibility in international environmental fora. This creates an opportunity for Canada to maintain leadership in ensuring that its priorities, as expressed at the World Summit on Sustainable Development, have broader support from key partners so that concrete results can be achieved. Canada has an opportunity to demonstrate leadership in implementing existing agreements and in continuing to advocate for effective agreements and institutions.

Canada and the United States have a strong track record on environmental cooperation. Key opportunities to advance Canada's priorities and to deepen and strengthen Canada-United States

cooperation include: improving air and water quality; joint management of our common water resources; targeting resources to mutual biodiversity priorities; greater scientific cooperation in the Arctic; supporting emerging initiatives such as the Global Earth Observation (GEO) work; and moving forward on a bilateral transboundary environmental impact assessment.

- ❖ To learn more about environmental issues and protecting our environment, visit: <http://www.ec.gc.ca/soer-ree>.

## 3.2 Departmental Priorities

Environment Canada has identified four departmental priorities that respond to current and emerging environmental and sustainable development issues, as well as to government-wide commitments. These are continuing priorities for Environment Canada, having been articulated in a stable fashion for the past several years within departmental accountability reports to Parliament.

The Department needs to continue to build towards an environmental management system for Canada that would develop lasting solutions to address the root causes of problems. Environment Canada is taking a long-term innovative approach to address immediate problems, while at the same time ensuring a sustainable environment for future generations. Such an approach must include knowledge and innovation as a foundation of action; domestic and international agendas operating in parallel; and partnerships to inform and engage citizens.

### **Priority #1: Reduce the Health and Environmental Impacts of Pollution**

Environment Canada's approach to managing environmental problems that impact the health of Canadians continuously evolves. On a number of fronts, addressing environmental issues will be an increasingly central and more cost-effective approach to improving health outcomes. Our plan focuses on critical issues, which proactively ensure that Canadians will benefit from an environment that sustains their health.

#### **CLEAN AIR**

Environment Canada continues to focus on the implementation of the federal government's Clean Air Agenda, which seeks to promote actions that reduce health risks and achieve physical improvements in air quality. Of particular note, in January 2003, Canada and the United States announced a commitment to build on transboundary air quality improvements of the last decade by starting work to develop new cooperative projects for the years ahead.

The Government's 10-year Action Plan on Clean Air has made substantial progress particularly on a vehicles and fuels agenda, the creation of Canada-wide Standards with the provinces and territories on the key air pollutants, through the signing of the Ozone Annex to the Canada – United States Air Quality Agreement, and the launch of joint pilot projects with the United States.

These efforts must be sustained. In particular, the issue of air quality must be part of a cities agenda as it is very much related to other urban challenges such as urban congestion, urban sprawl and sustainable transportation.

- ❖ For further details on Environment Canada's initiatives related to clean air, please refer to the work of the Clean Environment Business Line in Section 4.1.1.



## **TOXIC SUBSTANCES AND OTHER POLLUTANTS**

Environment Canada's primary vehicle for preventing and controlling risks posed to the environment and human health from toxic substances and other substances of concern is the *Canadian Environmental Protection Act, 1999 (CEPA 1999)*. The renewed *Act* adopts a precautionary and preventive approach to prevent harm to the environment and human health. Since *CEPA 1999* was proclaimed in 2000, the Department has focused on:

- ❑ Developing commitments under *CEPA 1999*;
- ❑ Assessing and managing the risk from over a thousand new substances introduced into Canada each year;
- ❑ Developing strategies to meet the legislated timelines in *CEPA 1999* to examine over 23,000 substances for the risks they pose to human health and the environment, and develop preventive or control actions for those found to be toxic; and
- ❑ Completing pilot studies to streamline the assessment procedures to ensure that all *CEPA* requirements (e.g. categorization of Domestic Substances List (DSL) substances by 2006) will be met.

The coming 5 year Parliamentary review of *CEPA* represents an opportunity to examine progress made in implementing *CEPA 1999* and to identify areas for improvement, including where there may be new policy approaches to manage risk more effectively.

- ❖ For further details on Environment Canada's initiatives related to toxic substances, please refer to the work of the Clean Environment Business Line in Section 4.1.2.

## **Priority #2: Move Forward on Climate Change**

Addressing climate change is important to our competitiveness as well as to the health, safety and security of Canadians. More than half of Canada's GDP is affected by climate and weather including: forestry, agriculture, fishing, hydro-electricity generation, transportation and tourism. Climate change-related extreme weather events are affecting the safety and security of Canadians. Taking action on climate change will also help improve the health of Canadians, reduce the incidence of asthma and reduce health care costs.

Kyoto is an important first step in addressing global climate change and a new long-term international regime is imperative and inevitable. The Government of Canada is committed to the Kyoto Protocol and is determined to continue to move forward in ways that produce long term and enduring results. The larger challenge for all countries is developing and deploying the next generation technologies needed to make the transformative changes that will be required to make the economies of the world less carbon intensive and sustainable for the long term. Canada's long-term competitiveness will be determined by how we manage the situation overall.

Our approach to addressing climate change is based on our environmental and economic policy framework. The department and government are developing and implementing, in conjunction with provinces/territories and stakeholders, a national climate change plan to move Canada towards its Kyoto targets and beyond. As well, the global climate is already changing and Canadians are already seeing the effects of a changing climate, particularly in the North. Research and modeling into climate change impacts need to be expanded in order to better identify the areas and sectors in Canada that are vulnerable to a changing climate and enable the

development of national, regional and local strategies to start adapting. The national climate change plan will include:

- ❑ New policies and programs to get further near-term and enduring emission reductions;
  - ❑ Setting longer-term goals to make the deep emission reductions needed to successfully address climate change and starting to work towards them;
  - ❑ Advancing the science and adapting to a changing climate; and
  - ❑ Leadership in bridging to a new long-term international framework.
- ❖ For further details on Environment Canada's initiatives related to climate change, please refer to the work of the Clean Environment Business Line in Section 4.1.1 and to the work of the Weather and Environmental Predictions Business Line in Section 4.3.3.

### **Priority #3: Sustain Our Natural Environment**

Nature has driven the development of Canadian society from the time that communities were located near rivers and fur trading opened the western and northern frontiers. Maintaining and enhancing Canada's natural legacy is linked to the future social and economic well being of Canadians.

Environment Canada is continuing to shape and promote a natural legacy agenda aimed at conserving Canada's natural heritage. In setting our priorities, the Department will continue to strive towards the conservation, protection and sustainable use of the natural environment by developing more integrated ecosystem approaches to the management of our natural resources.

#### **BROADER CONSERVATION STRATEGIES**

Environment Canada is building broad conservation strategies and protecting wildlife in order to ensure that biological diversity is conserved. A broad conservation strategy is required to recognize the shared responsibility of conserving nature between provincial, territorial and federal governments as well as private property owners, businesses, Aboriginal Peoples, conservation organizations, and research institutions. The Canadian Biodiversity Strategy provides a framework for action at all levels that will enhance our ability to ensure the productivity, diversity and integrity of our natural systems. We continue inter-jurisdictional collaboration and consultation as we move to implement the Strategy in the areas of improved stewardship, development of a national plan on invasive alien species, biological information management, and reporting on biodiversity status and trends.

- ❖ For further details on Environment Canada's broader conservation initiatives, please refer to the work of the Nature Business Line in Section 4.2.1.

#### **WILDLIFE**

As of June 5, 2003, two-thirds of the *Species at Risk Act* (SARA) came into force. This allows for immediate benefits under the Act in the areas of assessment, listing, recovery and stewardship. Environment Canada has other tools and processes that address the broader range of issues in the area of nature conservation and stewardship. In addition to protecting species at risk through the implementation of SARA, Environment Canada will also continue its efforts related to its other mandated responsibilities, focusing on two fronts: the development of a Migratory Birds Program Strategy and the development of a Federal Protected Areas Strategy.

- ❖ For further details on Environment Canada's initiatives related to wildlife, please refer to the work of the Nature Business Line in Section 4.2.1.

## **LEADERSHIP IN ECOSYSTEM SCIENCE**

The ability to support and secure a clean and healthy environment for Canadians currently and in the future is dependent upon our capacity to understand how our ecosystems are affected by human activities that cause harmful stress and to transfer that knowledge to Canadians and the global community so that it can be incorporated into decision-making. Through ecosystem-based research, Environment Canada: monitors the environment to detect and warn Canadians of ecosystem change; creates the scientific knowledge required to understand the impacts of human activities on the health of ecosystems; develops science-based options, recommendations and tools to support the development of management actions and ecosystem rehabilitation techniques; and establishes science-based goals for the quality of the Canadian environment and the health of ecosystems.

- ❖ For further details on Environment Canada's initiatives related to ecosystem science, please refer to the work of the Nature Business Line in Section 4.2.2.

## **WATER**

Water has emerged as a major science and policy priority for Environment Canada over the past 5 years. This issue area has been driven by public concern over incidents of water contamination and a growing national awareness that our water resources are finite and precious. Water is a classic example of where integrated management is required. Synergies need to be drawn from the new and innovative provincial water strategies, and through the increasing attention given to water in international fora such as the World Summit on Sustainable Development (WSSD).

Environment Canada will continue to focus its efforts on leading the science, monitoring, and guidelines development that underpins water management in Canada. It will also work with provincial partners and the United States to manage transboundary water issues and develop watershed-based models of water governance. In addition, Environment Canada will work with other government departments, provinces, municipalities and industries to understand patterns of water use and improve awareness and use of innovative policy instruments such as water pricing. Finally, the Department will work within the international community to ensure Canada's international commitments on water are met.

To support the work on water, Environment Canada's Meteorological Service of Canada (MSC) is undertaking key initiatives to document and understand impacts on Canada's water resources. First, it is completing bilateral negotiations with all the provinces and territories to ensure the continual collection and archiving of nationally consistent water quantity data across Canada. Secondly the Meteorological Service of Canada is working with scientists from within the Department and with other government departments to produce a comprehensive assessment, entitled, "Threats to Water Availability in Canada."

- ❖ For further details on Environment Canada's initiatives related to water quality, please refer to the work of the Nature Business Line in Section 4.2.3. and the work of the Weather and Environmental Predictions Business Line in Section 4.3.1.

## **INTEGRATED CONSERVATION PLANNING THROUGH ECOSYSTEM INITIATIVES**

No single area of society has direct accountability for Canada's natural environment. As a result, Environment Canada is working to pioneer a shift in the way in which we manage resources to ensure integrated conservation planning. To maintain the integrity of ecosystems, decisions related to human activities within those ecosystems must also be interconnected and coherent. The lack of recognition of this interconnectedness in the management of Canada's landscapes

and seascapes has meant that the impact of efforts to conserve Canada's natural legacy has not been fully satisfactory.

Environment Canada's six ecosystem initiatives across Canada provide an example of integrated conservation planning in practice. These initiatives bring key decision-makers (e.g. land owners, municipalities) together on an appropriate geographic scale to examine what is happening in an ecosystem. They then determine, in a collaborative manner, how to best respond to issues included in the decision-making process, such as the implementation of a specific program.

Environment Canada is also working with other government departments on cross cutting conservation policy initiatives such as the Agricultural Policy Framework, National Forest Strategy, Canada's Oceans Strategy, and Arctic and Antarctic activities to ensure that nature priorities are included at the policy development and program implementation stages.

- ❖ For further details on Environment Canada's initiatives related to integrated conservation planning, please refer to the work of the Nature Business Line in Section 4.2.3.

## **Priority #4: Reduce Risks from Weather, Environmental Change and Other Hazards**

Climate variability, air quality and high-profile weather events are of considerable importance to Canadians and have raised interest in several sectors, including agriculture, shipping, construction, media, health, environmental conservation, forestry and recreation, and the public. These sectors seek longer lead times and increased accuracy for warnings, increased predictive capacities for long term climate and environmental conditions, and improved ability to predict the presence and levels of threats in air, whether from natural, man-made or public security sources.

To respond to these needs, Environment Canada's Meteorological Service of Canada (MSC) is focusing its efforts on a five-year transformation agenda that will strengthen the organization's overall operational and scientific capacity.

### **WEATHER SERVICE TRANSFORMATION**

On March 13, 2003, the Minister of the Environment announced the investment of \$75 million over five years to transform, strengthen and revitalize the Meteorological Service of Canada's operations and to improve overall service to Canadians – transforming the Meteorological Service of Canada's human and asset infrastructures, and its service, operations and research focus to deliver more effective, efficient and sustained response to the needs of Canadians. The investment will allow the Meteorological Service of Canada to keep pace with meteorological developments and to provide the best and most useful weather information and services possible to ensure the health, security, economic growth and quality of life for Canadians.

- ❖ For further details on Environment Canada's initiatives related to weather service transformation, please refer to the work of the Weather and Environmental Predictions Business Line in Section 4.3.1.

### **HIGH IMPACT WEATHER AND RELATED HAZARDS**

The importance of weather and environmental prediction services is increasing as Canadians become more vulnerable to severe weather and other hazards. The challenge to Environment Canada is to improve the quality, timeliness and availability of weather warnings to allow Canadians to reduce risks from environmental threats. This challenge can be met by taking action: focusing more attention on high-impact events and automating routine forecasts as much

as possible; applying advances in science and technology; modernizing monitoring equipment; working with the media on standards and technologies to ensure timely and reliable delivery of warnings; and helping Canadians and industry better understand and reduce their vulnerability through enhanced emergency preparedness and response services.

Under the security package announced in December 2001, Environment Canada was allocated \$20.5 million over six years to enhance environmental emergency regulations and border controls controlling the import/export of hazardous substances (including improved tracking of transboundary movements of hazardous waste). The skills, models, techniques and infrastructure Environment Canada uses to forecast and warn of weather-related hazards can also be deployed rapidly in environmental emergencies to forecast the effect of human-made hazards such as nuclear and chemical explosions.

- ❖ For further details on Environment Canada's initiatives related to high impact weather, please refer to the work of the Weather and Environmental Predictions Business Line in Section 4.3.2.

### **ADAPTATION TO CLIMATE, ATMOSPHERE AND WATER CHANGES**

The Canadian public and various sectors are quickly becoming aware of the emerging risks of climate change and variability. In partnership with universities, provinces and the private sector, the Meteorological Service of Canada (MSC) commits to ensure that Canada has the meteorological, climatological and hydrological data, information and science capacity to support sound decision-making. The Meteorological Service of Canada will meet this need for very long term forecasting related to climate change, but also in continuing to support information needs for daily, weekly and seasonal decisions related to water levels, weather conditions and air quality at the local, regional, national and even at the international levels. This challenge is being met through a number of actions: improving climate prediction capabilities; continuing to assess and report on the state of the atmosphere and water cycle; acting as a catalyst for growth in the capacity of the meteorological private sector; improving access to data; and better defining services for weather-sensitive industries.

- ❖ For further details on Environment Canada's initiatives related to weather research, please refer to the work of the Weather and Environmental Predictions Business Line in Section 4.3.3.

## **3.3 Taking an Innovative Approach to Departmental Priorities**

Environment Canada's four Departmental priorities are supported by innovative approaches to policies and programs, and integrated management practices. Departmental efforts in this regard are managed by and reported under its fourth strategic outcome: *Provide strategic and effective departmental management to achieve environmental results*. Refer to Section 4.4 for more details.

### **INNOVATIVE APPROACH TO POLICIES AND PROGRAMS**

Given the complexity of environmental issues and the public's rising expectations for environmental results, Environment Canada needs to develop strategies that emphasize a more innovative approach to environmental management that encourages a more integrated and long-term perspective.

### ***Developing the Government-wide Environment and Sustainable Development Agenda***

The Department advocates, within the federal system, the development of an overarching framework that would situate the environment agenda within the context of sustainable development and help identify priorities grounded in a fact-based understanding of where, when and how the government needs to act.

Environment Canada provides leadership on sustainable development across the federal government. Work is continuing to advance a government-wide sustainable development strategy which would promote a shared vision and priority areas for coordinated action to support sustainable development in Canada and abroad.

❖ For further details on our initiatives related to sustainable development, see section 6.3.

### ***Enhancing Knowledge and Use of Innovative Policy Instruments***

A prerequisite to innovative action is sound environmental knowledge – it is the only way to ensure that Environment Canada identifies the problems, develops effective solutions and takes the required action for lasting results.

An important means of mobilizing environmental science resources for more and better exchange of information in support of decision-making is to establish a strategic information system that integrates the efforts of the many programs, services and organizations handling environmental issues. The Department continues the developmental work associated with establishing environmental indicators. The recent indicators report issued by the National Round Table on the Environment and the Economy (NRTEE) and the Statistics Canada proposal to expand the National Accounts System to include natural capital are cutting-edge efforts that could place Canada at the forefront of measuring the importance of the environment for economic prosperity, provide better tools for decision-makers, and enable improved accountability to Canadians.

The key to addressing environmental challenges will be to influence the behaviours of industry and Canadians. The Department needs policy instruments that will help manage the interaction between the economy and the environment more effectively. By using the full array of policy instruments – economic, regulatory and voluntary – the Department can ensure that good economic decisions will also be good environmental decisions. This is what smart regulation is all about.

### ***Strengthening Environmental Cooperation with Key Partners***

The environment is the ultimate horizontal issue. For effective risk management, the federal government must increasingly work with the provinces and territories, municipalities, Aboriginal peoples, industry leaders, research bodies, communities, citizen groups and civil society as a whole. Addressing environmental issues is a shared responsibility, which requires partnership among different sectors within society to design lasting solutions.

Canada played a leadership role at the World Summit on Sustainable Development (WSSD) through its advocacy of issues such as poverty alleviation, women's rights, international environmental governance, addressing water and biodiversity issues globally, health and environment linkages and sustainable development. To continue to move our agenda forward, Canada needs to build on its established credibility in key global and regional institutions and, more generally, with the international community.

Environment Canada needs to work in collaboration with other countries and international organizations to improve the effectiveness of international environmental governance mechanisms and to enable countries with diverse cultures and wide-ranging economic realities to come together and find common ground to move forward. Canada has also taken an active role in promoting mutual supportiveness of trade and environmental policy in international trade agreements. These areas pose a substantial challenge – but are also of critical importance in terms of addressing environmental issues in Canada.

- ❖ For further details on Environment Canada's initiatives related to innovative approaches to policies and programs, please refer to the work of the Management, Administration and Policy Business Line in Section 4.4.1.

## **INTEGRATED MANAGEMENT**

### ***Accountability, Stewardship and Risk Management***

For the past two years, Environment Canada has been implementing its Modern Management Action Plan (MMAP) which is centered on transforming the way the Department works by building management capacity necessary to deliver policy and program initiatives. The Plan was created to address opportunities for improvements identified in a departmental self-assessment of basic financial and management systems, procedures and operational capacity needed to ensure a solid foundation for modern management practices.

To date, Environment Canada's MMAP, modeled after *Results for Canadians: A Management Framework for the Government of Canada*, has provided the vehicle to ensure continual improvement in a variety of management areas. Presently, work is proceeding on the development of a second generation of the initial Plan that builds on the progress made so far, but that also incorporates a stronger focus on the expectations set out by the Treasury Board Secretariat's recently articulated Management Accountability Framework.

Environment Canada will continue to ensure managers have the tools and expertise they need to meet the broad standards set out by central agencies to ensure a culture of sound management and accountability within the federal public service. This includes attention to developing enhanced capabilities in managing in an environment of financial reallocation.

### ***Citizen-Focused Service***

Environment Canada is placing a particular emphasis on service to Canadians. The Department is in the process of developing a strategic approach to service that concentrates on the point of connection with Canadians. The better we can connect Environment Canada's science, policies, regulations, information and advice with Canadians, the more effective Canada will be in achieving its societal outcome of sustainable development.

A refocused approach will help Environment Canada make more informed decisions about the services it provides to Canadians. It will help the Department know if it is providing the right services, to the right people, in the right way, with the right partners, within its mandate and in the context of emerging priorities. This knowledge will enable the Department to take action to improve current services, create new ones, and assess when a service offering has run its course.

The Meteorological Service of Canada (MSC) has begun a supporting effort on service improvement. Initiatives to ensure that services are improved include: automated delivery and

customization of information and products; the renewal of the weather website; an increasing focus on public access to all data and information; and new service delivery agreements with key media and private sector partners.

### ***Environment Canada's People***

Environment Canada has gone through a decade of significant change which has included restructuring, transformation and new legislative and regulatory demands. In addition, the changing demographics of the Department mean that many of the new challenges will be met by the recruitment of new employees.

Environment Canada is at a crossroads with regard to the management of human resources. The impact of changing pressures and the new Human Resources Modernization Framework will lead to significant strategic decisions regarding how “people management” needs to be conducted within the Department and where we want to make investments to improve our approach and systems for the longer term.

Starting in 2004-2005, Environment Canada's human resource management activities will be guided by an overarching “People Plan.” This initiative is intended to communicate the Department's people-management commitments and overall direction to all levels of management and staff.

- ❖ For further details on Environment Canada's initiatives related to integrated management, please refer to the work of the Management, Administration and Policy Business Line in Section 4.4.2.

## **3.4 Science and Technology – the Foundation of Environment Canada's Agenda**

Science and technology (S&T) are essential for delivering on Environment Canada's mandate. They provide the basis for the Department's policies, programs, and services. Over 40% of Canada's environmental research capacity lies within the federal government, and about half of that is located in Environment Canada. It is critical for the success of Environment Canada and for environmental management in Canada that the Department's science and technology be of high quality, aligned with departmental and federal government goals, linked to Canadian and international environmental science and technology capacity, and applied effectively to address the environmental and sustainable development needs of Canadians. Science and technology are essential assets in an increasingly knowledge-based society and economy.

Through science and technology initiatives related to climate change, the health and environmental impacts of toxic substances and pesticides, and managing watersheds and coastal zones, Environment Canada is advancing the government's goal to strengthen government science, integrate its efforts across departments and disciplines, and focus on the priorities of Canadians. Recognizing the growing prevalence of horizontal issues, the federal science and technology community is developing a new governance structure for managing these cross-cutting files.

The Department is also developing new and more effective ways of engaging with the wider science and technology system, both domestically and internationally, in order to leverage external resources and build synergies with other organizations. The Department already has built significant science and technology networks across the country and is exploring new models of partnership and collaboration involving universities, the private sector, and non-



governmental organizations. The appointment of a National Science Advisor signals a new emphasis on science and technology in the federal government.

Because science and technology are among the most complex activities conducted within the Department and because they are fundamentally important, the Department strives to foster strong science and technology management policies and practices that are aligned with federal science and technology policy. These policies and practices are developed through the Department's science and technology management system which includes both internal committees and an external advisory body, working in collaboration with federal science and technology managers and policy advisors. This institutional structure, reinforced by the support and leadership of senior management champions, has allowed Environment Canada to ensure sound and innovative management of its investment in science and technology.

- ❖ To learn more about Environment Canada's Science and Technology, visit: [http://www.ec.gc.ca/scitech/index\\_e.htm](http://www.ec.gc.ca/scitech/index_e.htm).

## **3.5 Conclusion**

We have set out a context and a clear agenda of what we need to do now – and more importantly, the approach we must take to sustain action over the long term. By continuing to work together, and by focusing on the environmental and broader societal results that we want to achieve, we will protect and sustain our natural capital for future generations, while safeguarding Canadians from environmental hazards.

# Section 4

## Plans and Priorities by Strategic Outcome

This section of the RPP describes Environment Canada's four strategic outcomes and the major priorities the Department will pursue over the next three years. For each strategic outcome, we outline the plan Environment Canada intends to follow in order to deliver on its priorities. The focus of this section is on the management strategies, major initiatives and programs that will be pursued and on the management challenges and risks that will need to be addressed to ensure success over time. It provides a high-level strategic story of the Department's plans and priorities.

You can refer to the electronic links in this section for a more comprehensive story that includes the key commitments and timelines for the major initiatives and programs that constitute each priority area. This supplementary information is also available in booklet form.

A strategic context chart is provided in Section 7 to illustrate how departmental priority areas line up with the programs, major initiatives and key results for each strategic outcome.

### 4.1 Clean Environment Business Line

#### ***Strategic Outcome:***

***Protect Canadians and their environment from domestic and global sources of pollution***

Canadians are affected by pollutants from many sources and in many different forms. Thousands of Canadians die prematurely each year from air pollution. Toxic chemicals are accumulating in humans and in our ecosystems – in lakes, rivers, wildlife and the North. Greenhouse gas (ghg) emissions are altering the climate. We have a role to play in both cleaning up the legacy from past contamination and in preventing new pollution. Our focus is therefore on prevention, as experience has shown that the costs of cleaning up past contamination are much greater than preventing pollution in the first place.

Environment Canada acts on two fronts to protect Canadians and their environment from domestic and global sources of pollution. First, we seek to reduce the impact of human activity on the atmosphere and air quality. Second, the Department works to prevent or reduce the threats posed by toxic substances or other substances of concern in the environment.

Within Environment Canada's Management Framework, the Clean Environment Business Line strategic outcome is supported by two key results. We have grouped departmental priority concerns under the key results to which they relate. This logic structure is shown in the table that follows.

## Clean Environment Business Line

Protect Canadians and their environment from domestic and global sources of pollution

### Key Results

Reduce adverse impact on the atmosphere and on air quality

Reduce the environmental and human health impacts posed by toxic substances

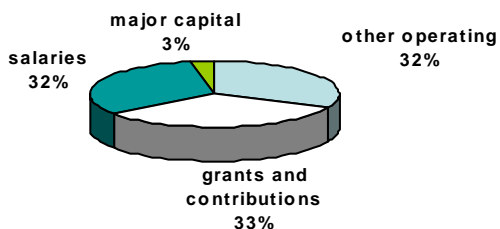
### Priorities

Improve Air Quality

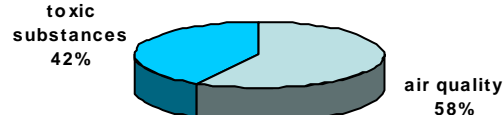
Climate Change

Toxic Substances

2004-2005 Gross Planned Spending by Input Factor (\$416.5M)



2004-2005 Gross Planned Spending by Key Result (\$416.5M)



	2003-2004 Forecast Spending*	2004-2005 Planned Spending	2005-2006 Planned Spending	2006-2007 Planned Spending
Reduced adverse human impact on the atmosphere and on air quality.	248.3	<b>242.7</b>	128.6	100.9
Understanding and prevention or reduction of the environmental and human health threats posed by toxic substances and other substances of concern.	171.4	<b>173.8</b>	197.1	189.6
<b>Gross Planned Spending</b>	419.7	<b>416.5</b>	325.7	290.5
Less: Respendable Revenue	(11.3)	<b>(9.2)</b>	(8.6)	(8.1)
<b>Net Planned Spending</b>	408.4	<b>407.3</b>	317.1	282.4

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

\* Reflects the best forecast of total net planned spending to the end of the fiscal year.

In 2003-2004, the amount in the reduced adverse human impact on the atmosphere and on air quality result includes a one-time grant payment to support the Canada Foundation for Sustainable Development Technology.

## 4.1.1 Key Result: Atmosphere and Air Quality

*Reduced adverse human impact on the atmosphere and on air quality*



### PRIORITY: IMPROVE AIR QUALITY

#### *What is the issue?*

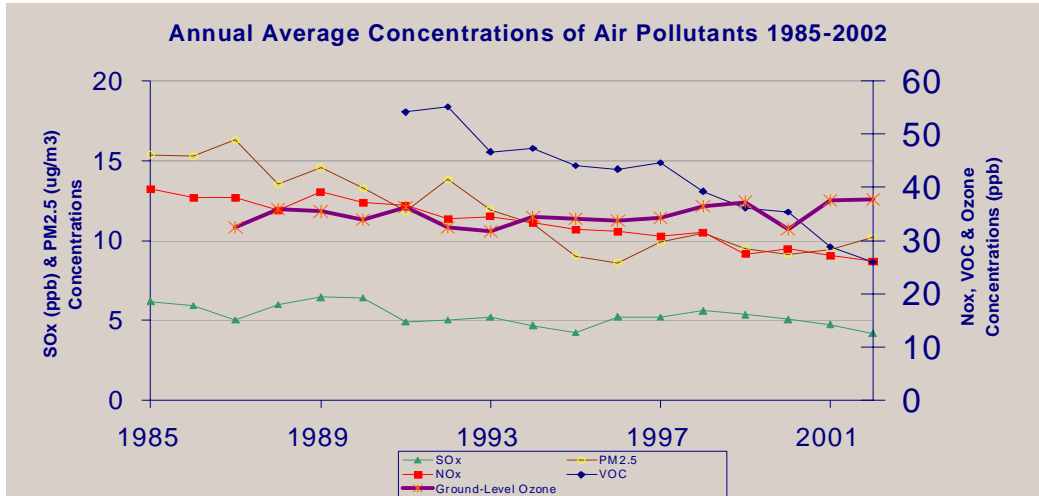
Air quality is a local and regional issue that is affected by human activities, weather, and topography. Air quality affects Canada's wildlife habitat, agricultural yields, forests and our health – cleaner air means fewer respiratory diseases among adults, fewer asthma attacks among children, fewer hospital admissions and fewer premature deaths.

Although there have been improvements in levels of some airborne pollutants in many parts of Canada, both urban and rural, many Canadians continue to experience periods of unacceptable air quality, especially in the summer. A number of pollutants, alone or in combination, worsen air quality. Together the pollutants are often called smog, which in Canada consists mostly of ground-level ozone and microscopic airborne particles known as particulate matter (PM). Ground-level ozone and over one-half of particulate matter concentrations are produced through the reaction of other air pollutants, called precursor gases, that include nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), and sulphur dioxide (SO<sub>2</sub>). These gases come primarily from human activities, such as burning fossil fuels in motor vehicles, smelters, homes, thermal power plants and other industries, and the evaporation of solvents but, in the case of volatile organic compounds, they can also come from natural sources. Ground level ozone is very dependent on sunlight and meteorological conditions so it is of greater concern in the spring and summer. It is of particular concern in the Windsor-Quebec City corridor and, to a lesser extent, in the southern Atlantic region and the Lower Fraser Valley.

Air quality is measured by the average concentrations of air pollutants in Canada and by trends in peak levels of ground-level ozone in Canada.

#### **Air Quality: Average Concentrations of Air Pollutants**

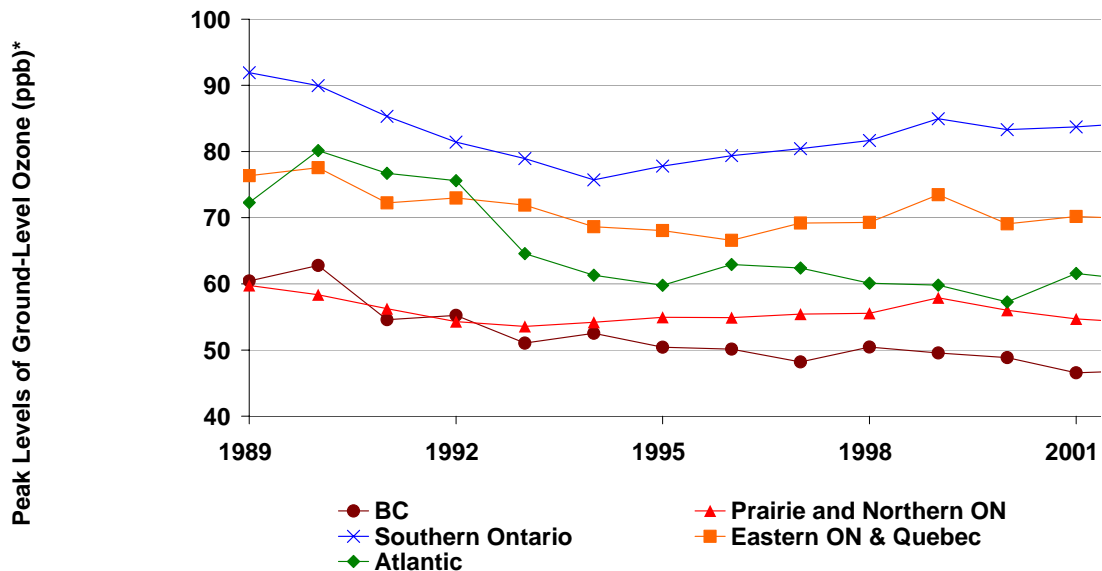
While the yearly average concentrations in urban air across Canada of sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOC), and fine particulate matter (PM<sub>2.5</sub>) have all decreased since the mid to late 1980's, there has been no noticeable net change in fine particulate matter (PM<sub>2.5</sub>) concentrations since the mid-1990's. The decreasing trends contrast with the trends in seasonal average levels for ground-level ozone, which have shown an increase over this period.



### Air Quality: Peak Levels of Ground-Level Ozone

Levels of ground-level ozone can vary considerably on an hourly, daily and monthly basis, depending on the prevailing meteorological conditions (especially temperature and air stability), the origin of air masses, and emissions. Since the late 1980's, despite the reductions observed in ambient concentrations of NO<sub>x</sub> and VOC, the peak levels of ground-level ozone, averaged across all sites in Canada, have remained relatively stable. These levels vary across the country. Levels tend to be higher east of the Manitoba–Ontario border, especially along the Windsor-Quebec City corridor.

Trends in Peak Levels of Ground-Level Ozone in Canada, 1989-2002



\* 3 year running average of 4<sup>th</sup> highest daily maximum 8h ozone levels.

Note: A standard metric for peak ozone levels has been developed for the Canada-Wide Standard that reflects the fourth highest daily maximum observed value during the ozone season (April-September) at sites across Canada.

Source: Data from NAPS (National Air Pollution Surveillance) network, adapted by Environment Canada.

## *What are we doing about it?*

Environment Canada's broad policy and program strategy for addressing air quality issues is detailed in the 10-year Clean Air Agenda that was announced in 2001. The Agenda focuses on:

- ❑ Working in partnership with provincial and territorial environment departments to attain and improve targets for Canada-wide Standards (CWS) for particulate matter (PM) and ozone;
- ❑ Reducing transboundary flows of pollutants through the implementation of the Canada-U.S. Ozone Annex to the 1991 Air Quality Agreement.
- ❑ Reducing emissions from major industry and other sectors, specifically the emissions of volatile organic compounds (VOC) from solvents used in many consumer and commercial products, through the development of a Federal Agenda for the Reduction of VOC Emissions from Consumer and Commercial Products.
- ❑ Expanding air quality monitoring and forecasting to inform the public, protect public health and monitor the progress of our air pollution control strategies.
- ❑ Increasing public engagement to reduce air pollution through the support of ongoing programs, initiatives and services, such as the One Tonne Challenge, to continue to educate Canadians.
- ❑ Continuing other areas of work on air, acid rain, Hazardous Air Pollutants (HAPs) and stratospheric ozone.

<b>Major Initiative/Program:</b> Clean Air Agenda
<p><b>Expected Results:</b></p> <p>Working in partnership with provincial and territorial environment departments to attain, review and to improve Canada-wide Standards (CWS) for particulate matter (PM) and ozone.</p> <p>Transboundary flows of air pollution are reduced.</p> <p>Emissions from vehicles, engines and fuels are reduced.</p> <p>Reduction of emissions from industrial and other sectors.</p> <p>Canadians understand how to interpret air quality information and are aware of actions they can take.</p> <p>Canadians take action to reduce air pollution.</p> <p>Continued national, bilateral, and multilateral progress on Acid Rain, HAPs and Stratospheric Ozone.</p>
<p><b>Partners:</b> Provincial/territorial environment and energy ministries, Natural Resources Canada, United States, transportation sector, industry, provinces, territories &amp; municipalities, CCME, ENGOS, Health NGOs, DFAIT, Agriculture and Agri-food Canada, CIDA, NRCAN, Health Canada, DIAND, Industry Canada, PMRA, CCME – Task Groups.</p>
<p><b>Detailed Commitments:</b> <a href="#">Click here</a> or refer to the detailed table in the Supplementary Information booklet.</p>

Over the years, our approach to air issues management has evolved to encompass the following critical success factors:

- **Sectoral strategies:** Experience has shown that the strategies for reducing emissions are most successful when they take an integrated, long-term view of the problem. The Federal Agenda on Cleaner Vehicles, Engines and Fuels, a key element of the Clean Air Agenda, reflects this strategy. First, the Agenda takes a systems approach to reducing emissions and considers fuel, engines and vehicles in an integrated program of activity. Secondly, the Agenda has a 10-year time horizon and charts a course for continual improvement. As engine and vehicle design can precede market launch by three to four years and planning and implementing refinery changes can take several years, affected industries must be given

appropriate notice to incorporate new standards. Finally, the Agenda is largely based in the context of the North American market and builds upon U.S. EPA standards and timelines where possible.

- **Partnerships:** A key element of Environment Canada's response to air quality issues, and a key objective of the Clean Air Agenda, is to mobilize others (industries, communities, NGOs, provinces and territories) to take action. An important example is the commitment by the provinces and territories to the Canada-wide Standards process. Partnerships are also used to advance research and our understanding of the impact of air quality on human and environmental health. Several non-government organizations, including the Canadian Medical Association (CMA) and the Canadian Lung Association, are actively involved in defining and addressing the effects of air pollution on human health. Still others, such as the Canadian Urban Transit Association or Go for Green are involved in Clean Air Day related initiatives.
- **Cooperation and harmonization with the U.S.:** Harmonization of Canadian and U.S. emission standards can be used to raise the bar in both countries. A good example of Canada-U.S. harmonization is the Vehicle and Engine Emission standards. The success of the cooperative approach can be seen in the coordinated and effective response to acid rain in the 1980's and 1990's. Emissions of sulphur dioxide (SO<sub>2</sub>), one of the pollutants that causes acid rain, have declined by 45% in Canada and over 35% in the United States, from 1980 levels.

### ***What are the key management challenges and risks?***

The momentum on the Federal Agenda for Cleaner Vehicles, Engines and Fuels will be continued. With on-road regulations in place, the Department will focus on completing regulations for off-road engines and vehicles (e.g. engines in lawn equipment, forklifts, personal watercraft, snowmobiles, and agricultural and construction machines) and the compliance, monitoring and reporting functions associated with implementation of on-road regulations.

Significant opportunities lie ahead for smart regulations, federal-provincial relationships and other partnerships. Specifically, we will explore in greater depth the prospects for a future particulate matter (PM) annex to the Canada-U.S. Clean Air Quality Agreement. A key partnership to meeting the Clean Air Agenda commitments to reduce transboundary emissions is the Canada-U.S. Border Air Quality initiative announced on June 23, 2003. Under the Strategy, we will continue to identify collaborative activities and develop regional strategies to co-operatively respond to air pollution in the Great Lakes Basin and in southern British Columbia's Georgia Basin/Puget Sound airshed and to explore emissions trading. The Strategy also supports our commitment to advance the Air Quality Forecast and Air Quality Index programs to cover more communities and more pollutants. The Department will also work with the medical community, provinces and non-government organizations to develop a health-risk based Air Quality Index that can be used across the country. The existing collaboration on implementation of the Canada-wide Standards for particulate matter (PM) and ozone will also continue, including work on planning for and performing the reviews of the Canada-wide Standards to be presented to the Canadian Council of Ministers of the Environment in 2005 and 2010. The Department will continue to integrate the clean air and climate change agendas, illustrating and supporting the environmental, human health and economic co-benefits of policies and measures. The integration will be supported through public education and outreach activities, policy coordination, technology development programs, co-ordinated work on emissions reporting and sector strategies where possible.

As the economy grows, continued efforts will be needed to address potential pollution that will be generated, including air emissions. This challenge becomes more complicated as international trade and new technologies are developed. A key priority is to work more closely with the United States on reducing transboundary emissions. We will also continue to leverage Ozone Annex funds to ensure co-benefits to other activities and sub-results such as climate change.

❖ To learn more about the air issues, visit: [http://www.ec.gc.ca/air/introduction\\_e.html](http://www.ec.gc.ca/air/introduction_e.html).



## PRIORITY: CLIMATE CHANGE

### *What is the issue?*

Greenhouse gases trap heat within the earth's atmosphere, and make the earth habitable. However, changing the concentrations of these greenhouse gases changes our climate. Scientific research shows that an increase in greenhouse gases from human activities (mostly from the burning of fossil fuels like gasoline and coal), combined with deforestation, is changing the balance of the world's atmosphere. As a result, the earth's average temperature is getting warmer.

Globally, climate change is recognized as one of the top three issues on par with security and trade. In Canada, climate change is affecting our environment, our health and our competitiveness.

### *What are we doing about it?*

As early as the mid-70's, Environment Canada was part of global efforts to understand the science and impacts of global climate change. Working on the development of policies and plans to reduce greenhouse gas emissions has been a departmental priority since the late 1980's. The Department's policy and program strategies are currently focused on the design and development of a new national climate change plan in cooperation with provinces/territories and stakeholders:

<p><b>Major Initiative/Program:</b> Implement near term and enduring emission reductions and set long-term goals to make the deep emission reductions needed to successfully address climate change and start working towards them.</p>
<p><b>Expected Results:</b> Sustainable electricity production and use. Sustainable transportation. Clean and efficient industry. Sustainable cities.</p>
<p><b>Partners:</b> Other government departments, provinces, territories, municipalities, the private sector, non-governmental organizations, Aboriginal organizations and the United States.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>



<b>Major Initiative/Program:</b> Help individual Canadians to do their part in meeting the climate change challenge
<b>Expected Results:</b> Canadians actively engaged in the One-Tonne Challenge and in emissions reduction actions. Canadians take into account energy efficiency/conservation considerations in their purchase, use and lifestyle decisions.
<b>Partners:</b> Municipalities, community groups, educators, the private sector including retailers, the financial sector, automakers, professional organizations (architects, engineers, transportation demand management planners), and youth.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Provide leadership in bridging to a new sustainable, global climate change regime
<b>Expected Results:</b> Continue to make progress in international implementation of key provisions in the Kyoto Protocol. A framework for a new, sustainable international climate change framework that includes all industrialized countries and key developing countries and has commitments and timeframes based on the long-term transformative changes that are required globally. Bilateral agreements with key developing countries.
<b>Partners:</b> Other government departments, the private sector, other countries, NGOs, Aboriginal organizations, and multilateral organizations.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Adapting to a changing climate (Refer also to section 4.3.3: WEP Business Line Priority Area: Informing Policy Through Science)
<b>Expected Results:</b> Awareness of impacts of climate change on economic development and planning processes Scenarios and options to guide decision-making on adaptation in areas vulnerable to a changing climate Strategies for adapting to the changing climate particularly in the North and in municipalities as well as water management strategies.
<b>Partners:</b> Other government departments, provinces, territories, municipalities, universities and the private sector.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

Achieving our climate change commitments will be a demanding task. Key challenges include:

- Ensuring Canada's long-term competitiveness and building on our environment and economic policy framework.
- Implementing new policies and programs to get more near-term and enduring emission reductions.
- Integrating climate change with other government policies/agendas in areas such as industrial strategies, the new deal for cities and foreign and trade policy.

- ❑ Addressing key technical/engineering, financial and political challenges.
- ❑ Leadership in the international process to develop a long-term, inclusive international framework.
- ❑ Ensuring Environment Canada's internal capacity is best organized to provide government-wide leadership on the issue.
- ❖ To learn more about climate change, visit: <http://www.ec.gc.ca/climate/home-e.html>.

## 4.1.2 Key Result: Toxic Substances

*Reduce the environmental and human health impacts posed by toxic substances and other substances of concern.*



### PRIORITY: TOXIC SUBSTANCES AND OTHER SUBSTANCES OF CONCERN

#### *What is the issue?*

Addressing the problem of toxic substances is complex. Toxic substances and other substances of concern can be released from many industrial, agricultural, domestic or international sources and, once released into the environment, can be dispersed to remote regions in air and water currents. These substances can be dangerous in and of themselves (e.g. mercury) or they can combine with other substances to contaminate air, water or soil. While Environment Canada focuses on reducing human production of toxic substances, some substances, such as heavy metals, occur naturally in the environment.

Other 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 particularly vulnerable. While toxic substances can affect all Canadians, the greatest health risk is to susceptible populations such as young children and the elderly.

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.

#### *What are we doing about it?*

*CEPA 1999* provides the legislative framework for preventing and managing the risks posed by toxic substances. 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 *CEPA 1999* implementation and jointly administers the research, categorization, assessment and management of toxic substances with Health Canada.

#### ***Canadian Environmental Protection Act 1999***

The goal of the *Canadian Environmental Assessment Act* is to protect the environment, human life and health from the risk associated with toxic substances and other substances of concern, and to contribute to sustainable development through pollution prevention.

- ❖ For details on *CEPA 1999*, please refer to: <http://www.ec.gc.ca/CEPARRegistry>.

Our activities can best be explained through a cycle that goes from identifying and assessing risk, managing those risks both directly and through developing risk management strategies, ensuring the strategies are complied with and monitoring and reporting on progress. We also seek to influence the development of environmental technologies to ensure environmental solutions are available in the market. The main components of toxic substances management include:

- ❑ The risks posed by toxic substances are understood and substances requiring improved management are identified under the implementation of *CEPA 1999* and the New Substances Program (NSP).

<b>Major Initiative/Program:</b> Risk Assessment
<b>Expected Results:</b> The risks posed by toxic substances are understood and substances requiring improved management are identified. Priority will be given to developing research and science strategy for emerging threats, including endocrine disrupting substances, persistent organic pollutants, genetically modified organisms, and pharmaceuticals. New Substances Program – Unauthorized use of new substances or new use of existing substances prevented.
<b>Partners:</b> Health Canada, Canadian Food Inspection Agency.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ 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.

<b>Major Initiative/Program:</b> Risk Management
<b>Expected Results:</b> Risk management actions to address sources of greatest concern for those substances added to Schedule 1. Persistent, bioaccumulative, toxic and anthropogenic substances are virtually eliminated. International obligations are met with respect to transboundary movements of hazardous waste and hazardous recyclable materials and with respect to Polychlorinated Biphenyls (PCBs). The negative environment impacts of land-based activities to coastal and marine environments are prevented. Soil and groundwater contamination from petroleum products and allied petroleum products storage tank systems are prevented.
<b>Partners:</b> Canadian Council of Ministers of the Environment, Organization for Economic Cooperation and Development (OECD), Treasury Board Secretariat, Health Canada, Fisheries and Oceans Canada, Indian and Northern Affairs Canada and Arctic Council partner countries, Natural Resources Canada, and Industry Canada.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Pollutants posing environmental and related human health risks are directly managed through direct action, such as the issuance of permits, conducting environmental assessments, environmental emergency planning, application of prevention and control techniques, and contaminated site remediation.

<b>Major Initiative/Program:</b> Pollutants are directly managed
<b>Expected Results:</b> The direct management of pollutants that pose a risk to the environment and human health is improved.
<b>Partners:</b> Department of Fisheries and Oceans, Transport Canada, Canadian Coast Guard, Canadian Environmental Assessment Agency, Public Works and Government Services Canada, Province of Nova Scotia, Cape Breton Regional Municipality, Health Canada, Parks Canada, Department of National Defence, Indian and Northern Affairs Canada, Royal Canadian Mounted Police, Natural Resources Canada, Treasury Board Secretariat, Canadian Food Inspection Agency, Foreign Affairs Canada, International Trade Canada, Correctional Service of Canada, Agriculture and Agri-Food Canada, provincial governments.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Compliance with environmental protection legislation by focusing on educating and informing the regulated community about Canada’s pollution prevention laws and regulations (*CEPA 1999* and *Fisheries Act* section 36), and by carrying out compliance promotion and enforcement activities.

<b>Major Initiative/Program:</b> Compliance with environmental protection legislation
<b>Expected Results:</b> Compliance with environmental protection legislation is improved (ongoing).
<b>Partners:</b> Department of Fisheries and Oceans, the Royal Canadian Mounted Police, the Border Services Agency, the Canadian Coast Guard and provincial/territorial environment ministries.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Improve monitoring and reporting to in order to inform future government, business and citizen action on pollution prevention and control by collecting and providing information through the National Pollutant Release Inventory (NPRI), *CEPA* Registry, and other avenues.

<b>Major Initiative/Program:</b> Monitoring and Reporting
<b>Expected Results:</b> To collect information through the National Pollutant Release Inventory (NPRI), <i>CEPA</i> Registry, industry Environmental Effects Monitoring and other avenues and make data available to Canadians.
<b>Partners:</b> National Air Pollution Surveillance (NAPS), provincial and territorial governments, Health Canada.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

Our continuing strategy for managing the risk of toxic substances focuses on using the most appropriate tool or mix of tools to achieve the desired environmental result. The tools provided by *CEPA 1999* include new measures such as pollution prevention plans, and range from regulatory action to voluntary instruments. We will continue to form effective partnerships with industry, other levels of government, including provinces, territories and municipalities, Aboriginal groups and other federal departments. The mandatory review of *CEPA 1999* in 2005 will provide an opportunity to review progress, identify where modifications are warranted and identify opportunities for improvement.

Environment Canada acts as a catalyst and facilitator in forming strategic partnerships that stimulate and support corporate sustainability leadership among Canadian companies. Not only do these partnerships lead to results in the areas of protection of the environment and health of Canadians, but they also help to deepen corporate commitment to practices that align with the concept of sustainable development. Companies are profiting from “eco-efficient” technologies that help to reduce their production costs and by answering a growing demand for environmentally friendly products and services.

As part of the federal government’s efforts to enhance the personal and economic security of Canadians, prevent terrorist activities and ensure the protection of the environment and human health and safety, the Department will continue to implement measures in the following areas: environmental emergencies, hazardous waste and contaminated sites, and compliance promotion and enforcement.

## 4.2 Nature Business Line

### *Strategic Outcome: Conserve biodiversity in healthy ecosystems*

Canada is recognized internationally for its natural wealth, including wildlife, forests, water and protected areas. At home, Canada's ecosystems and wildlife are legacy issues for Canadians – a part of our Canadian identity and an essential resource to be preserved for future generations. 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, 1,100 species of fish and 4,000 species of plants. From a global perspective Canada has 20% of the world's remaining wilderness, 7% of the world's renewable freshwater, 25% of the global wetlands, 10% of its forests and the longest coastline in the world. This shows just how important it is for Canada and Canadians to care for and to protect Canada's ecosystems and wildlife.

Through the Nature Business Line, Environment Canada acts to conserve biological diversity (biodiversity) in healthy ecosystems. This is achieved by building shared sustainability strategies for Canada's wildlife and ecosystems, fresh water and wetland resources, contributing to scientific understanding of ecosystems, establishing science and technology practices and developing partnerships to improve the health of nationally significant ecosystems.

Within Environment Canada's Management Framework, the Nature Business Line strategic outcome is supported by three key results. We have grouped departmental priority concerns under the key results to which they relate. The priority concerns identified all aim to address the departmental priority #3: "Sustain Our Natural Environment." This logic structure is shown in the table that follows.

## Nature Business Line

*Conserve biodiversity in healthy ecosystems*

### Key Results

**Biological Diversity**

**Health of Ecosystems**

**Priority Ecosystems**

### Priorities

**Broader Conservation Strategies**

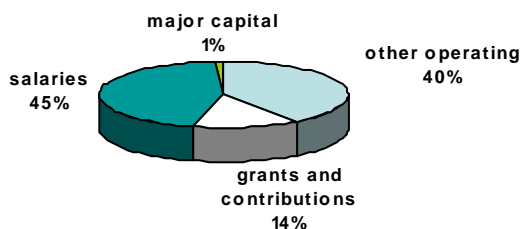
**Wildlife**

**Leadership in Ecosystem Science**

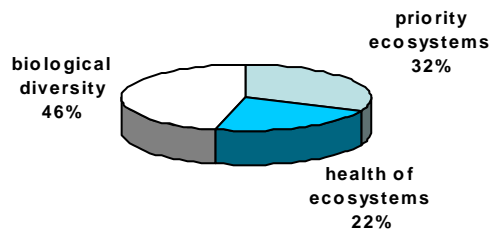
**Water**

**Integrated Conservation Planning Through Ecosystem Initiatives**

**2004-2005 Gross Planned Spending by Input Factor (\$215.1M)**



**2004-2005 Gross Planned Spending by Key Result (\$215.1M)**



	2003-2004 Forecast Spending*	2004-2005 Planned Spending	2005-2006 Planned Spending	2006-2007 Planned Spending
Biological diversity is conserved.	96.2	<b>99.2</b>	103.3	102.9
Human impacts on the health of ecosystems are understood and reduced.	46.2	<b>48.1</b>	47.1	46.4
Priority ecosystems are conserved and restored.	94.5	<b>67.8</b>	67.8	67.1
<b>Gross Planned Spending</b>	236.9	<b>215.1</b>	218.2	216.4
Less: Respendable Revenue	(7.6)	<b>(6.9)</b>	(6.8)	(6.8)
<b>Net Planned Spending</b>	229.3	<b>208.2</b>	211.4	209.6

\* Reflects the best forecast of total net planned spending to the end of the fiscal year. Please note that totals may differ between and within tables due to rounding of figures.

## 4.2.1 Key Result: Biological Diversity

*Conservation of biological diversity*



### PRIORITY: BROADER CONSERVATION STRATEGIES

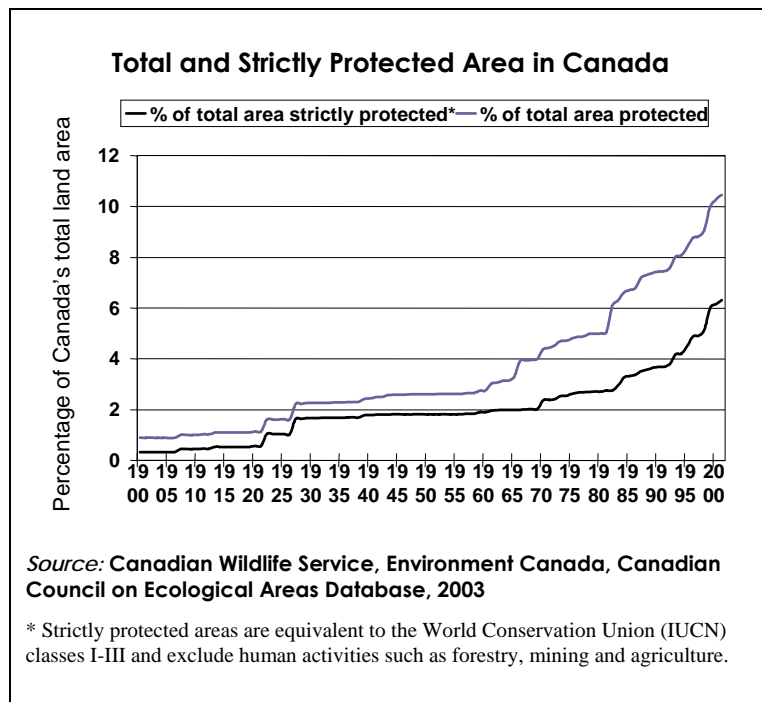
#### *What is the issue?*

The most significant threat to biodiversity now lies in the loss, degradation and fragmentation of the habitats that animals and plants need to survive. Parks and protected areas help protect natural habitats, but they are scattered throughout the country with limited natural linkages between them. Some protected areas are found at high elevations, or on biologically unproductive lands that support fewer species than those at lower elevations.

The second largest threat to biodiversity is invasive alien species (IAS). An “invasive species” is defined as a species that is 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g. microbes). Human actions are the primary means of invasive species introductions.

In Canada, the number of invasive alien species continues to grow and major pathways are not yet regulated or sufficiently monitored. In September 2002, the federal, provincial and territorial Ministers of Wildlife, Forest, and Fisheries and Aquaculture approved a discussion document as the basis for consultation on a draft national plan to address the threat of invasive alien species. Thematic working groups including aquatic invasives, terrestrial animals, terrestrial plants, and leadership and coordination, have been tasked with identifying and assessing major pathways of introduction, priority policy issues and developing associated action plans to address these issues and pathways.

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 from wilderness, parks and working landscapes, to urban centres. To maintain ecosystem integrity,



decisions related to human activities within landscapes and seascapes must also be interconnected and coherent. The lack of recognition of the interconnectedness of Canada’s resources has meant that the impact of efforts to conserve Canada’s natural legacy is not as significant as it could be. There is a strong need to develop partnerships with industry, academia and non-governmental organizations to promote and advance integrated conservation planning and management.

***What are we doing about it?***

In order to address issues related to maintaining ecosystem integrity and protecting species, the Department is actively involved in the following areas of broad ecosystems work:

- ❑ Implementing the Canadian Biodiversity Strategy through working with federal, provincial and territorial partners and others to identify conservation priorities and develop collaborative partnerships. This effort includes a special focus on developing a national strategy to address the threat of invasive alien species.

<b>Major Initiative/Program:</b> Canadian Biodiversity Strategy
<p><b>Expected Results:</b></p> <p>Develop a biodiversity science agenda for Canada including a biological information management component.</p> <p>Enhance capacity to monitor and report on the status and trends of biodiversity.</p> <p>Address the threat of invasive alien species (IAS).</p> <p>Engage Canadians through biodiversity stewardship.</p> <p>Develop recommendations for new/emerging inter-jurisdictional priorities.</p>
<p><b>Partners:</b> Fisheries and Oceans Canada, Natural Resources Canada, Indian and Northern Affairs Canada, provinces and territories, private sector, ENGOs.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>

- ❑ Implementing a Natural Legacy Agenda, in partnership with other federal departments, that works towards a more integrated approach to protection, conservation and sustainable use of Canada’s natural resources.

<b>Major Initiative/Program:</b> Natural Legacy Agenda
<p><b>Expected Results:</b></p> <p>Wild living resources are conserved. (Refer also to expected results under “Protecting species at risk” and “Sustaining Migratory Bird Population” major initiatives/programs.)</p> <p>Public and private stewardship on Canada’s lands and waters have extended and advanced forward.</p> <p>Canada’s protected areas are established, expanded and restored (refer also to expected results under “Protecting and conserving habitats” major initiative/program).</p> <p>Strengthen the scientific information base.</p>
<p><b>Partners:</b> National Round Table on the Environment and Economy, Aboriginal Peoples, Commission for Environmental Cooperation, NGOs, community level organizations, Fisheries and Oceans Canada, Parks Canada, Agriculture and Agri-Food Canada.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>



## ***What are the key management challenges and risks?***

Absence of coordinated and effective partnerships to deliver results will continue to be the most challenging aspect of managing broader ecosystems. Lack of an intensive focus on priorities associated with implementing a Nature Legacy Agenda in partnership with other federal departments is also a risk related with the process.

The Department will also work towards developing a coordinated system to integrate ideas and suggestions from its partners, including responding to recent reports such as the National Round Table on the Environment and Economy (NRTEE) report *Securing Canada's Natural Capital: A Vision for Nature Conservation in the 21<sup>st</sup> Century*; *The Status of Wildlife Habitats in Canada* from the Wildlife Habitat Canada (WHC) and the *Nature Audit 2003* from the World Wildlife Fund (WWF)-Canada.

- ❖ To learn more about the Canadian Biodiversity Strategy visit:  
[http://www.bco.ec.gc.ca/documents/CBS\\_E.doc](http://www.bco.ec.gc.ca/documents/CBS_E.doc).

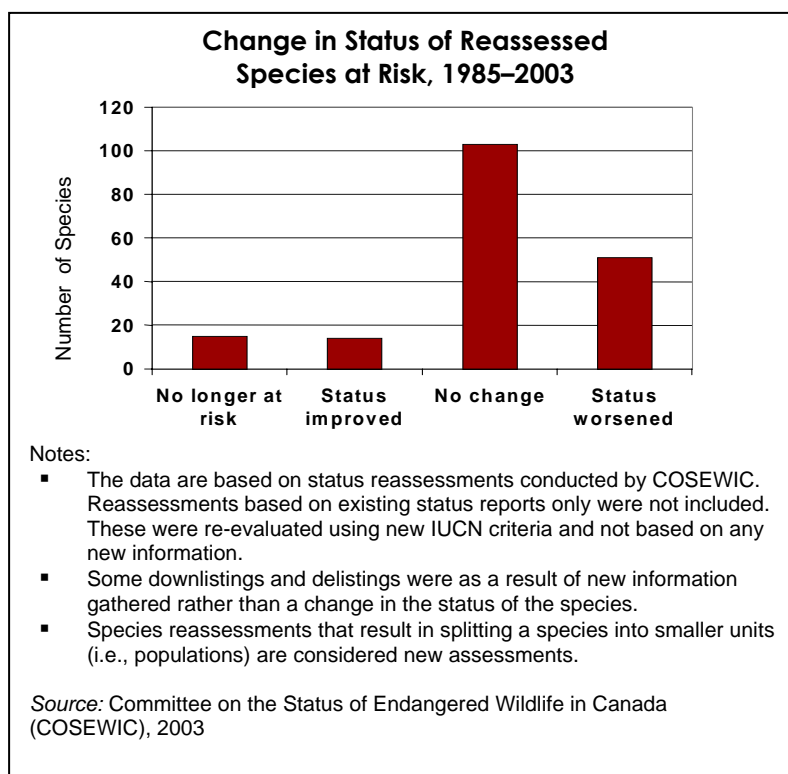


## **PRIORITY: WILDLIFE**

### ***What is the issue?***

Despite abundant natural resources and Canadians' appreciation of nature, Canada's natural capital is at risk. Human induced pressures are contributing to significant declines in many species of animals and plants. In Canada, 429 species are currently identified by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as extirpated, endangered, threatened or of special concern. Urbanization, agricultural intensification, forest harvesting and other resource extraction activities 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 are exacerbating this situation. Finally, increased international human movement and trade have led to new threats to wildlife and their habitats from introduced diseases and invasive alien species.



## ***What are we doing about it?***

Environment Canada discharges the federal government's responsibilities for managing wildlife, particularly migratory birds and species at risk, and their habitats. The Canadian Wildlife Service (CWS) Strategic Plan 2000 sets out the direction and scope of the Department's wildlife and conservation efforts through 2010. The Plan has an overarching goal of preserving biological diversity, with a focus on three key issues that are identified in this report as the three priority components.

- Protecting species at risk – implement the National Strategy for the Protection of Species at Risk with a special focus on effective discharge of responsibilities related to the new federal *Species at Risk Act (SARA)*.

<b>Major Initiative/Program:</b> Protecting species at risk
<b>Expected Results:</b> The National Strategy for the Protection of Species at Risk and <i>Species at Risk Act</i> are implemented. <ul style="list-style-type: none"><li>• Species are assessed and considered for listing under <i>SARA</i>;</li><li>• Recovery strategies are prepared for species listed as extirpated, endangered and threatened;</li><li>• Provincial and territorial governments and Aboriginal organizations are engaged;</li><li>• Stakeholder consultations contribute to desired results;</li><li>• Enforcement capability for species at risk is established; and</li><li>• International obligations related to species at risk are met.</li></ul>
<b>Partners:</b> Fisheries and Oceans Canada, Parks Canada, OGDs, provinces and territories, NGOs, Aboriginal organizations.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- Sustaining migratory bird populations – maintain healthy populations at acceptable levels.

<b>Major Initiative/Program:</b> Sustaining migratory bird populations
<b>Expected Results:</b> Knowledge of the status of migratory bird populations is acquired and conservation measures undertaken. Compliance with the <i>Migratory Bird Convention Act</i> is promoted and enforced. Awareness of stakeholders and the public is increased and support for migratory bird conservation initiatives obtained. Cooperative management processes and structures are established to accommodate and respond to Aboriginal and treaty rights in land claim settlements. Partnership initiatives for migratory bird conservation are developed and implemented. Impacts of toxic substances and diseases on migratory birds are understood and mitigated.
<b>Partners:</b> Primarily the United States and Mexico, but also limited involvement with other nations in the Western Hemisphere. Includes government and non-government agencies and organizations.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Protecting and conserving habitats – protect, conserve and rehabilitate habitat significant to migratory birds and species at risk.

<b>Major Initiative/Program:</b> Protecting and conserving habitats
<p><b>Expected Results:</b></p> <p>Species at risk and their habitats are conserved through the Habitat Stewardship Program.</p> <p>National Wildlife Areas, Marine Wildlife Areas, Migratory Bird Sanctuaries and RAMSAR sites are established and maintained.</p> <p>Land donations to support conservation are enabled through the Ecological Gifts Program.</p> <p>Aboriginal organizations and communities continue to be engaged.</p> <p>Stakeholder consultations and participation continue to be used to contribute to desired results.</p>
<b>Partners:</b> Aboriginal Peoples, other government departments, provinces and territories.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

Environment Canada has entered a new phase of program development and implementation in order to meet significantly increased responsibilities under the new *Species at Risk Act (SARA)*. Most notably, the Department is developing or acquiring new expertise to evaluate and respond to threats for a much broader spectrum of species and their habitats than before. *SARA* has also brought clear cooperation and consultation requirements (with a wider variety of stakeholders), reporting and process requirements and performance timelines intended to ensure open and transparent program delivery. These new responsibilities place a strain on resources and capacity.

The magnitude of the species at risk agenda has resulted in the conservation community devoting considerable attention to this issue. However, concerns about habitat loss, the need for more protected areas in Canada, wildlife diseases and invasive alien species are now moving up on the conservation agenda. Calls to complete and expand the scope of Canada’s system of protected areas networks are intensifying as the general decline in the quality and quantity of the habitat base in Canada becomes increasingly evident. Also, across the conservation agenda, there is a need to develop better tools (such as monitoring systems and data sharing) to evaluate how wildlife populations respond to habitat change and other stressors and to make greater use of innovative incentives and programs (e.g. tax policies, conservation easements) to influence land use planning and decision-making.

Although the Department’s conservation challenges and obligations have continued to expand, the resources to address some of the challenges have not increased accordingly. For example, pressure continues to mount on Environment Canada to expand the use of National Wildlife Areas as a key mechanism to enhance federally protected areas across the country. As a result, our partnerships are more important than ever. Non-government partners are increasingly recognized as integral players in wildlife conservation, bringing expertise, resources and alternative approaches to the table. The Department will continue to foster our partnerships with wildlife conservation organizations, universities, industry associations and landowners across Canada.

The increasing flow of goods and people across borders brings increasing challenges to the conservation of wildlife. Increased likelihood of colonization by invasive alien species, together with threats to migratory species when they are outside Canada, adds to international concerns. Many of the international conventions and agreements to which Canada is a signatory are now seen as bringing new opportunities as well as obligations. Environment Canada, along with other federal departments and the provinces and territories, is currently addressing the issue of invasive alien species as one of four commitments selected from the Canadian Biodiversity Strategy as requiring priority action.

- ❖ To learn more about Canada’s species at risk, visit: <http://www.cws-scf.ec.gc.ca/theme.cfm?lang=e&category=12>.

## 4.2.2 Key Result: Health of Ecosystems

*Human impacts on the health of ecosystems are understood and reduced.*



### PRIORITY: LEADERSHIP IN ECOSYSTEM SCIENCE

#### *What is the issue?*

The ability to secure a clean and healthy environment for Canadians is dependent upon our capacity to understand how our ecosystems are affected by human-induced stressors and to transfer that knowledge to Canadians and the global community. Only then can it be incorporated into decision-making. An understanding of the ecosystem structure, processes and functions, as well as the effects of economic activities, is a critical requirement for effective ecosystems-based management and it is of fundamental importance to sound decision-making.

#### *What are we doing about it?*

Environment Canada works in collaboration with other federal departments, provinces and territories (e.g. individually or through the Canadian Council of Ministers of the Environment), science networks related to work on the environment, as well as the public (including non-governmental organizations, academia and municipalities) to share information, determine priorities for monitoring and research, and provide timely and integrated scientific information and advice to decision-makers.

Environment Canada’s focus in the ecosystem health priority area includes the following four activity areas:

- ❑ Determine “*what is changing*” within ecosystems – ensure that Canadians receive timely information and advice on the status and trends of the health of ecosystems.

<p><b>Major Initiative/Program:</b> Environmental quality status and trends monitoring and reporting</p> <p><b>Expected Results:</b>  Enhanced linkages with networks in Canada and improved information sharing on ecosystem changes.  Integrated approach to the generation, acquisition and dissemination of information and knowledge.  More accessible information on ecosystem health and enhanced public awareness of ecosystem changes.  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.</p>
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**Partners:** Other federal departments, provinces and territories (individually or through Canadian Council of Ministers of the Environment), science networks and the public (ENGOS, academia).

**Detailed Commitments:** Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Assess “*why things are happening / changing*” – advance the scientific understanding of the impacts of human activities on the health of ecosystems.

**Major Initiative/Program:** Advance and transfer scientific understanding

**Expected Results:**

Improved understanding of stressors and improved decision-support tools, through partnerships, to assess, predict and communicate the health of Canada’s national, bi-national and international watersheds/ecosystems.

Policy- and decision-makers and Canadians have the knowledge and information required to make decisions to protect and conserve the environment; to change policies; and to make changes in their activities.

**Partners:** Other federal departments, provinces and territories (individually or through Canadian Council of Ministers of the Environment), science networks and ENGOS, academia, international academic community.

**Detailed Commitments:** Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Determine “*what we can do about it*” – provide science-based advice and solutions that contribute to reducing human impacts on the health of ecosystems.

**Major Initiative/Program:** Science-based tools and approaches

**Expected Results:**

More and improved application of guidelines across Canada and in shared watersheds/ecosystems.

Improved tools and approaches for integrated resource management and ecosystem remediation.

Improved engagement and support for solutions to conserve, protect and rehabilitate ecosystems.

Requirements arising from acts, regulations and national and international agreements and environmental assessments are met.

**Partners:** Other federal departments, provinces and territories (individually or through Canadian Council of Ministers of the Environment), science networks and ENGOS, academia, municipalities.

**Detailed Commitments:** Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ “*Ensure excellence in managing science and technology*” – strategic management of Environment Canada’s Science and Technology (S&T) in alignment with federal science and technology policy.

**Major Initiative/Program:** Science and Technology (S&T) Management

**Expected Results:**

Environment Canada’s science and technology are high quality.

Environment Canada’s science and technology efficiently and effectively support the Department’s mission and contribute to achieving the federal government’s goals.

Environment Canada’s science and technology are integrated with federal, Canadian and international environmental science and technology capacity.

Environment Canada’s science and technology effectively address the environmental and sustainable development needs of Canadians.

**Partners:** Granting agencies and foundations (e.g. Canada Foundation for Innovation, Natural Sciences and Engineering Research Council of Canada, Canadian Institutes of Health Research, Social Sciences and Humanities Research Council), OGDs, universities.

**Detailed Commitments:** Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

Canadians continue to be concerned about the impacts of land use practices and the ecosystem effects of stressors such as toxic substances and other substances of concern, climate change, and biodiversity change on aquatic ecosystem health.

Through the Canadian Council of Ministers of the Environment (CCME), Environment Canada has been working with its provincial and territorial counterparts to provide new knowledge to decision-makers and Canadians on the impacts of human activities on the health of ecosystems. Ongoing and future efforts aim to protect water quality from source to tap by focusing on water quality research priorities, sharing best management practices, developing water quality monitoring network of networks, improving Internet-based information on water quality, and accelerating the development of water quality guidelines.

- ❖ To learn more about the work being done under this key result visit: <http://www.nwri.ca/nwri-e.html> and <http://www.ec.gc.ca/CEQG-RCQE/English/default.cfm>.

## **4.2.3 Key Result: Priority Ecosystems**

*Conservation and restoration of priority ecosystems.*



### **PRIORITY: WATER INITIATIVES**

#### ***What is the issue?***

Clean, safe and secure water for people and ecosystems continues to be a shared vision for governments domestically and internationally. Globally, the overarching focus is on the water Millennium Development Goal (MDG) and the World Summit on Sustainable Development (WSSD) sanitation target, which aim, respectively, to halve by 2015 the proportion of people who lack access to safe drinking water and adequate sanitation. The WSSD Joint Plan of Implementation also commits countries to formulate water efficiency plans and integrated water resource management plans by 2005. The United Nations Commission on Sustainable Development has also selected water, sanitation, and human settlements as the themes for its first two-year cycle of work (2004 and 2005).

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 pressures on both water supply and quality in parts of Canada. Adequate supplies of clean water are required to support each pillar of sustainable development. Incidents such as the contamination of drinking water in Walkerton, Ontario and in North Battleford, Saskatchewan undermine public confidence in water systems management. Events involving floods or droughts increase concerns for economic stability in other regions (e.g. Prairies). Consumption of water is high per capita in Canada and ultimately impacts on the sustainability of infrastructure facilities.

The federal government has a key science-based role to play. This includes identifying water quality threats and threats to water availability. Science is vital to helping all levels of government set priorities and take actions to ensure that Canadians have clean, safe and secure water.

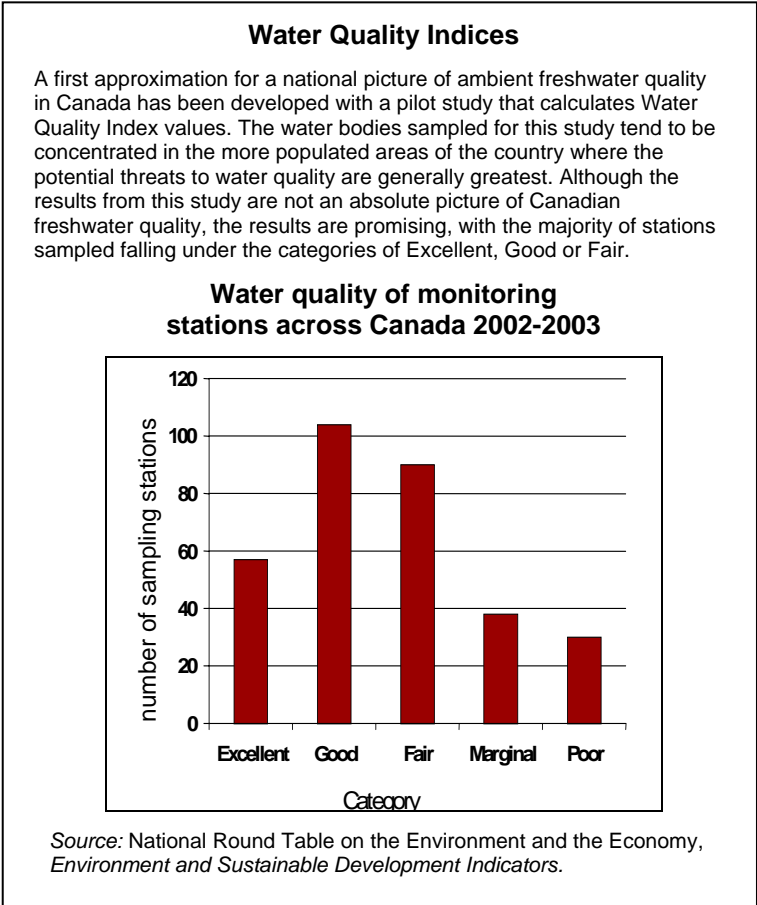
***What are we doing about it?***

Responsibility for the management of freshwater is shared among governments, industry and individual Canadians. Provinces and territories have primary jurisdiction over most areas of water management and protection, and most governments delegate some of these authorities to municipalities. Federal jurisdiction applies to conservation and protection of oceans and their resources, fisheries, navigation, shipping, and international relations and agreements (Canada-U.S. boundary waters). The federal government is also responsible for water on federal lands including Territories, parks and First Nations communities. Although not expressly stated in the Constitution, the federal government plays a lead role in providing water science and monitoring to support water management by all jurisdictions. Canada also plays a key role in developing science-based water quality guidelines. There is a need to apply these guidelines within the federal house (e.g. National Parks) as well as in other jurisdictions and sectors.

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

- Demonstrating water science leadership by accelerating various research strategies to improve water protection.

<b>Major Initiative/Program:</b> Research
<p><b>Expected Results:</b></p> <p>Collaborative approaches with stakeholders using models and tools for integrated analysis of water quality, quantity and use to address sustainable water management issues.</p> <p>Application of Sustainable Water management strategies to selected rivers and watersheds.</p>
<p><b>Partners:</b> Federal, provincial and territorial governments, municipalities, industrial sectors, Indian and Northern Affairs Canada, Health Canada.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>



- ❑ Strengthening water governance and promoting integrated water resource management among key water-related partners.

<b>Major Initiative/Program:</b> Governance
<b>Expected Results:</b> CCME Water Action Plan is implemented. An integrated, watershed approach to water management in Canada is advanced. First Nations Water Management Strategy is delivered in First Nations communities through a partnership approach (Environment Canada, Health Canada, Indian and Northern Affairs Canada).
<b>Partners:</b> Federal, provincial, territorial and municipal governments, Indian and Northern Affairs Canada, Health Canada.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Making sustainable water-use information available to the Canadian public and to decision-makers.

<b>Major Initiative/Program:</b> Awareness
<b>Expected Results:</b> Knowledge and understanding of water use is developed and disseminated to Canadians in a targeted and integrated manner.
<b>Partners:</b> Federal, provincial, territorial and municipal governments, NGO's, academia and the general public.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Developing innovative tools and instruments and making them available to support water management.

<b>Major Initiative/Program:</b> Tools and Instruments
<b>Expected Results:</b> The Water Quality Index as recommended by NRTEE Report (Environment and Sustainable Development Indicators) is refined and reported regularly at the national and regional level. Promote the application of various tools and instruments for water management.
<b>Partners:</b> Federal, provincial, territorial and municipal governments, Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration, Health Canada, stakeholders, NGO's, academia.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Deliver on international commitments.

<b>Major Initiative/Program:</b> International and Bi-National Water Initiatives
<b>Expected Results:</b> Canadian Global Water Strategy is developed. Consensus on Canada-U.S. Transboundary Water.
<b>Partners:</b> Canadian Council of Ministers of the Environment, provincial, territorial and municipal governments, NGO's, the International Joint Commission, industry, academia.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.



### ***What are the key management challenges and risks?***

The Auditor General has raised concerns about the trend of directing resources away from environmental quality monitoring systems. Significant efforts are underway to improve information on the status of water quality at national and local levels across Canada but successful programs involve significant leveraging of in-kind services and resources from provinces, communities, non-governmental organizations, and other government departments. There is a need to enhance existing partnerships and build new ones at the national and international level to have an integrated approach and agenda for addressing these issues.

In addition, responsibilities for research on water are shared by several federal departments. Issues such as agriculture, groundwater, transportation, manufacturing, mining, energy (hydro and thermal), forestry and fisheries are some key examples of how this issue cuts across various departments and jurisdictions. Progress is occurring at different rates within each of these sectors and an important challenge over the next three years will be how to better integrate and coordinate the work of these sectors.

❖ To learn more about issues related to water, visit: [http://www.ec.gc.ca/water\\_e.html](http://www.ec.gc.ca/water_e.html).



### **PRIORITY:**

## **INTEGRATED CONSERVATION PLANNING THROUGH ECOSYSTEM INITIATIVES**

### ***What is the issue?***

Integrated conservation planning is often used as a synonym for other terms such as ecosystem management, landscape management, ecosystem approach, and watershed management, as examples. In common, they are all based on

related concepts that encourage a whole-system approach to managing resources. Canada's landscapes and seascapes are diverse, containing varying habitats and ecosystems including tundra, grasslands, estuaries and forests. Associated with these ecosystems are many resources and assets either on the ground (e.g. trees, wildlife, wetlands, soils) or below the ground or sea (e.g. oil and gas, minerals, groundwater). The challenge is to develop a general approach involving the consolidation of the more independent resource-based, species-based, habitat-based or protected areas-based management approaches into a more encompassing framework to serve broader conservation and resource management goals.

**Environment Canada has six  
Ecosystem Initiatives in place:**

- Atlantic Coastal Action Program
- St. Lawrence Action Plan
- Great Lakes Action Plan
- Western Boreal Conservation Initiative
- Northern Ecosystem Initiative
- Georgia Basin Action Plan

### ***What are we doing about it?***

Ecosystem Initiatives (EIs) are key examples of such integrated conservation planning mentioned above. In essence, Ecosystem Initiatives are cooperative efforts to address complex environmental issues affecting targeted ecosystems. Ecosystem Initiatives help Canadians

achieve environmental results through partnerships, pooling resources, focusing science, coordinating efforts, sharing information and experiences and generating a broad basis of support. They help build the capacity of all the players involved to make better decisions and to effect change.

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

- ❑ Atlantic Coastal Action Program – Environment Canada, through the Atlantic Coastal Action Program (ACAP), has empowered and works directly with, and in support of, ecosystem-based coalitions of stakeholders at the individual watershed-estuary level, as well as at a broader ecosystem scale throughout the region. These ecosystem-based communities have developed, and are implementing, clear and targeted comprehensive management plans.

<b>Major Initiative/Program:</b> Atlantic Coastal Action Program
<b>Expected Results:</b> Improve public awareness and enhance scientific understanding of environmental issues. Build capacity to assume a leadership role for sustainability in their communities. Improve and enhance the environment through action identified in comprehensive environmental management plans.
<b>Partners:</b> Atlantic Coastal Action Program communities, Atlantic provinces, other government departments, private sector, non-governmental organizations, academia.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ St. Lawrence Action Plan – The St. Lawrence Action Plan (SLAP) is guided by the vision of a healthy and prosperous St. Lawrence ecosystem that favours ecological integrity, human health, environmentally friendly economic activities and the commitment of communities. Cooperative action by federal and provincial departments and various partners aims at producing tangible, significant results in areas such as community involvement, agricultural clean-up, biodiversity conservation, industrial and urban clean-up and navigation.

<b>Major Initiative/Program:</b> St. Lawrence Action Plan
<b>Expected Results:</b> Improve our knowledge of the St. Lawrence ecosystem (impacts of stresses, biodiversity, monitoring). Increase public knowledge of the state of the ecosystem’s health (Cyber St. Lawrence, Biosphère). Support local community groups (14 ZIP committees) and build new partnerships (with Biosphère, coastal management groups). Work collectively to implement actions that contribute to the health and prosperity of the St. Lawrence ecosystem.
<b>Partners:</b> Federal departments (Environment Canada, Agriculture and Agri-Food Canada, Department of Fisheries and Oceans, Transport Canada, Canadian Space Agency, Economic Development Canada, Canadian Payments Association, Public Works and Government Services Canada, Government of Quebec, Areas of Prime Concern (ZIP), non governmental organizations, industry.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Great Lakes Action Plan – The federal Great Lakes Program is a partnership of eight federal departments with the goals of 1) a healthy environment; 2) healthy citizens; and 3) sustainable communities. Budget 2000 announced an additional \$40 million to be contributed over the next five years in federal funding to restore environmental quality in significantly degraded “Areas of Concern” designated pursuant to the Canada-United States Great Lakes Water Quality Agreement.

<b>Major Initiative/Program:</b> Great Lakes Action Plan
<p><b>Expected Results:</b></p> <p>Restored environmental quality in two Areas of Concern, resulting in the removal of the designation “Area of Concern.”</p> <p>Completion of all required actions for Remedial Action Plans in at least six Areas of Concern.</p> <p>Progress towards the rehabilitation of ecological systems in the remaining Areas of Concern.</p> <p>Progress towards the virtual elimination or significant reductions for persistent bioaccumulative toxic substances such as mercury, dioxins, furans and PCBs.</p>
<p><b>Partners:</b> Agriculture and Agri-Food Canada, Fisheries and Oceans Canada, Health Canada, Parks Canada, Natural Resources Canada, Public Works and Government Services Canada; Transport Canada, Ministry of Agriculture, Food and Rural Affairs, agencies of the United States federal government and the eight Great Lakes States.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>

- ❑ Western Boreal Conservation Initiative – The Western Boreal Conservation Initiative (WBCI) was launched in April 2003 as a vehicle to bring Environment Canada’s strong conservation mandate and inter-jurisdictional focus to the boreal forest. The boreal forest represents over half of Canada’s land mass and holds enormous environmental wealth for biodiversity, clean air and water. In 2004-05, the WBCI will focus on project delivery.

<b>Major Initiative/Program:</b> Western Boreal Conservation Initiative
<p><b>Expected Results for Phase I (2003-2008):</b></p> <p>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.</p> <p>Working through partnerships, management of boreal forests in Canada are moving towards a model of conservation-based landscapes, based on the principles of protected areas and sustainable development.</p> <p>Partnerships and resources are in place that will allow Phase II of WBCI to function as a nationally-based program across the boreal forest.</p> <p>No new species have become at risk in the boreal forest and contribution has been made to ensure recovery of species that were at risk.</p> <p>There is an increased awareness and appreciation of boreal forests and their biodiversity in Canada.</p>
<p><b>Partners:</b> Provincial and territorial departments, other federal government departments, NGOs, forest and energy industry, academia, aboriginal peoples.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>

- ❑ Northern Ecosystem Initiative – With a vision focused on enhancing the future health and sustainability of communities and ecosystems across the Canadian North, the Northern Ecosystem Initiative (NEI) is supporting efforts to improve our understanding and awareness of the effects of climate change, contaminants and resource use activities. The ultimate goal of this initiative is to increase the ability to manage ecosystems as well as their assets including resources, and support sustainable communities within a changing environment.

<b>Major Initiative/Program:</b> Northern Ecosystem Initiative
<p><b>Expected Results:</b></p> <p>Enhance the future health and sustainability of northern communities and ecosystems.</p> <p>Increased knowledge and awareness of ecosystem impacts of contaminants, climate change and resource use activities.</p> <p>Further development of a northern monitoring network able to provide information on ecosystem status and trends.</p> <p>Enhanced capacity in northern communities and Aboriginal organizations.</p>
<p><b>Partners:</b> Indian and Northern Affairs Canada, Natural Resources Canada, Agriculture and Agri-Food Canada, Department of Fisheries and Oceans, Governments of the Northwest Territories, Yukon, Nunavut, Quebec, Ontario, Newfoundland and Labrador, Innu Nation, Inuit Tapiriit Kanatami, Dene Nation, Council of Yukon First Nations, Cree Council of Northern Quebec, Naskapi First Nation, Inuit of Nunavik, and academia, the private sector, non-governmental organizations, and northern communities.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>

- ❑ Georgia Basin Action Plan – The Georgia Basin Action Plan aims at achieving healthy, productive and sustainable ecosystems and communities in the Georgia Basin. The Georgia Basin Action Plan represents cooperative action by governments and partners to achieve measurable environmental results and enhance the ability of individuals, communities and the private sector to make decisions that promote sustainable development.

<b>Major Initiative/Program:</b> Georgia Basin Action Plan
<p><b>Expected Results:</b></p> <p>Collaborative stewardship actions support the sustainability of the Georgia Basin.</p> <p>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.</p> <p>Scientific and indigenous knowledge supports improved decision-making by advancing the understanding of key ecosystem stresses.</p> <p>Targeted ecosystems are protected from harmful human activities and affected key ecosystem components are restored.</p>
<p><b>Partners:</b> Fisheries and Oceans Canada, Parks Canada, British Columbia Ministry of Water, Air and Land Protection, British Columbia Ministry of Sustainable Resource Management.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>

### ***What are the key management challenges and risks?***

Each of the Ecosystem Initiatives has been extremely successful in building partnerships and consensus and has resulted in tremendous environmental gains. However, there remain associated challenges, including: challenges in setting the agendas and priorities for each initiative; making environmental results transparent; limited finances and capacity issues amongst our partners; and the need for a strong national approach.

Working through diverse multi-stakeholder partnerships creates challenges in establishing consistent agendas and priorities for action. Environment Canada has worked for many years with ecosystem-based coalitions to develop shared agendas and approaches.

Investing in organizational capacity building and long-term partnerships does not necessarily produce immediate environmental results. However, by helping to build strong and capable ecosystem-based organizations, our experience has demonstrated significant leverage on our financial investments, tangible environmental results, and on-the-ground capacity to continue advancing an environmental agenda over the long term.

Some provincial governments in Canada have limited, and in some cases, a diminishing financial and capacity base, which restricts their ability to support these regional efforts. Regardless, their participation in each of these initiatives is always encouraged. They are recognized for their in-kind contributions and treated as equal partners in these processes.

Another key challenge will be to continue building and strengthening the ‘national’ approach of the program while remaining responsive to community level priorities within the different geographic and social-cultural areas. Encouraging broad representation of membership, including the regions/services of Environment Canada, along with Aboriginal Peoples, non-governmental organizations, the scientific community, academic institutions, expert groups, and territorial and provincial governments from across Canada, offers a unique opportunity to share ideas, perspectives, successes stories and challenges. Building these partnerships around common priorities is essential in order to sustain healthy ecosystems and communities. With its partnership base at the national, institutional and local levels, EIs are well positioned to form an important component of renewed action on science and technology as well as support Canada’s commitments at the national level in policy and decision-making.

- ❖ To learn more about Environment Canada’s Ecosystem Initiatives, visit: <http://www.ec.gc.ca/ecosyst>.

## 4.3 Weather and Environmental Predictions Business Line

*Strategic Outcome: Help Canadians adapt to their environment in ways that safeguard their health, safety and security, optimize economic activity, and enhance environmental quality*

As Canadians, we are affected by weather and environmental conditions such as tornadoes, winter storms, floods, hurricanes, droughts, smog, variable lake levels, extremes in temperature and precipitation, aircraft turbulence, sea ice conditions, and road icing. These conditions can affect our health and safety, property, businesses, the economy, and the environment. The Meteorological Service of Canada (MSC), the core service supporting the Weather and Environmental Predictions (WEP) Business Line, operates 24 hours per day, 365 days per year, to forecast weather and environmental conditions from coast to coast to coast at the local, regional, national and international levels.

Environment Canada's Meteorological Service works to reduce risks to Canadians from weather-related and environmental hazards by providing warnings of hazardous and severe weather and by supporting other government departments and agencies in their decision-making. The Service's work also helps weather-sensitive industries, such as transportation, energy, fisheries, forestry and tourism, to improve productivity and competitiveness, as well as assisting them to make their operations environmentally sustainable. The Meteorological Service of Canada also 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.

## Weather and Environmental Predictions Business Line

*Help Canadians adapt to their environment in ways that safeguard their health, safety and security, optimize economic activity, and enhance environmental quality*

### Key Results

**Reduced Impact of Weather and Related Hazards**

**Adaptation to Environmental Changes**

### Priorities

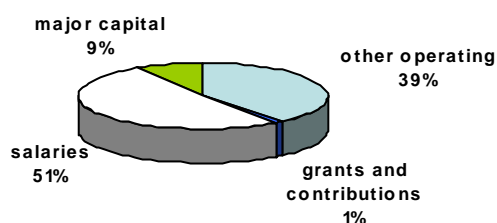
**Reduced Impact of Weather and Related Hazards**

**Transformation of the Meteorological Service of Canada**

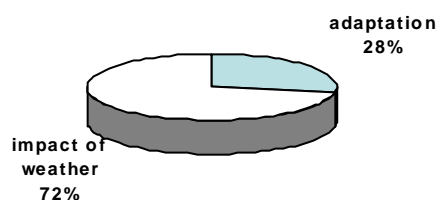
**Improving the Quality of Forecasts**

**Informing Policy Through Science**

**2004-2005 Gross Planned Spending by Input Factor (\$282.4M)**



**2004-2005 Gross Planned Spending by Key Result (\$282.4M)**



	2003-2004 Forecast Spending*	2004-2005 Planned Spending	2005-2006 Planned Spending	2006-2007 Planned Spending
Reduced impact of weather and related hazards on health, safety and economy	206.7	<b>204.2</b>	195.1	188.2
Adaptation to day-to-day and longer-term changes in atmospheric, hydrological and ice conditions	117.5	<b>78.2</b>	71.9	69.6
<b>Gross Planned Spending</b>	324.2	<b>282.4</b>	267.0	257.8
Less: Respendable Revenue	(62.8)	<b>(64.1)</b>	(64.3)	(63.7)
<b>Net Planned Spending</b>	261.4	<b>218.3</b>	202.7	194.1

\* Reflects the best forecast of total net planned spending to the end of the fiscal year. Totals may differ between and within tables due to rounding of figures.

### 4.3.1 The Transformation of the Meteorological Service of Canada (MSC) enables both of WEPs Key Results



#### PRIORITY: TRANSFORMATION OF THE METEOROLOGICAL SERVICE OF CANADA

In March 2003, the Environment Minister announced the investment of \$75 million over five years and \$5 million per year ongoing thereafter in order enable the Meteorological Service of Canada to better meet the needs of Canadians. With this new funding, Canadians will see improvements in the accuracy and timeliness of day-to-day forecasts, longer-term forecasting and in the prediction of extreme weather events. The new funding will be used to transform, strengthen and revitalize the Meteorological Service of Canada operations. It will also be used to ensure that Canadians have continuing and sustainable access to quality weather and climate information to safeguard their health, safety and security, as well as their social and economic well being.

#### *What is the issue?*

A cornerstone of government is to reduce social and economic vulnerability by providing federal services for the safety and security of Canadians. Moreover, Canadians want those services kept modern and adaptive to changing economic and social need. In the more than 130 years since the Meteorological Service of Canada was created, the ravages of time coupled with rapid advances in science and technology have caused parts of the Meteorological Service of Canada's monitoring infrastructure to rust out or become obsolete, putting the integrity of observed data at risk. In some cases, the monitoring infrastructure requires the remediation of older monitoring sites to meet present environmental standards.

In addition, the Service is faced with the reality of an aging scientific workforce. The departure of staff through retirements and other actions presents a significant risk to the organization in terms of lost knowledge and expertise. Without proper succession planning and human resource management, there may be a gradual loss of professional and technical skills if new and remaining staff do not have sufficient training to take on the duties performed by this group. The Meteorological Service of Canada needs a broad-based solution to manage the threat posed by infrastructure and human-resource challenges, and to maintain the integrity of Canada's weather and water service. The new funding is urgently required to modernize Meteorological Service of Canada operations and to lay the foundation for ongoing sustainability and service enhancements.

#### *What are we doing about it?*

The Weather and Environmental Predictions (WEP) Business Line began undertaking a full review of its funding resource allocations in fiscal year 1999-2000. This exercise entailed a complete review of existing budget allocations within the organization and of the results that were or should be targeted with these resources. The March 2003 transformation funds target key issues that need to be addressed in order to ensure that the planned 2004-2005 full budget reallocation can successfully deliver its intended improved service, sustainability, and results focus for this year and beyond.



With the new funding, the Meteorological Service of Canada began consolidating its fourteen forecast operations into five Storm Prediction Centres (SPC) in order to optimize operational efficiency. New National Research Laboratories, funded through internal reallocation, will be co-located with the consolidated forecasting operations in the Storm Prediction Centres. Co-location will enable more effective transfer of knowledge between the scientific research and forecast operations functions. The efficiencies obtained through consolidation are expected to help produce better forecasting and warning services for Canadians by enabling forecasters to focus on severe weather while automating more routine functions. Consolidation measures will lay essential foundations for future initiatives that will fulfill the Meteorological Service of Canada's longer-term vision to support: greater protection of the health, safety and security of Canadians; more efficient and effective federal weather-related operations; and greater innovation and competitiveness of weather-sensitive sectors and emerging meteorological industries.

In addition, new National Service Offices will be created to focus on key stakeholders such as the marine community and media organizations, and on weather-sensitive industries such as forestry, transportation and agriculture. With a critical mass of expertise in the newly created production, research and service centres, there will be more opportunities for research and development, enhanced use of existing technologies such as satellite, aircraft and radar equipment, strengthened collaboration with universities and other public or private sector partners, and improvements in client service and public education and outreach in addition to the core improved forecast and warning quality. To ensure that the Meteorological Service of Canada maintains the expertise it requires in the future, efforts will be directed to the active recruitment and training of new scientists, meteorologists, and technicians to replace staff lost through retirement.

For the next four years the Meteorological Service of Canada will be re-positioning the organization as per the Minister's announcement on March 13, 2003. The Meteorological Service of Canada transformation will involve the following five main components:

- Meteorological Service of Canada Forecast Operations Restructuring and Refocusing – consolidate public, marine and severe weather forecasting operations from 14 centres across the country to 5 larger centres.

<b>Major Initiative/Program:</b> Meteorological Service of Canada (MSC) Forecast Operations Restructuring and Refocusing
<b>Expected Results:</b> 5 new Storm Prediction Centres and the satellite office in Winnipeg established. Improved warnings and forecasts of high impact events through improved training to professional meteorologists, operational tools, performance management and automation.
<b>Partners:</b> Public Works and Government Services Canada, Public Service Commission, NAV Canada, telecommunications service providers, international Weather Services.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Creating National Service Offices, Increased Outreach and Strengthened Partnerships – dedicate more resources to partnerships with, and services for, key stakeholders and clients, in particular the media, emergency responders, private meteorological service providers and weather sensitive industries.

<b>Major Initiative/Program:</b> Creation of National Service Offices, Increased Outreach and Strengthened Partnerships
<b>Expected Results:</b> Improved services for and strengthened partnerships with key stakeholders and weather-sensitive clients by establishing new service delivery structures. Three National Services Offices and one National Services Unit are created. Increased use and effectiveness of atmospheric data and services by partners and clients by establishing a new outreach network across Canada.
<b>Partners:</b> Department of Fisheries and Oceans - Canadian Coast Guard, Transport Canada, Agriculture and Agri-Food Canada, Public Service Commission, Pelmorex (The Weather Network/Météomédia), Canadian Association of Broadcasters, Broadcast News, Canadian Meteorological and Oceanographic Society (private sector committee).
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Monitoring Networks Life Cycle Management – integrate new and more innovative technologies into existing monitoring networks to enhance observing capacity.

<b>Major Initiative/Program:</b> Monitoring Networks Life Cycle Management
<b>Expected Results:</b> Enhanced quality assurance of and access to key atmospheric, water, ice and air quality data. Improved forecasts by providing new and improved measurement of upper atmosphere conditions.
<b>Partners:</b> Provincial water survey organizations, municipalities, airlines, NAV Canada.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Refocusing Research and Development – create 5 new national laboratories that will: increase the research and development, and training capacity in regional offices; and enhance technology transfer within the Department and with clients.

<b>Major Initiative/Program:</b> Refocusing Research and Development (R&D)
<b>Expected Results:</b> 5 new National R&D laboratories are created in the Regions to support Storm Prediction Centres (SPC). The broader research community is engaged in the Meteorological Service of Canada's research agenda.
<b>Partners:</b> Universities, research institutes and agencies.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- Key Employee Skill Sets and Recruitment – commitments to ensure that the Meteorological Service of Canada continues to be a good employer throughout the significant changes related to Transformation.

<b>Major initiative/Program:</b> Key Employee Skill Sets and Recruitment
Meteorological Service of Canada employees are mobilized to realize the vision of the Weather and Environmental Predictions (WEP) Business Line and accomplish its mission. A productive workforce and new capacity to meet current and future needs. Work environment is safe and healthy and meets the needs of Meteorological Service of Canada staff. A sustainable workforce.
<b>Partners:</b> Public Service Commission, unions, Occupational Health and Safety community, public opinion research companies.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

Transformation and renewal are fundamental to most of these initiatives, whether they are renewal of the Meteorological Service of Canada ‘s human resource capital or the modernization of hardware and software infrastructure. This transformation is a major undertaking for the Meteorological Service of Canada and it is proceeding in concert with ongoing operations and research and development activities. This transformation and the associated 2004-2005 Weather and Environmental Predictions (WEP) budget reallocation are key enabling initiatives that will ensure that the Meteorological Service of Canada is well positioned to effectively and efficiently deliver on its two key results.

### ***What are the key management challenges and risks?***

The March 2003 new funding and plans for Transformation will enable better delivery by the Meteorological Service of Canada of the two key WEP Business Line results.

This said, in view of the fact that the infrastructure life-cycle management has been neglected for too many years, there is some risk that this investment will be insufficient to address the ‘bow-wave’ of investment that would be required to catch up to the existing investment needed to address the monitoring rust-out issue. This challenge will be managed through more analysis throughout this 5-year initiative, as well as pursuing possible new funding and monitoring opportunities such as the internationally driven Global Earth Observation (GEO) initiative.

Implementing significant changes while maintaining ongoing activities carries with it the obvious risks of ensuring uninterrupted and continued 24/7 service while relocating complex operations. Furthermore, in view of the critical need to ensure service in the worst of severe weather and emergency situations, contingency plans for the 5 versus 14 centre new operational model are also being addressed.

There are clear impacts and the usual discomfort for staff as the Meteorological Service of Canada goes through relocation of some of its activities and through changes associated with budget reallocations and refocusing of activities. Effective and regular communication and HR support and training will be required to ensure that employees have the necessary information and skills to meet the personal and work challenges ahead.

As public and client expectations increase, there is the risk of not seeing the full results of transformation for several years since it will take time to create new offices and infrastructure and to build human capital. Furthermore, there is the challenge of maintaining positive relations with partners as the Meteorological Service of Canada rationalizes its monitoring networks. Regular consultation with these partners and stakeholders, as well as the development of strategic communication events that highlight early results will be critical in managing these risks over the first few years of this 5-year initiative.

The Meteorological Service of Canada is actively working to address these risks through its close management and tracking of Transformation activities and results.

### **4.3.2 Key Result: Reduced Impact of Weather and Related Hazards**

*Reduced impact of weather and related hazards on security, health, safety and the economy*



#### **PRIORITY: FOCUSING ON HIGH IMPACT WEATHER AND RELATED HAZARDS**

##### ***What is the issue?***

The long-term goal of the Meteorological Service of Canada is to improve Canadians' capacity to adapt to, anticipate, mitigate, withstand, and recover from high-impact weather events and related hazards to help ensure healthy communities where threats from environmental hazards are minimized.

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. Canadians are becoming more vulnerable to high-impact weather and related hazards because of migration patterns to more vulnerable areas such as flood plains, growing urban density, aging infrastructure and the creation of complex but vulnerable production and delivery systems. Other environmental hazards, such as poor air quality, may be produced or intensified by human activity. 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. According to the Insurance Bureau of Canada, disaster recovery payments (from insurance companies and taxpayers) doubled every five years throughout the 1980s and 1990s. This trend is expected to increase in the new century.

##### ***What are we doing about it?***

Government, industry and universities have joined forces to ensure that Canada maintains a high level of expertise in the area of high-impact weather and climate. For example, the Meteorological Service of Canada continues to support the Canadian Foundation for Climate and Atmospheric Sciences (CFCAS), established in 2000 to fund university-based research in climate and atmospheric sciences.

Media and private sector companies, such as Pelmorex (the parent company of The Weather Network and Météomédia), are key partners in getting warnings and forecasts out to Canadians. They also assist in disseminating information on how Canadians can protect themselves and their property from environmental hazards.

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. Technologies, such as cell phones, personal data assistants, laptop computers, the Internet, and digital radios, offer a variety of future opportunities. These include crawler messages that scroll across television screens to warn viewers of severe weather and technologies that interrupt automated radio broadcasts during weather-warning situations. This will create an opportunity for new partnerships with broadcasters and cable and telecommunications companies.

Water continues to be a growing priority in Canada and the Meteorological Service of Canada plays a key role in monitoring, understanding, and predicting the impacts upon Canada’s water resources. The Meteorological Service of Canada, through its research and prediction programs and the Water Survey of Canada, works closely with provincial and other partners to ensure that knowledge of current and forecast conditions of rain, snow and ice are available so that critical drought and flood hazard impacts can be mitigated.

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 lead time, accuracy, utility and satisfaction with warnings. To achieve this goal, the following broad strategies are being pursued:

- Monitoring approaches and technology that will increase the likelihood of early detection of severe weather and its precursors.

<b>Major Initiative/Program:</b> Monitoring of Weather, Climate, Surface Water, Ice and Stratospheric Ozone
<p><b>Expected Results:</b></p> <p>Monitor the weather, climate, surface water, ice and stratospheric ozone</p> <p>Manage national water survey monitoring relationships and activities</p> <p>Manage ice monitoring relationship and activities with Department of Fisheries and Oceans – Coast Guard</p> <p>Ensure optimization, contribution and continuing access to international monitoring data through initiatives such as the Global Earth Observation (GEO) initiative</p> <p>Better detect dangerous or changing weather/environmentally-related conditions by continuing modernization of monitoring equipment</p> <p>Continue to demonstrate leadership in environmental stewardship by cleaning up contaminated federal monitoring sites</p>
<p><b>Partners:</b> Provincial water survey organizations, provinces, municipalities, World Meteorological Organization, Earth Observation Summit intergovernmental and international stakeholders, Global Atmospheric Inc., airlines, NAV Canada, National Oceanic and Atmospheric Administration/National Environmental Satellite, Data, and Information Service, RadarSat International, Natural Resources Canada, European Space Agency.</p>
<p><b>Detailed Commitments:</b> <a href="#">Click here</a> or refer to the detailed table in the Supplementary Information booklet.</p>

- Improving warning production and dissemination capability through production modernization.

<b>Major Initiative/Program:</b> Warnings of Severe and High Impact Weather and Related Hazards
<b>Expected Results:</b> Seamless, continued production of warnings by forecasters from the newly consolidated Storm Prediction Centres Warning improvements through scientific knowledge transfer to operations, more training and professional development for forecasters and automation of routine production Increased accessibility, use and reliability of warnings delivered through Environment Canada service channels (web, phone and Weatheradio) and partnered channels (media, radio and TV)
<b>Partners:</b> NAV Canada, telecommunications service providers, international Weather Services, Department of Fisheries and Oceans – Canadian Coast Guard, Pelmorex (The Weather Network/Météomédia), Canadian Association of Broadcasters, Broadcast News, media (radio, TV and print).
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- Targeting atmospheric, hydrometeorology and ice science activities and associated predictive modeling capacity.

<b>Major Initiative/Program:</b> Atmospheric, Hydrometeorology and Ice Science and Associated Predictive Modeling Capacity
<b>Expected Results:</b> Forecast improvements through advancements in numerical weather prediction Focus and grow warning related science efforts through new national labs Better understanding of the nature and characteristics of high-impact vulnerabilities and adaptations by conducting scientific analyses, with partners as appropriate Improved hydro-meteorological prediction and modeling capacity by work with others
<b>Partners:</b> Universities, communities, National Water Research Institute, U.S. Weather Service, Department of Fisheries and Oceans.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- Improving support to emergency preparedness and response for citizens and first responders, including capacity to address atmospheric security threats.

<b>Major Initiative/Program:</b> Security and Emergency Response
<b>Expected Results:</b> Increased access to information, particularly by media and first responders, on high-impact weather and other hazards to ensure that Canadians are aware of their vulnerability, understand our products and services and are prepared for hazardous events. Completion of Canadian Meteorological Centre (CMC) fortification to ensure availability and reliability during high impact weather and security events. Support to national security and national emergency events preparedness and response.
<b>Partners:</b> Emergency Preparedness, National Defense, provincial and municipal emergency measures and response agencies, media, Health Canada.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

The importance of weather and environmental services is increasing as Canadians become more vulnerable to changing weather and environmental conditions. The challenge to Environment Canada is to improve the timeframes within which environmental hazards and issues such as climate change and environmental health are addressed to allow Canadians and government the time to anticipate, prevent, withstand or adapt to such conditions more effectively.

Overall, the Meteorological Service of Canada must continue on its path of continuous improvement through focused renewal and reallocation to this priority. It must continue to leverage its contributions with those of key partners and must seek innovative ways of delivering these vital warning services to Canadians.

## **4.3.3 Key Result: Adaptation to Environmental Changes**

*Adaptation to day-to-day and longer-term changes in atmospheric, hydrological and ice conditions*



### **PRIORITY: IMPROVING THE QUALITY OF FORECASTS FROM DAYS TO SEASONS**

#### ***What is the issue?***

Citizens, weather-sensitive industries and institutions in Canada depend on the availability of information from the Meteorological Service of Canada to make daily, weekly, monthly and seasonal decisions related to their plans, their quality of life, their health and their economic welfare. The Meteorological Service of Canada leverages its very large investment in monitoring and predictive capacity targeted at safety and security considerations to provide the required information to answer to this immense need.

The need is growing as we advance in this information age because decisions are increasingly optimized as economic and timeliness pressures push for more forewarning and precision in forecasts in order to gain a competitive edge or simply to meet the demands of daily life. Information users are also becoming more sophisticated and they are demanding full access to raw data, to live data and to extensive archives in order to customize the use of this information or to make some of the assessments of future states themselves or with private sector meteorological service providers. Computer and telecommunication technological capability changes have enabled this trend.

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 on the short and long term weather, climate and environmental conditions, and improved ability to predict the presence and levels of threats in air and water. Statistics indicate that even the average Canadian citizen is more programmed – actively engaged during specific times or days in planned work or leisure activities – than in the past and is hence less adaptable

to changing environmental or weather circumstances and therefore seeking more assurances as plans are made. All of these demands exert pressure on the Meteorological Service of Canada's limited resources but they also excite its willingness to serve and the need for continuous service improvement.

***What are we doing about it?***

The Meteorological Service of Canada supports forecast and data dissemination systems, actively builds client relations, 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 and ensure the effectiveness of Meteorological Service of Canada 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 Web, on our own network of radio transmitters and 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 the *Weather Office* Web site. Most of our services are provided to the public at no charge, but we also serve those requiring specialized information on a cost recovered basis where services are not available from the marketplace.

The Meteorological Service of Canada provides the monitoring, production and service delivery infrastructure to produce weather, air quality, extended range and seasonal forecasts. This service continues to be refined and improved as the technological, scientific and demand drivers permit. The Meteorological Service of Canada has clearly committed, through its recent reallocation exercise and through additional ongoing funds secured for these purposes within the March 2003 announcement, to undertake action in the following key areas.

- ❑ Improving accuracy of and access to short-term forecasts for citizens, weather-sensitive industries and institutions.

<b>Major Initiative/Program:</b> Short-term Forecasts for Citizens, Weather Sensitive Industries and Institutions
<p><b>Expected Results:</b>  Forecast improvements through training of forecasters and improvement of tools and work environment.  Increased accessibility, use and reliability of forecasts delivered through Environment Canada service channels (web, phone and Weatheradio) and partnered channels (media, radio and TV).  Improvements to key services for highly weather-sensitive economic sectors such as Fisheries, Agriculture, Forestry, Energy and Transportation.  Increased capacity and role of the private sector in serving meteorological and hydrological needs in Canada.  Expand attribution in daily media broadcasts to Environment Canada for weather information.</p>
<p><b>Partners:</b> Telecommunications service providers, Broadcast News, media (radio, TV and print), international weather services, Pelmorex (The Weather Network/Météomédia), Department of Fisheries and Oceans – Canadian Coast Guard.</p>
<p><b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.</p>



- ❑ Improving access to all of its real-time and archived data holdings and to ensuring a high level of quality control of this information.

<b>Major Initiative/Program:</b> Data collecting and archiving supports improved quality of forecasts from days to seasons
<b>Expected Results:</b> Improved access to basic meteorological, hydrometric and climatological data by the public, private and academic sectors. Enhanced data sets to effectively document and understand climatic processes.
<b>Partners:</b> Department of Fisheries and Oceans – Canadian Coast Guard, provinces and territories, international meteorological and hydrological services.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Improving the accuracy and use of extended range and seasonal forecasts for weather sensitive industries and institutions.

<b>Major Initiative/Program:</b> Extended Range and Seasonal Forecasts for Weather Sensitive Industries and Institutions
<b>Expected Results:</b> Improved extended range and seasonal forecasts. More effective use of longer-range environmental prediction information leads to sustainable development decision-making.
<b>Partners:</b> National Weather Services, Natural Resources Canada, Agriculture and Agri-Food Canada, weather-sensitive industries such as agriculture and energy.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- ❑ Increasing its support to information users with an expanded outreach program.

<b>Major Initiative/Program:</b> Outreach to Citizens and Weather Sensitive Sectors
<b>Expected Results:</b> Expanded outreach program to catalyze increased effectiveness and use of Meteorological Service of Canada data, forecasts and services.
<b>Partners:</b> Weather-sensitive industries, private meteorological service providers, schools, media, provinces, municipalities.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

The increasing demands from the public and specialized clients for high quality, timely information will continue to exert pressure on the Meteorological Service of Canada’s limited financial and human resources, from a science and service delivery perspective. New technology such as ensemble prediction (generation of probabilistic forecasts), has the potential for higher quality short and longer term forecasts, but will require greater effort and investment in education and outreach with the public and weather-sensitive sectors to ensure the new products are interpreted and used appropriately.

With every scientific or technical improvement, client expectations increase accordingly, whether for longer time scales (seasons), higher geographic resolution, higher accuracy, or greater access to data to use for their own purposes. The Meteorological Service of Canada will need to continue to ensure that client needs can be met, whether by working with the private meteorological sector in Canada to increase overall capacity, augmenting service delivery options as budgets and technology permits, and improving data accessibility and quality for all these growing demands.



## **PRIORITY: INFORMING POLICY THROUGH SCIENCE**

### ***What is the issue?***

The Meteorological Service of Canada's research and development activities continue to be vital for the health and safety of the public and for informed policy formulation by the Canadian federal, provincial, and local governments and other stakeholders. Climate change is showing real signs of effect on our lives, our environment and our economy. It is only through assessment of climate change scenarios, at the global, national and local levels that adaptation actions can be initiated by individuals, governments and industries.

In general, scientific assessment of the status of environmental stressors and progress in mitigating the impact of these on our society is a critical function that enables decisions related to current and future directions and actions by governments and others. This is clearly urgent for the climate change issue but also it continues to be critical for other priorities such as clean air and clean and available water among others.

### ***What are we doing about it?***

The Meteorological Service of Canada conducts research to ensure that Environment Canada has a solid scientific base on which to build policies and strategies that safeguard our environment and protect human health. We also support initiatives such as Biosphere Implications of CO<sub>2</sub> Policy (BIOCAP), a not-for-profit organization that has been working with industry and producer groups, government and non-governmental organizations as well as the national research community and university funding agencies to promote and encourage university-based research aimed at:

- ❑ Reducing greenhouse gas emissions (especially N<sub>2</sub>O and CH<sub>4</sub>) from biological sources including agriculture, landfill sites and wetlands;
- ❑ Removing atmospheric carbon (C) through enhancing biosphere carbon sinks in agriculture, forestry and wetlands;
- ❑ Replacing existing energy sources with biomass and biological systems that will provide a sustainable and renewable source of energy, chemicals and materials.

The Meteorological Service of Canada conducts research in a wide variety of areas related to the priority issues of the Department including the following key areas:

- Climate and climate change, air quality and associated predictive modeling capacity.

<b>Major Initiative/Program:</b> Climate and Climate Change, Air Quality and Associated Predictive Modeling Capacity support policy and service improvement
<b>Expected Results:</b> A coordinated approach to climate change science among federal government departments, universities and others. Improved local, regional, national and global science and modeling of climate and climate change as a key contribution to sustainable development in Canada and internationally. Air quality science and prediction improvements to support decisions.
<b>Partners:</b> Academia, Ouranos partnership, BIOCAP, Intergovernmental Panel on Climate Change, Natural Resources Canada, National Water Research Institute, other government departments, provincial environment and air quality agencies.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- Climate change impacts and adaptations.

<b>Major Initiative/Program:</b> Climate Change Impacts and Adaptations science supports policy and service improvement
<b>Expected Results:</b> Increased assessment and understanding of the impacts of climate change and adaptation strategies.
<b>Partners:</b> World Meteorological Organization, other National Weather Services, sectors and communities sensitive to climatic change.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

- Science assessment, advice and communication.

<b>Major Initiative/Program:</b> Conduct integrated Science Assessments on key policy issues for Environment Canada for improved policy through science
<b>Expected Results:</b> Strong Canadian participation in the global/international climate change science assessment. Continue assessment of water threats.
<b>Partners:</b> Intergovernmental Panel on Climate Change, universities, international research and development community, research institutes, other government departments, provinces, policy advisors.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

### ***What are the key management challenges and risks?***

The ultimate key to the success of Environment Canada's research and development lies in securing a long-term funding base for research efforts where results are observed only in the longer term. Funding for some research activities may be at risk to due to sunseting of programs, so efforts are required to ensure continued support for vital science activities. The recent implementation of a strategic plan for the Meteorological Service of Canada's Research and Development activities is an important step in achieving this objective.

In addition, attracting, developing and retaining talented scientists is a critical challenge faced by the Department, given competitors who can often offer attractive positions more rapidly to candidates. This is particularly important given the large numbers of retirements expected over the next five years. Additional challenges face the Meteorological Service of Canada as it develops plans to address recommendations made by the external peer review and financial resources are allocated to these priorities.

## **4.4 Management, Administration and Policy**

### ***Strategic Outcome:***

***Provide strategic and effective departmental management to achieve environmental results.***

The context in which Environment Canada operates is one where environmental issues are global in nature, jurisdictions are shared and the challenges of integrating environmental, economic and social factors must be addressed. As such, it is important to ensure strong linkages across the Department in the development of strategic directions related to both horizontal management and policy issues.

Through the Management, Administration and Policy (MAP) Business Line, Environment Canada develops an integrated management and policy agenda. This is the Department's strategic medium- and long-term agenda focusing on leadership, knowledge management and partnerships to inform and engage citizens, and developing ways to provide efficient, innovative internal and external services.

Within Environment Canada's Management Framework, the Management, Administration and Policy Business Line strategic outcome is supported by two key results. We have grouped departmental priority concerns under the key results to which they relate. This logic structure is shown in the table that follows.

## Management, Administration and Policy Business Line

Provide strategic and effective departmental management to achieve environmental results

### Key Results

Integrated Policy, Priorities and Plans

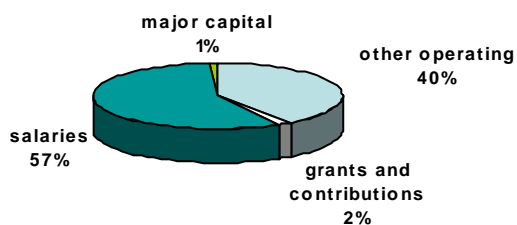
Well Performing Organization

### Priorities

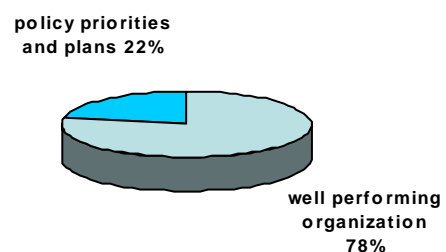
Innovative and Integrated Policy


Integrated Management

2004-2005 Gross Planned Spending by Input Factor (\$125.7M)



2004-2005 Gross Planned Spending by Key Result (\$125.7M)



	2003-2004 Forecast Spending*	2004-2005 Planned Spending	2005-2006 Planned Spending	2006-2007 Planned Spending
Strategic and integrated policy priorities and plans.	22.9	27.1	31.2	31.2
Well performing organization 	114.0	98.6	97.5	96.4
<b>Gross Planned Spending</b>	136.9	<b>125.7</b>	128.7	127.6
Less: Respendable Revenue	(0.8)	<b>(0.8)</b>	(0.8)	(0.8)
<b>Net Planned Spending</b>	136.1	<b>124.9</b>	127.9	126.8

\* Reflects the best forecast of total net planned spending to the end of the fiscal year.

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



## 4.4.1 Key Result: Strategic and Integrated Policy Priorities and Plans

*Strategic and integrated policy, priorities and plans*



### PRIORITY: INNOVATIVE AND INTEGRATED POLICY

#### ***What is the issue?***

Environmental issues tend to be complex, interdependent, pervasive and transboundary. For example, air pollution, acid rain and water are issues that have strong impacts on human health and our ecosystems and do not respect jurisdictional boundaries.

Environmental issues are also closely linked with economic and social issues. This is illustrated by the challenge of addressing climate change. It is a truly global issue and its solutions will likely have major impacts on our economy, in particular our daily decisions regarding energy and transportation. Because of this link, developing the right policy tools to address environmental issues presents both a challenge and an opportunity.

#### ***What are we doing about it?***

The Department is strategically moving the environment and sustainable development agenda forward.

Although environmental issues are a preoccupation of many departments, Environment Canada is the federal lead. 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 the government-wide environment and sustainable development agenda.

In this leadership role, the Department is exploring the potential role for more innovative environmental policy tools that are tailored to the issue at hand. While regulation continues as a policy option, the Department is expanding its use of information, partnerships, and economic instruments.

Innovative and integrated policy in the Department is focused on:

<b>Major Initiative/Program:</b> Lead in the development of the Government-wide Environment and Sustainable Development Agenda
<b>Expected Results:</b> Integrated strategic policies and approaches to advance departmental priorities. Coordinated departmental strategic directions on crosscutting environmental issues (e.g. Sustainable Development Strategies, environment and health, urban agenda). Integrated decision-making is enhanced through new decision support tools. Leadership on the Government-wide Environment and Sustainable Development Agenda.
<b>Partners:</b> Provinces and territories, other government departments, such as Natural Resources Canada, Parks Canada Agency, Indian and Northern Affairs Canada, Health Canada, Department of Fisheries and Oceans, Agriculture and Agri-Food Canada, Aboriginal people.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Enhance Knowledge and Use of Innovative Policy Instruments
<b>Expected Results:</b> Environmental policy goals are achieved through the use of innovative instruments, such as economic instruments and incentives, voluntary approaches and information tools, when these instruments are shown to be the most efficient, effective and practical tools. Environment Canada's knowledge base to support policy research and sustainable development is enhanced through improved indicators and better information.
<b>Partners:</b> Provinces and territories, Finance, Foreign Affairs Canada, International Trade Canada, Natural Resources Canada.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Policy Partnerships and Coordination
<b>Expected Results:</b> Progress toward sustainable development is enhanced through the development and implementation of innovative approaches for working with key partners. Leadership necessary for setting out a government-wide framework for moving the agenda forward in a collaborative manner is provided. International leadership on Canadian priorities is provided.
<b>Partners:</b> Provinces and territories, other government departments such as Foreign Affairs Canada, International Trade Canada, Canadian and International Development Agency, Natural Resources Canada, Health Canada, Other countries such as U.S. Mexico, Chile, Costa Rica, India, NGOs, Aboriginal People.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Provide strategic communications advice to the Minister and senior management based on sound public environment analysis and public opinion research
<b>Expected Results:</b> Strategic approaches to departmental, interdepartmental and international communications are developed. Departmental priorities and policy directions are presented in a consistent, coherent and coordinated manner. Communications advice, issues management and operations support are provided to the Minister, the Deputy Minister and Environment Canada's senior management.
<b>Partners:</b> Treasury Board Secretariat, Privy Council Office, Cabinet Committees, Public Works and Government Services Canada, Public Service Commission, National Library of Canada, Media, Canadian public, OGDs such as Canadian Heritage, Natural Resources, Health Canada, Transport Canada, Industry Canada, Department of Fisheries and Oceans and Agriculture.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

## ***What are the key management challenges and risks?***

### *Environment and Sustainable Development*

To make sustainable development a reality, the Department needs to integrate social, economic and environmental issues into all of the Department's policies and programs. Increasingly, there is interest in the social aspects (e.g. poverty, gender and health) which lead to concerns relating to environmental health, including children's health, and the urban agenda. Intense work needs to continue, and much remains to be done, to better integrate environmental policies with economic considerations. MAP's integrated policy result reflects the Business Line's responsibility for the Department's leadership role in the development and promotion of the Government of Canada's broader Environment and Sustainable Development (SD) agenda. To advance these objectives, it uses strategic partnerships with both key domestic and international stakeholders.

One challenge in particular will be increasing awareness and understanding of how federal departments can best use a framework established for setting environmental and sustainable development priorities and to ensure that the federal Sustainable Development Strategy (SDS) serves a strategic role in promoting sustainable development across the federal system. Building partnerships will also be essential for implementing Environment Canada's actions in the follow-up to the World Summit on Sustainable Development and in the implementation of the Kyoto Protocol.

### *Policy Instruments*

In support of the Environment and Sustainable Development agenda, the Department will also continue to develop new approaches to policy instruments, including Environment and Sustainable Development indicators, and support policy research and development analysis. Emissions trading of greenhouse gases, for example, has been included as a key element of Canada's Climate Change Action Plan. This recognition of the important role of market-based instruments reflects work undertaken over a number of years within Environment Canada and other federal agencies in collaboration with the provinces, territories and stakeholders. Work will also be undertaken with the Department of Finance and other departments to implement



fiscal measures (taxes, charges and other market-based instruments) to achieve the objectives of climate change policies. Environment Canada will continue to support the broader federal initiative to move forward on a smart regulation strategy.

### *Policy Partnerships*

Environment Canada will continue to build on Canada's strong international presence as an environmentally progressive nation, through its participation in organizations and fora like the United Nations Environment Programme, the Organization for Economic Cooperation and Development, and the G8, as well as bilaterally with selected countries. For example, the Department will continue to implement Environmental Cooperation Agreements with partners in the Americas (United States, Mexico, Chile and Costa Rica) and the Memorandum of Understanding with China. Environment Canada works in partnership with other federal departments to promote the mutual supportiveness of trade and environment in international trade agreements, such as the North American Free Trade Agreement (NAFTA) and World Trade Organization (WTO). An important federal initiative, being led by the Department of Foreign Affairs and International Trade (DFAIT), in which Environment Canada participates, is the environmental assessment of trade negotiations. Work will continue through the Canadian International Development Agency (CIDA) with countries such as India, to achieve concrete environmental improvements and to build capacity in developing countries and countries with economies in transition. Environment Canada will also continue to partner with the United States and Mexico in implementing a program of action for North America. More broadly, work will be done with Canada's trade partners in the Americas to promote national action and coordinated hemispheric action to improve human and environmental health.

## **4.4.2 Key Result: Well Performing Organization**

*A well performing organization supported by efficient and innovative services*



### **PRIORITY: INTEGRATED MANAGEMENT**

#### ***What is the issue?***

Environment Canada needs to transform the way business is conducted from both inward looking and outward looking perspectives. Environment Canada focuses internally on strengthening management capacity, and improving accountability and information for decision-making to respond to increasingly complex and urgent environmental concerns, shared governance and increased public demands for transparency. This internal capacity building will support the Department in providing better, more innovative and responsive services to Canadians, having a richer dialogue with the citizens, and improving results for the environment. In addition to addressing internal capacity issues, the integrated management agenda also focuses on the Department's approaches to delivering services. This enables us to be responsive to individuals, communities and businesses and to transform our services when necessary to ensure we are providing the best environmental results for Canadians.

### ***What are we doing about it?***

Environment Canada's integrated management agenda is intended to influence organizational culture, structures, processes and management capacity to enable the Department to deliver results over the long term. As part of this agenda, the Department introduced a Modern Management Action Plan (MMAP), a 3 year Action Plan entering its final year of implementation. It presents a series of integrated activities aimed at improving a wide range of capabilities. By implementing the plan, Environment Canada has built its capacity in five key management areas: citizen focus, exemplary workplace, responsible spending, managing for results and values. The integrated management agenda also comprises initiatives that focus on knowledge sharing and service transformation.

Over the next three years Environment Canada will put significant effort into demonstrating results in a selection of Treasury Board Secretariat Management Accountability Framework (MAF) dimensions which correspond to various elements of the Modern Management Action Plan. They are:

<b>Major Initiative/Program:</b> Accountability, Stewardship and Risk Management
<b>Expected Results:</b> Tools are available to improve Environment Canada's management capacity and practices. New IM practices are facilitated throughout the Department. Sustainability of key departmental systems and operations.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Citizen-Focused Service
<b>Expected Results:</b> Innovative and responsive services are delivered internally and to Canadians. Better response to evolving client needs. Knowledge is strategically managed and readily shared, internally and externally. Environment Canada's leadership in Federal House in Order is established.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

<b>Major Initiative/Program:</b> Environment Canada's People
<b>Expected Results:</b> Environment Canada's people feel valued and supported in a workplace that develops, retains and attracts the diverse talent needed to achieve its mandate.
<b>Detailed Commitments:</b> Click here or refer to the detailed table in the Supplementary Information booklet.

The structure of the performance charts above is based on the Common Reporting Structure for the MAP Business Line. Since the MAF essentially provides guidance to further advance modern management, progress has already been made in the majority of the 10 elements of the

Framework through existing initiatives outlined in the MMAP, as well as initiatives in the Knowledge and Service agenda.

***What are the key management challenges and risks?***

The services delivered by the MAP Business Line are fundamental to delivering on both policy and program priorities and to meeting expectations for Modern Management (e.g. Human Resource Modernization, Security, Audit and Review, e-government and Modern Comptrollership). Promoting an active Environment Canada service culture through service transformation efforts and ensuring sustainability of core systems and operations will be significant challenges for the Business Line.

Environment Canada's focus on transforming the way services are delivered, both externally, to Canadians and clients of the Department, and internally, to departmental staff who deliver those external services, will entail asking people to look at the services they deliver, to whom, what the recipients' expectations are about that service delivery, and how they want services delivered. This transformation will require not only a culture change in many quarters of the Department, but also may place demand on existing service delivery channels and methods (e.g. information technologies). Environment Canada will need to be able to better respond to and manage expectations, while continuing to develop financial strategies in support of investments that may be necessary to transform our service delivery.

The Department is also challenged to develop strategies to maintain the sustainability of core programs and services (e.g. HR, IM/IT and administration) across the Department. Continuing departmental growth over the next few years is likely to exacerbate MAP's current resource challenges. The Business Line will need to regularly examine the services it provides and position its functions strategically for the long-term. A long-term financial strategy is currently being developed to address these financial issues. Not moving forward with a more strategic approach to resource issues would put at risk the Department's capacity to deliver on many initiatives that would improve services to internal and external clients.

# Section 5: Financial Information

## 5.1 Planned Spending Overview

The departmental planned spending to deliver on the priorities identified in Section 2 is presented in Table 5.1. Environment Canada will have a budget of \$958.7M in 2004-2005. This total amount is allocated among four Business Lines as illustrated in Figure 1. Section 4 provides more details on budget allocation by Business Line and by long-term result.

The budget of the Department has decreased by \$76.6M from last fiscal year. This decrease is mostly due to one-time payments made in 2003-2004. These payments include a \$50M grant to the Canadian Foundation for Climate and Atmospheric Sciences, a \$125M grant to Sustainable Development Technology Canada (SDTC) (payment of \$100M is planned for 2004-2005), and a \$28M contribution towards the acquisition of Burns Bog, British Columbia.

Environment Canada will also receive in 2004-2005, increased funding for some initiatives. The major changes in funding include an increase of \$9.8M for the transformation of the Meteorological Service of Canada (MSC), \$6.1M for research and negotiations with the United States related to Border Air Quality, and new resources in the amount of \$6.7M towards the Agricultural Policy Framework (APF).

As part of the Federal Budget 2004, the government also announced incremental funding for the remediation of federal contaminated sites. The amounts indicated in the tables include approximately \$14.5M in resources which will be redistributed to other federal government departments for various remediation projects. Also announced in the Federal Budget 2004 was funding for the implementation of environmental indicators. The resources for environmental indicators identified in the tables include resources that will be transferred to Statistics Canada.

Environment Canada is planning for a further decrease in its budget over years two and three of the planning horizon. This decrease is directly attributable to the sunsetting of funding tied to programs such as the Climate Change Action Fund, the remediation of the Sydney Tar Ponds and the Coke Oven contaminated site, and a reduction in the cash flow related to the Meteorological Service of Canada transformation and various climate change initiatives. Also, a grant payment to Sustainable Development Technology Canada (SDTC) has not been identified for these two fiscal years.

In light of the December 2003 government transition and the review of programs that has started, it is possible that the planning numbers presented in this section may be adjusted at a later date to reflect the outcome of the various expenditure review exercises to be undertaken.

The following tables depict the planned spending situation in Environment Canada for the period of 2004-2005 to 2006-2007. Totals may differ within and between tables due to rounding of figures.

**Table 5.1 Departmental Planned Spending**

(\$ millions)	Forecast Spending 2003-2004*	Planned Spending 2004-2005	Planned Spending 2005-2006	Planned Spending 2006-2007
Budgetary Main Estimates (gross)				
Clean Environment	239.4	<b>273.1</b>	266.0	253.5
Nature	190.2	<b>210.4</b>	206.1	204.3
Weather and Environmental Predictions	253.5	<b>278.1</b>	263.2	254.0
Management, Administration and Policy	120.1	<b>124.6</b>	122.5	117.3
Less: Respendable Revenue	(82.5)	<b>(81.0)</b>	(80.5)	(79.4)
<b>Total Main Estimates</b>	<b>720.7</b>	<b>805.2</b>	<b>777.3</b>	<b>749.6</b>
<b>Adjustments (planned spending not in Main Estimates):</b>				
2003-04 Supplementary Estimates and technical adjustments:				
- Implementation of the Canadian Environmental Protection Act (Budget 2003)	25.2			
- Additional operating and capital costs	13.0			
- Operating budget carry forward	18.6			
- Contribution towards the acquisition of Burns Bog to protect ecologically sensitive lands	28.0			
- Grants to support the Canadian Foundation for Climate and Atmospheric Sciences (Budget 2003)	50.0			
- Grant in support of the development and demonstration of climate change and clean air technologies (Budgets 2003 and 2004)	125.0	<b>100.0</b>		
- Implementation of the Climate Change Plan (Budget 2003)	23.4	<b>25.7</b>	26.0	9.9
- Federal Contaminated Sites Action Plan (Budget 2003)***	3.0	<b>8.1</b>	27.5	21.1
- Salary increases due to the signing of new collective agreements	16.1	<b>11.3</b>	11.7	11.7
- Other technical adjustments	12.3	<b>5.0</b>	(0.9)	(0.9)
- Queens Quay West Land Corporation		<b>(4.0)</b>	(4.0)	
- Environmental Indicators (Budget 2004)**		<b>5.0</b>	10.0	10.0
- Ecological Gifts Program		<b>2.4</b>	2.4	2.4
- Biotechnology Strategy (Budget 1999)			1.0	1.0
- Great Lakes Action Plan (Budget 2000)			8.0	8.0
<b>Net Planned Spending</b>	<b>1,035.3</b>	<b>958.7</b>	<b>859.0</b>	<b>812.8</b>
Less: Non-respendable revenue	(10.9)	<b>(10.0)</b>	(10.0)	(10.0)
Plus: Cost of services received without charge				
- Accommodation provided by Public Works and Government Services Canada (PWGSC)	32.8	<b>33.5</b>	34.9	36.3
- Contributions covering employees' share of employee's insurance premiums and expenditures paid by TBS	28.4	<b>28.7</b>	28.4	28.1
- Workman's compensation coverage provided by Human Resources Canada	1.7	<b>1.5</b>	1.4	1.4
- Salary and associated expenditures of legal services provided by Justice Canada	2.4	<b>2.3</b>	2.4	2.5
<b>Net Cost of Program</b>	<b>1,089.7</b>	<b>1,014.7</b>	<b>916.1</b>	<b>871.1</b>
<b>Full-Time Equivalents</b>	<b>5,878</b>	<b>5,871</b>	<b>5,902</b>	<b>5,881</b>

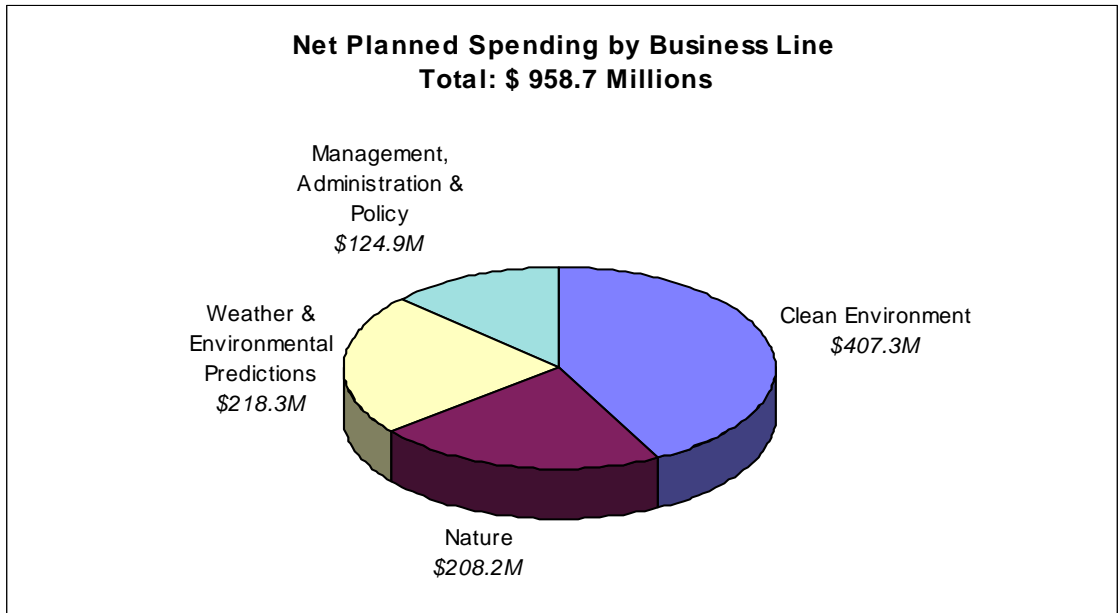
Totals may differ between and within tables due to rounding of figures.

\* Reflects the best forecast of total net planned spending to the end of the fiscal year.

\*\* Amount for Environmental Indicators includes resources that will be transferred to Statistics Canada.

\*\*\* Amounts for 2005-2006 and 2006-2007 include approximately \$14.5M in resources that will be redistributed to other federal government departments for various remediation projects.

**Figure 1**



Figures do not include certain initiatives announced through Budget 2004 such as Contaminated Sites (\$3.5B over 10 years) since the Department's share for these initiatives is not yet confirmed.

The planned decrease in spending from 2003-2004 to 2004-2005 is due in part to one-time payments for Burns Bog (\$28M) and the Canadian Foundation for Climate and Atmospheric Sciences (\$50M) in 2003-2004 and to the reduction in payments to Sustainable Development Technology Canada from \$125M in 2003-2004 to \$100M in 2004-2005. A decrease in funding for the transformation of the Meteorological Service of Canada (\$5.8M) and Action Plan 2000 (\$5.1M) along with funding for a payment to Sustainable Development Technology Canada (\$100M), Climate Change Action Fund (\$6.3M) and the long term capital plan (\$3M) ending in 2004-2005, all contributed to the decrease in the Departments' budget from 2004-2005 to 2005-2006. A further decrease in funding for the transformation of the Meteorological Service of Canada (\$8.8M) in 2006-2007 as well as funding for items relating to Climate Change initiatives ending in 2005-2006 contributed to the decrease in the Department's planned funding from 2005-2006 to 2006-2007.

**Table 5.2 Summary of Capital Spending by Business Line**

(\$ millions)	Forecast Spending 2003-2004*	Planned Spending 2004-2005	Planned Spending 2005-2006	Planned Spending 2006-2007
Clean Environment	17.8	<b>13.4</b>	11.2	11.6
Nature	3.3	<b>2.6</b>	2.6	2.6
Weather and Environmental Predictions	22.2	<b>25.5</b>	19.2	18.5
Management, Administration and Policy	1.2	<b>1.2</b>	1.2	1.2
<b>Total</b>	44.5	<b>42.7</b>	34.3	33.9

\* Reflects the best forecast of total net planned spending to the end of the fiscal year.

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

The Long Term Capital Plan (LTCP) is a sub-set of the Department's business plan and, as such, portrays Environment Canada's capital investment on a Business Line and results basis.

Environment Canada is a science-based department and a significant national science and technology (S&T) performer. Environment Canada's mandate, under the *Department of the Environment Act*, covers preservation and enhancement of the quality of the natural environment, renewable resources, meteorology, enforcement of the rules of the Canada-U.S. International Joint Commission, and the coordination of federal environmental policies and programs.

Being a science-based department, most of Environment Canada's capital assets are focussed on research and other science activities that produce a "public good" – providing knowledge in support of policy development, developing new methods to improve service delivery, and providing technological solutions to meet the Department's mission. The Department operates 15 research institutes and laboratories, has 49 National Wildlife Areas, and over 4,600 air, climate and water monitoring stations in all regions of the country (many of which are operated in partnership with provinces, Canada's universities and international scientific agencies).

There are 4 broad categories of capital assets, including:

- Specialized facilities and land holdings to conduct environmental science research, develop technologies and protect critical wildlife areas;
- Scientific equipment to conduct laboratory analyses and monitor the status and trends in the environment;
- Information technology infrastructure and equipment to run scientific equipment and facilitate communications; and
- Fleet, including off-road vehicles, to transport personnel to study sites and meet needs for a speedy response.

**Table 5.3 Details on Major Capital Project Spending**

(\$ millions)	Current Estimated Total Cost	Forecast Spending to March 31, 2004	Planned Spending 2004-2005	Planned Spending 2005-2006	Planned Spending 2006-2007	Future Year Spending requirements
<b>Clean Environment</b>						
Ozone – Construction of a Vehicle and Fuel Testing Facility (EPA-S)	13.4	11.5	1.9	-	-	-
Ozone – National Air Pollution Surveillance Network (NAPS) (EPA-S)	16.5	12.6	3.9	-	-	-
Canadian Air and Precipitation Monitoring Network (CAPMON) (DA-S)	1.0	0.9	0.1	-	-	-
<b>Weather and Environmental Predictions</b>						
Doppler upgrade – Radar Network Modernization (EPA-S)	45.2	45.2	-	-	-	-
Weather station construction Eureka N.W.T. (EPA-S)	9.9	7.4	2.5	-	-	-
Modernization of the Climate Observing Program (EPA-S)	8.6	3.7	0.5	0.5	0.5	3.4
Ocean Data Acquisition System (ODAS) – Buoy Payload Replacement (DA-I)	2.2	1.4	0.2	0.1	0.5	-
Sable Island Weather Station (EPA-S)	3.0	2.0	-	0.5	0.5	-
Hydrometric Program (EPA-S)	10.0	8.0	2.0	-	-	-
MSC – Single Window Web Site (DA-S)	4.6	2.9	1.0	0.7	-	-
DSAT Replacement Project (DA-S)	1.9	1.4	0.4	0.1	-	-
Upper Air Hydrogen Generator Replacement Project (DA-S)	1.8	0.1	0.1	0.3	1.0	0.3
Aircraft Meteorological Data Relay (AMDAR)	2.1	0.9	0.7	0.3	0.2	-
Canadian Meteorological Centre – Facility Extension	8.3	7.1	0.6	0.6	-	-

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

Table 5.3 lists major Capital projects over \$1 million by Business Line. All of the major capital projects listed have received Effective Project Approval (EPA) or are within Environment Canada's delegated authority (DA). EPA implies Treasury Board's approval of, and expenditure authorization for, the objectives of the project implementation phase. Sponsoring departments and agencies are to submit for EPA only when the scope of the overall project has been defined and when the estimates have been refined to the substantive level. On the other hand, delegated authority implies that the Treasury Board has delegated authority to the Department for projects up to a specified amount. Environment Canada's delegated authority is \$2.5M for general projects, \$5M for the implementation of new technologies and \$10M for information replacement projects.

These projects are also listed as Substantive Estimates (S) or Indicative Estimates (I). Substantive implies that the estimate is one of sufficiently high quality and reliability as to warrant Treasury Board approval as a cost objective for the project phase under projects consideration. Indicative implies that the estimate has a low quality order of magnitude that is not sufficiently accurate to warrant Treasury Board approval as a cost objective.



**Table 5.4 Summary of Transfer Payments**

(\$ millions)	Forecast Spending 2003-2004*	Planned Spending 2004-2005	Planned Spending 2005-2006	Planned Spending 2006-2007
<b>Grants</b>				
Clean Environment	2.0	<b>2.0</b>	2.0	2.0
Weather and Environmental Predictions	0.2	-	-	-
<b>Total Grants</b>	2.2	<b>2.0</b>	2.0	2.0
<b>Contributions</b>				
Clean Environment	28.5	<b>36.1</b>	24.4	21.2
Nature	56.7	<b>29.2</b>	31.1	31.7
Weather and Environmental Predictions	4.0	<b>2.6</b>	2.4	1.9
Management, Administration and Policy	3.7	<b>2.1</b>	1.8	1.8
<b>Total Contributions</b>	92.9	<b>70.0</b>	59.7	56.6
<b>Total Transfer Payments</b>	95.1	<b>72.0</b>	61.7	58.6
<b>Statutory Grants</b>				
Clean Environment – Canada Foundation for Sustainable Development Technology (SDTC)	125.0	<b>100.0</b>	-	-
Weather and Environmental Predictions – Canadian Foundation for Climate and Atmospheric Sciences	50.0	-	-	-
<b>Total Statutory Grants</b>	175.0	<b>100.0</b>	-	-

\* Reflects the best forecast of total net planned spending to the end of the fiscal year. Totals may differ between and within tables due to rounding of figures.

Included in 2003-2004 under the Nature Business Line is a one-time contribution payment of \$28M towards the acquisition of Burns Bog.

**Table 5.5 Details on Transfer Payments Programs**

Explanation of grants and contributions in Business Lines where the total transfer payment budget exceeds \$5M.

Business Lines	Objective/Planned Results	
Grant for the Implementation of the Montreal Protocol on substances that deplete the Ozone layer. (Clean Environment)	The objectives of this grant are to provide effective assistance to developing countries to help them meet their obligations, under the Montreal Protocol to phase out ozone depleting substances (ODS); and to share, promote and/or demonstrate Canadian expertise in the field of ODS reduction.	\$2.0M
Grant in support of the development and demonstration of climate change and clean air technologies (Clean Environment)	The objectives of the grant are to fund the development and demonstration of new sustainable development technologies related to climate change and clean air, in order to make progress towards sustainable development; foster and encourage innovative collaboration and partnering amongst diverse persons in the private sector and in academic and not-for-profit organizations to channel and strengthen the Canadian capacity to develop and demonstrate sustainable development technologies with respect to climate change and clean air, and; ensure timely diffusion by funded recipients of new sustainable development technologies in relevant market sectors throughout Canada.	\$100.0M
Contributions to Support Environmental Research and Development (Clean Environment, Nature and WEP)	These contributions are meant to stimulate scientific research by providing funding directly to researchers; establish or support university chairs or faculty positions for the promotion and coordination of research and development activities in areas that support the Department's objectives, priorities, programs, and activities. The expected benefits will be in the area of wildlife and toxicology.	\$2.4M
Contributions to support Environmental and Sustainable Development Projects (Clean Environment, Nature and WEP)	To enable Canadian groups, associations and organizations to become actively involved in environmental and sustainable development projects and initiatives with the aim of protecting, conserving, enhancing and restoring habitats, sites and ecosystems; conservation, protection enhancement or restoration of fish and wildlife habitats, environmentally downgraded harbours and estuaries, and rivers and river systems; projects that relate to pollution prevention, abatement and clean up; and sustainable development projects, e.g., the enabling of aquaculture and eco-tourism industries to respond to market demands.	\$13.9M
Contributions to increase awareness and understanding of environmental and sustainable development issues (Clean Environment, WEP and MAP)	To provide information and expertise to interested individuals, groups and organizations, and governments and public agencies, including the maintenance of a national information database; promote and recognize excellence in environment fields and activities; network and develop partnerships to share information on environmental and sustainable development issues, initiatives and activities, and; organize environmental conferences aimed at increasing awareness and understanding of environmental and sustainable development issues.	\$3.3M
Contributions to Support Canada's International Commitments (Clean Environment, Nature, WEP and MAP)	To offset the direct and indirect costs of activities and projects resulting in the development and signing of international agreements, conventions and protocols. Pay membership fees and operating costs for international environmental initiatives and organizations; and establish or maintain committees, working groups, secretariats or similar mechanisms at the international or domestic level that: (i) administer funds on the behalf of other organizations, countries or public agencies; (ii) coordinate projects or activities; or (iii) disseminate results relevant to EC strategies and priorities.	\$4.1M
EcoAction 2000 – Community Funding Initiative (Clean Environment and Nature)	To enable community-based groups to make environmental improvements that help reduce risks to human health and the environment; to lever voluntary in-kind and monetary (non-federal government) support for environmental activities which have measurable environmental benefits; and to provide Canadians with the tools they need to act on their knowledge and values as individuals and members of communities in support of sustainable development. Planned results include the successful completion of community-based projects that support action, capacity building and outreach on priority environmental issues at the local and regional levels as well as measurable results that are supportive of the Government of Canada's climate change objectives, as detailed in the Climate Change Plan for Canada and the One Tonne Challenge Program.	\$5.0M

**Table 5.5  
(Continued)**

**Details on Transfer Payments Programs**

Business Lines	Objective/Planned Results	
Contribution for Canada's share of the Commission of Environmental Cooperation (CEC) Budget (Clean Environment)	To fund Canada's share of the Commission for Environmental Cooperation (CEC) budget. The North American Agreement on Environmental Cooperation was one of the prerequisites to the government's decision to proceed with the implementation of NAFTA in order to develop and promote policies in support of environmental protection in the context of expanded economic integration in North America; facilitate the development of coordinated solutions to transboundary and continental scale for environmental challenges facing North America; provide a reference point for reliable environmental information.	\$4.6M
Contribution for the environmental clean-up of the Sydney Tar Ponds and Coke Ovens Sites in the Muggah Creek Watershed (Clean Environment)	For the remediation of historical contamination; the fostering of a healthy community by finding workable solutions engendered primarily within the Cape Breton community through the Joint Action Group (JAG) process; the enhancement of ecosystems as may be determined appropriate for land and water use; and subject to municipal, provincial, national and international laws and agreements, the optimized use of local labour, services, products, expertise, and compliant technologies in the process.	\$7.2M
Contributions for the Science Horizons Youth Internship and the International Environmental Youth Corp Programs (Clean Environment, Nature)	Develop opportunities for young scientists and science graduates through mentorship and coaching, and provide them with hands-on experience and matching them with scientists and program managers; provide opportunities for Canadian young adults in international placements that foster their long term employability in the environmental private sector, strengthen the capacity of the sector to expand exports and trade in the environment, and make a positive impact on the global environment.	\$3.1M
Climate Change: The Opportunities Envelope Program (Clean Environment)	To lever federal investment with provinces and territories on projects or programs that will result in measurable greenhouse (GHG) reductions that contribute to meeting Canada's Kyoto target for the first commitment period. Planned results include accelerated progress on provincial and territorial climate change and GHG action plans and strategies, improved horizontal federal government coordination with respect to co-operation and consultations with the provinces and territories on climate change and GHG reduction, and improved multi-jurisdictional collaboration between provinces and territories and the Government of Canada in areas of common interest.	\$9.6M
Habitat Stewardship Contribution Program (HSP) (Nature)	HSP's goal is to contribute to the recovery of endangered, threatened and other species of concern, and to prevent other species from becoming a conservation concern, by engaging Canadians from all walks of life in conservation actions to benefit wildlife. The planned results include securing or protecting important habitat to protect species at risk and support their recovery, mitigating threats to species at risk caused by human activities and supporting the implementation of other priority activities in recovery strategies or action plans, where these are in place or under development.	\$10.0M
Climate Change Action Fund (Clean Environment and WEP)	Broaden the government's understanding to ensure informed decision-making on emission mitigation and reduction measures; to build on the current development of scientific and adaptation analysis; to increase public awareness and engage Canadians in solutions for reducing Greenhouse Gas (GHG) emissions.	\$4.6M
Contribution to the Wildlife Habitat Canada Foundation (Nature)	To provide financial assistance to Habitat Canada in the implementation of its wildlife habitat conservation initiatives across Canada in accordance with its objectives, through the production and marketing of the Wildlife Habitat Conservation Stamp.	\$2.2M

**Table 5.6 Sources of Respendable and Non-Respendable Revenue**

<b>Respendable Revenue</b>				
(\$ millions)	Forecast Spending 2003-2004*	Planned Spending 2004-2005	Planned Spending 2005-2006	Planned Spending 2006-2007
<b>Clean Environment</b>				
Scientific and professional services	8.9	<b>6.4</b>	5.5	4.9
Information products	0.3	<b>0.3</b>	0.3	0.3
Regulatory services	2.0	<b>2.5</b>	2.8	2.8
Realty (accommodation)	0.1	<b>0.1</b>	0.1	0.1
	11.3	<b>9.2</b>	8.6	8.1
<b>Nature</b>				
Scientific and professional services	6.4	<b>5.6</b>	5.4	5.5
Information products	0.2	<b>0.2</b>	0.2	0.2
Regulatory services	0.2	<b>0.3</b>	0.3	0.3
Realty (accommodation)	0.9	<b>0.9</b>	0.9	0.9
	7.7	<b>6.9</b>	6.8	6.8
<b>Weather and Environmental Predictions</b>				
Scientific and professional services	13.7	<b>14.2</b>	14.4	14.6
Information products	48.9	<b>49.7</b>	49.7	49.0
Realty (accommodation)	0.1	<b>0.1</b>	0.1	0.1
Sale of Sponsorships	0.1	<b>0.1</b>	0.1	0.1
	62.8	<b>64.1</b>	64.3	63.7
<b>Management, Administration and Policy</b>				
Realty (accommodation)	0.8	<b>0.8</b>	0.8	0.8
<b>Total Respendable Revenue</b>	82.5	<b>81.0</b>	80.5	79.4

Table 5.6 lists various sources of respendable and non-respendable revenue (next page). To clarify the types of revenues that fall under these revenue 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.

**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 NWRI building recoveries.

**Sale of sponsorships:** sponsorships and advertising sales.

The decrease in planned respendable revenue from 2003-2004 to 2004-2005 is caused primarily by a decrease in anticipated revenue for scientific and professional services.

**Table 5.6**  
(Continued)

**Sources of Respendable and Non-Respendable Revenue**

<b>Non-Respendable Revenue</b>				
(\$ millions)	Forecast Spending 2003-2004*	<b>Planned Spending 2004-2005</b>	Planned Spending 2005-2006	Planned Spending 2006-2007
<b>Clean Environment</b>				
Miscellaneous	0.1	<b>0.1</b>	0.1	0.1
	0.1	<b>0.1</b>	0.1	0.1
<b>Nature</b>				
Scientific and professional services	0.2	<b>0.2</b>	0.2	0.2
Regulatory services	4.4	<b>4.4</b>	4.4	4.4
Miscellaneous	0.2	<b>0.2</b>	0.2	0.2
	4.8	<b>4.8</b>	4.8	4.8
<b>Weather and Environmental Predictions</b>				
Scientific and professional services	0.1			
Information products	3.1	<b>2.0</b>	2.0	2.0
Royalties	0.1	<b>0.4</b>	0.4	0.4
Miscellaneous	2.7	<b>2.7</b>	2.7	2.7
	6.0	<b>5.1</b>	5.1	5.1
<b>Total Non-Respendable Revenue</b>				
	10.9	<b>10.0</b>	10.0	10.0
<b>Total Respendable and Non-Respendable Revenue</b>				
	93.4	<b>91.0</b>	90.5	89.4

\* Reflects the best forecast of total net planned spending to the end of the fiscal year. Totals may differ between and within tables due to rounding of figures.

**Table 5.7 External Charging**

This table presents information on the introduction or amendment of external charging fees.

Fee Setting Authority	<i>CEPA 1999 S.328</i>
Name of Fee Activity	New Substances Fees Regulations (NSFR)
Fee Type	Regulatory Service (R)
Reason for Fee Introduction or Amendment	Amendments are required due to changes being made to the Associated New Substances Notification Regulations (NSNR)
Effective date of planned change to take effect	2004-2005
Planned Consultation & Review process	The NSFR Advisory Panel will be consulted on the proposed minor changes to the NSFR. Amended NSFR will then be pre-published in Canada Gazette I for 60 days consultation period at the same time as the amended NSNR.

# Section 6: Regulatory and Delegated Arrangements

## 6.1 Major Regulatory Initiatives

### Detailed List of Planned Regulatory Initiatives

Clean Environment Business Line	
Regulatory Initiatives (2004-2005)	Planned Results
<b>Clean Air</b>	
<i>Chromic Acid Used in Chromium Electroplating or Chromium Anodizing Regulations (targeting publication in Canada Gazette Part I)</i>	Prevent and minimise emissions of chromium from chromium electroplating/anodizing/reverse etching operations that will result in facilities reducing chromium emissions by 50 to 90 percent.
<i>Regulations Amending the Sulphur in Diesel Fuel Regulations (targeting publication in Canada Gazette Part I)</i>	Set limits for sulphur in off-road, rail and marine diesel fuels at 500 mg/kg starting in 2007, with off-road diesel fuel reduced to 15 mg/kg in 2010. This will result in environmental and health benefits and ensure that the level of sulphur in diesel fuel used in off-road vehicles in Canada will not impede the effective operation of advanced emission control technologies.
<i>Marine Spark-Ignition Engines and Off-Road Recreational Vehicle Emission Regulations (targeting publication in Canada Gazette Part I)</i>	Introduce, for the first time, emission standards for outboard engines, personal watercraft, snowmobiles, all-terrain vehicles and off-road motor cycles. These emission standards will result in significant reductions of pollutants emitted from these categories of vehicles.
<i>Off-Road Compression-Ignition Engine Emission Regulations (targeting publication in Canada Gazette Part I)</i>	Establish emission standards for diesel engines such as those used in power construction, agricultural and forest machines. As a result of implementing these standards NO <sub>x</sub> and PM emissions from these engines will be reduced.
<b>Clean Water</b>	
<i>Regulations Amending the Pulp and Paper Effluent Regulations (targeting publication in Canada Gazette Part II)</i>	The Amendments will ensure requirements are clearer and more understandable, thereby making the Regulations easier to comply with and enforce.
<b>Management of Hazardous Waste</b>	
<i>Export and Import of Hazardous Wastes and Hazardous Recyclable Materials Regulations (targeting publication in Canada Gazette Part I)</i>	Integrate the relevant changes to international agreements' definitions of hazardous waste and hazardous recyclable material in Canada; enable progress towards a federal-provincial-territorial harmonized approach to the management of hazardous recyclable material. Establish reduction plans for export of hazardous waste for final disposal and establish Environmentally Sound Management (ESM) criteria to allow the Minister to determine whether to refuse an export, import or transit permit.
<b>Clean Air/Clean Water</b>	
<i>Amendments to the New Substances Notification Regulations (Chemicals and Polymers) (targeting publication in Canada Gazette Part I)</i>	Publication for comment of a streamlined and simplified regulatory framework that uses plain language.

<b>Clean Environment Business Line (continued)</b>	
<b>Regulatory Initiatives (2005-2006)</b>	<b>Planned Results</b>
<b>Clean Air</b>	
<i>Off-Road Large Spark Engine Emissions Regulation (targeting publication in Canada Gazette Part I)</i>	Introduce emission standards for the first time for large spark-ignition engines such as those found in forklifts and ice resurfacers. These emission standards will result in significant reductions of pollutants emitted from these categories of vehicles.
<i>Regulations Limiting Volatile Organic Compounds (VOC) Content in Paints and Coatings (targeting publication in Canada Gazette Part I)</i>	Implement national VOC emission standards for certain categories of architectural and industrial maintenance coatings; aligned with the requirements in the U.S. to reduce emissions of VOCs (a precursor pollutants contributing to the formation of ground-level ozone and particulate matter) into the atmosphere.
<b>Clean Water</b>	
<i>Ministerial Order to Add hexachlorobutadiene (HCBD) to the Virtual Elimination List (targeting publication in Canada Gazette Part II)</i>	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 below the level of quantification specified by the Ministers in the List.
<i>Federal Petroleum Products and Allied Petroleum Products Storage Tank Systems Regulation (targeting publication in Canada Gazette Part I)s</i>	Provide a more comprehensive framework in order to effectively prevent soil and groundwater contamination from 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.
<b>Management of Hazardous Waste</b>	
<i>Polychlorinated Biphenyl (PCB) Regulations (targeting publication in Canada Gazette Part I)</i>	Control the use of PCB equipment and releases of PCB into the environment by phasing out by specific date PCB equipment that is still in use, and implement new tracking provisions for the PCBs currently in use.
<i>PCB Waste Export and Import Regulations (targeting publication in Canada Gazette Part I)</i>	Bring the controls on imports and exports under one regulation. Prohibit the export of hazardous PCB wastes and strengthen the controls on imports to allow imports only destined directly for disposal.
<b>Clean Air/Clean Water</b>	
<i>Regulations to Prohibit the Use of Lead Fishing Gear (targeting publication in Canada Gazette Part I)</i>	Reduce the amount of lead that enters the environment by prohibiting the use of lead fishing gear.
<i>Total, Partial or Conditional Prohibition of Certain Toxic Substances Regulations (targeting publication in Canada Gazette Part II)</i>	Prohibit Toxic substances, [hexachlorobutadiene (HCBD), N-nitrosodimethylamine (NDMA) and dichlorodiphenyltrichloroethane (DDT)] that pose serious risks to Canadians' health or their environment, to ensure the substances are not introduced into the Canadian market.
<b>Regulatory Initiatives (2006-2007)</b>	<b>Planned Results</b>
<b>Clean Air</b>	
<i>Regulations Limiting Volatile Organic Compound (VOC) Content in Consumer Products (targeting publication in Canada Gazette Part I)</i>	Implement a national VOC emission standards for certain categories of consumer products to align with the requirements in the U.S. to reduce emissions of VOCs (a precursor pollutants contributing to the formation of ground-level ozone and particulate matter) into the atmosphere.
<i>Regulations Limiting Volatile Organic Compound (VOC) Content in Automobile Refinishing (targeting publication in Canada Gazette Part I)</i>	Developed a national VOC emission standards for automobile refinish coatings that are aligned with the U.S. and CCME standards to reduce emissions of VOCs (a precursor pollutants contributing to the formation of ground-level ozone and particulate matter) into the atmosphere.
<i>Amendments to the New Substances Notification Regulations (Living Organisms) (targeting publication in Canada Gazette Part I)</i>	Publication of the consultation report outlining outcome of multi-stakeholder consultations on the application of the Regulation to living organisms.



<b>Nature Business Line</b>	
<b>Regulatory Initiatives (2004-2005)</b>	<b>Planned Results</b>
<b>Species at Risk</b>	
<i>Amendments to the legal list and compensation regulation (publish regulations in 2004-2005).</i>	Amend schedule 1 and provide procedure to apply for compensation.
<b>Migratory Birds Regulations</b>	
<i>Annual hunting regulations establishing hunting season dates and bag and possession limits for migratory game birds (publish regulations by the 1<sup>st</sup> quarter of 2004-2005).</i>	Through best available science allow hunting at sustainable levels.
<i>Overabundant Snow Goose regulation to establish special conservation seasons (publish regulation in the 4<sup>th</sup> quarter 2004-2005).</i>	Maintain a spring hunting season for snow goose as a population control measure where needed.
<b>Migratory Bird Sanctuary (MBS) Regulations</b>	
<i>Amendments to update regulations and establish and enlarge Iles-aux-Herons MBS (QC); adjust legal survey description for Anderson River MBS (NWT); enlarge Baie des Loups MBS (publish regulations by the 4<sup>th</sup> quarter of 2004-2005)</i>	Update current Migratory Bird Sanctuaries to reflect current distribution of Migratory birds as well as new land holdings.
<b>National Wildlife Area (NWA) Regulations</b>	
<i>Amendments to enlarge Alaksen NWA (BC), Columbia NWA (BC), Qualicum NWA (BC), St. Clair NWA (ON), Long Point NWA (ON), Prince Edward Point NWA (ON), Iles-de-L'Estuaire NWA (QC) and Chignecto NWA (NS), Pointe de L'Est, Lac Saint-François and Baie de l'Isle Verte NWAs (QC) (publish regulations by the 4<sup>th</sup> quarter of 2004-2005).</i>	Update current National Wildlife Areas to reflect new land holdings, for the protection of wildlife in Canada.
<b>Regulatory Initiatives (2005-2006)</b>	<b>Planned Results</b>
<b>Species at Risk</b>	
<i>Amendments to the legal list of species and other provisions, as needed (publish regulations in 2005-2006).</i>	Amend schedule 1 and put in other provisions as required.
<b>Migratory Birds Regulations</b>	
<i>Annual hunting regulations establishing hunting season dates and bag and possession limits for migratory game birds (publish regulations by the 1<sup>st</sup> quarter of 2005-2006).</i>	Through best available science allow hunting at sustainable levels.
<i>Overabundant Snow Goose regulation to establish special conservation seasons (publish regulation by the 4<sup>th</sup> quarter of 2005-2006).</i>	Maintain a spring hunting season for snow goose as a population control measure where needed.
<b>Wildlife Animal and Plant Trade Regulations</b>	
<i>Permit and inspection fees, record keeping, marking of specimens, and designated ports of entry (publish regulations by the 2<sup>nd</sup> quarter of 2005-2006).</i>	Provide for more efficient administration of the Convention on International Trade in Endangered Species (CITES) by Canada.
<i>Provisions for pre-Convention and ranched specimens (publish regulations by the 2<sup>nd</sup> quarter of 2005-2006).</i>	Provide an exemption regulation for certain specimens as authorized under the Convention.
<b>Regulatory Initiatives (2006-2007)</b>	<b>Planned Results</b>
<b>Species at Risk</b>	
<i>Amendments to the legal list of species and other provisions, as needed (publish regulations in 2006-2007).</i>	Amend schedule 1 and put in other provisions as required.
<b>Migratory Birds Regulations</b>	
<i>Annual hunting regulations establishing hunting season dates and bag and possession limits for migratory game birds (publish regulations by the 1<sup>st</sup> quarter of 2006-2007).</i>	Through best available science allow hunting at sustainable levels.
<i>Overabundant Snow Goose regulation for special conservation seasons (publish regulation by the 4<sup>th</sup> quarter 2006-2007).</i>	Maintain a spring hunting season for snow goose as a population control measure where needed.

## 6.2 Foundations

This table provides information on private foundations for which Environment Canada is the sponsor or co-sponsor.

Canadian Foundation for Climate and Atmospheric Sciences (CFCAS) ( <a href="http://www.cfcas.org">http://www.cfcas.org</a> )			
Objective	Amount and Timing of Funding	Projected Use of Funds	Expected Results
<p>Enhance Canada's scientific capacity by funding the generation and dissemination of knowledge in areas of national importance and policy relevance, through focused support for excellent university-based research in climate and atmospheric sciences. Major objectives are to:</p> <ul style="list-style-type: none"> <li>o Channel and strengthen Canada's scientific capacity to address climate change and air quality issues.</li> <li>o Provide the scientific basis for a better understanding of climate change, the climate system, (including processes and predictions), extreme weather, air quality, and marine environmental prediction.</li> <li>o Provide the scientific basis for policies addressing the impacts of extreme weather, climate change and air quality as well as their implications for human health and the natural environment, including northern Canada.</li> <li>o Foster collaborative and interdisciplinary approaches to research on meteorology, atmospheric science, air quality, climate and climate change.</li> <li>o Encourage the participation and support of others, including the private sector, in climate and atmospheric sciences.</li> </ul>	<p>CFCAS was established in 2000-2001, through a one-time contribution of \$60M. The funds were originally to be disbursed over six years.</p> <p>A second one-time contribution of \$50M was provided to CFCAS in 2003-2004 to sustain and support the activities of the Foundation until June 30, 2010 (with follow-up &amp; "shutdown" of activities as relevant, extending to March 31, 2011).</p>	<p>CFCAS will continue to invest strategically in excellent university-based research to: provide relevant science to policy makers; generate better knowledge of climate change and its impacts on the natural environment; provide results to help Canada respond to its international environmental commitments; and ensure a supply of skilled human resources to meet future environmental challenges.</p> <p>The Foundation will focus more heavily on funding major initiatives, in partnership with other agencies, and promoting intersectoral and interdisciplinary research partnerships.</p> <p>Investments will be more targeted to strategic areas: Arctic climate, extreme weather, air quality and marine environments.</p> <p>From 2004 the Foundation will support a small number of international science cooperation offices based in Canada, in conjunction with other agencies. It will also promote more systematic transfer of results to 'stakeholder' communities.</p>	<p>Improved weather predictions and policies, environmental security and risk management strategies.</p> <p>Enhanced economic stability through generation and application of new knowledge on climatic conditions conducive to smog, disease vectors, exotic pest and plant species, avalanches, forest fires and other threats.</p> <p>Better prediction and understanding of severe weather events (drought, winter storms, floods).</p> <p>Generation of skilled scientists to meet societal and industry needs, and fill positions vacated by retirements.</p> <p>More efficient and effective use of facilities and technologies for monitoring regional climates (including earth observation systems).</p> <p>Better data on climate system processes influencing greenhouse gas sources and sinks.</p> <p>Improved knowledge of oceans and atmospheric processes, for better marine environmental predictions and a better understanding of the role of oceans in climate.</p> <p>Enhanced prestige and profile of Canadian researchers; greater involvement of Canadians in international scientific activities.</p>

Sustainable Development Technology Canada (SDTC) ( <a href="http://www.sdtc.ca">http://www.sdtc.ca</a> )			
Objective	Amount and Timing of Funding	Projected Use of Funds	Expected Results
<p>To provide funding to eligible recipients for eligible projects in Sustainable Development Technology particularly focusing on climate change (80%) and clean air (20%).</p>	<p>An initial grant of \$100M was announced in Budget 2000 and funds were transferred by the two lead departments, Environment Canada and Natural Resources Canada, in 2001-2002 for disbursement over 5 years.</p> <p>As of February 2004, SDTC has announced \$40M of funding for 27 projects, from the initial \$100M grant. This is based on the first 3 rounds of funding.</p> <p>An additional grant of \$250M was announced in Budget 2003. A revised Funding Agreement was negotiated with SDTC Treasury Board Ministers. The new funds will be transferred by each of the lead departments before March 31, 2004. The period for commitment of the funds extends to December 31, 2007 and the period of disbursement extends to December 31, 2009. The term of the Funding Agreement is June 30, 2012, which allows for 2 years of project reporting, after each project has been completed.</p>	<p>To fund the accelerated development and demonstration of collaborative projects which address the issues of climate change and air quality.</p> <p>Eligible recipients must demonstrate the formation of creative and economically sound partnerships from the private sector, academia, not-for-profit organizations, and possibly federal or provincial or municipal governments (as potential participants, but not recipients of funds). These partners will contribute at least a further \$750M of leveraged funding, since SDTC will fund, on average, up to 33% of an eligible project. There will be a 75% stacking limit for all forms of government funding on a per project basis.</p>	<p>Upon diffusion of successful projects, major reductions in greenhouse gas emissions will result to facilitate reaching Canada's Kyoto objectives. Other EC priorities related to Clean Air will be met with new innovative technologies.</p>

The Federation of Canadian Municipalities' Green Municipal Funds (GMF) ( <a href="http://www.fcm.ca">http://www.fcm.ca</a> )			
Objective	Amount and Timing of Funding	Projected Use of Funds	Expected Results
<p>Two complementary GMFs were created to stimulate municipal investments in innovative environmental infrastructure projects and practices to achieve cleaner air, water, and soil, to protect the climate and promote sustainable use of renewable and non-renewable resources. Program delivery to all Canadian municipalities is delegated to the FCM, which operates at arm's length from the Federal Government.</p> <p><b>The Green Municipal Enabling Fund (GMEF)</b> \$50M fund, ending in 2007, that provides cost-shared grants for feasibility studies that assess the technical, environmental and/or economic feasibility of innovative environmental projects. Grants cover up to 50% of eligible costs to a maximum of \$350,000.</p> <p><b>The Green Municipal Investment Fund (GMIF)</b> \$200 M permanent revolving fund providing financing to municipal governments or their partners to underwrite the capital costs of innovative environmental infrastructure projects. Grants may also be provided for highly innovative projects.</p>	<p>\$50M (Endowments of \$25M each in Budget 2000 and 2001).</p> <p>\$200M (endowments of \$100M each in Budget 2000 and 2001).</p> <p>Funds were provided by Environment Canada and Natural Resources Canada, each contributing half.</p>	<p>The FCM will continue to use the GMF to fund innovative environmental projects. They have established a two phase selection process based on established criteria. Applicants first submit a brief description of their study as a letter of Intent to Apply. Only applicants that meet basic criteria are asked to proceed to the detailed application phase.</p> <p>A Peer review committee of experts in the field evaluates applications. Recommendations from Peer Reviewer are presented to a 15-member Green Municipal Funds Council (GMFC) that oversees the activity and work of the GMF and makes recommendations to the FCM Board, which is the designated approval body for the Funds.</p> <p>The Council consists of five representatives from the Government of Canada (2 from NRCan, 2 from EC and 1 from Transport Canada), five from the municipal sector and another five from non-government institutions and the private sector. This balanced membership assures fairness in the overview of the Funds.</p> <p>In March 2004, FCM will complete their annual statement of plans for fulfilling the Fund objectives and purposes for the coming year as well as a mid-term independent evaluation of the GMF.</p>	<p>► To improve air, water and soil quality, protect the climate, and have a positive impact on the health and the quality of life of Canadians by:</p> <ol style="list-style-type: none"> <li>1. Encouraging local environmental action in key sectors including: <ul style="list-style-type: none"> <li>► Energy and energy services;</li> <li>► Water;</li> <li>► Solid waste management;</li> <li>► Sustainable transportation services and technologies;</li> <li>► Sustainable community planning; and</li> <li>► Integrated community projects.</li> </ul> </li> <li>2. Leveraging private sector contributions to make cities and towns across Canada more energy efficient, at the same time reducing our greenhouse gas emissions.</li> <li>3. Improving the environmental efficiency and cost-effectiveness of municipal infrastructure.</li> </ol>

Clayoquot Biosphere Trust ( <a href="http://www.clayoquotbiosphere.org">http://www.clayoquotbiosphere.org</a> )			
Objective	Amount and Timing of Funding	Projected Use of Funds	Expected Results
<p>Establish and implement technical committees in marine/aquatic, terrestrial, education and community development to provide support and recommendations for approval of community-based initiatives.</p> <p>Improve outreach to communities to facilitate better understanding and participation in the work of the Clayoquot Biosphere Trust.</p> <p>Maintain current funding initiatives and explore other funding sources to maximize community benefit through educational scholarships, project funding, and collaborative partnerships.</p> <p>Pursue targeted initiatives and partnerships to provide significant community benefit and provide opportunity to develop collaborative ventures.</p>	<p>Funding is administered by the Clayoquot Biosphere Trust (CBT).</p>	<p>Allocate resources to CBT committees to allow the provision of technical advice for the funding of community-based projects.</p>	<p>Local communities and First Nations are engaged in continuing dialogue on developing local solutions towards conservation, sustainable development, and healthy communities.</p> <p>Meetings organized and held with each First Nation and regional communities to create greater sense of involvement with the Clayoquot Biosphere Trust.</p> <p>Additional funds pursued for use in scholarships to promote post-secondary education opportunities for local students.</p> <p>Partnerships and alliances continued with the local communities and First Nations that lead to enhanced collaboration among stakeholders and solutions to local environmental and sustainable development challenges.</p>

## 6.3 Environment Canada's Sustainable Development Strategy 2004-2006

*Environment Canada's Sustainable Development Strategy (SDS) 2004-2006*, tabled in Parliament in February 2004, is Environment Canada's third in a series of sustainable development strategies. It highlights for Canadians key commitments that the Department will undertake over the next three years to further our sustainable development objectives, to participate in building a government-wide approach to sustainable development, and to address our international sustainable development agenda.

*SDS 2004-2006* builds upon the strengths of our previous *SDS 2001-2003* by continuing to advance four themes that have shaped the Department's approach in recent years – Information for Decision-Making; Innovative Instruments; Partnerships for Sustainable Development; and Managing for Sustainable Development. The updated Strategy focuses on building a future shaped by:

- A strong knowledge base that puts human and natural capital on an equal footing with economic capital, informs public debate and ensures integrated decision-making;
- The strategic use of market forces to ensure that good economic policy becomes good environmental and social policy;
- Partnerships and governance models that enable horizontal decision-making at the government, community and corporate levels; and
- Leadership in our departmental operations as well as supporting efforts to promote sustainable development in operational policies and practices government-wide.

### **Applying Environment Canada's SDS Framework to Departmental Priorities**

The SDS 2004-2006 has taken steps to demonstrate the influence of the Strategy on the delivery of Environment Canada's policy and programming priorities: Reducing the Health and Safety Impacts of Environmental Impacts of Pollution, Moving Forward on Climate Change; Sustaining our Natural Environment; and, Reducing Risk from Weather, Environmental Change and Other Hazards. The following describes related significant sustainable development challenges under each of the four departmental priorities, and the SDS commitments that will address these challenges. This section is intended to provide a clearer picture of the role and fit of the Strategy within the Department.

## **I. Priority 1: Reducing the Health and Environmental Impacts of Pollution**

Reducing the health and safety impacts of environmental threats requires that Canadians receive timely and accurate information and take the appropriate steps to both mitigate against the risk and protect themselves. Our key sustainable development challenges are related to addressing research gaps, enhancing information dissemination and strengthening partnerships with industry.

**Information for Decision-Making:** A significant sustainable development challenge for the Department is to strengthen our understanding and increase awareness of the link between the environment and health. At the World Summit on Sustainable Development, Canada announced \$3 million to support the initiative *Strengthening Health and Environment Linkages: From Knowledge to Action*. The Initiative will bring together scientific, technical and socio-economic information on environment and health linkages, and transfer that knowledge to inform decision-making at the local, regional and national levels.

Over one-half of all Canadians live in areas where ground-level ozone may reach high levels during the summer months and every urban centre has levels of airborne particles that are high enough to cause health impacts. Providing accurate, comprehensive and timely information to all Canadians will allow them to take appropriate action to reduce their personal health risk and contributions to air pollution.

Research characterizing sources and processes determining air quality in airsheds (some of which are shared with the United States) provides information that can guide decision-makers to maintaining and enhancing sustainability.

**Innovative Instruments:** The 2003 Speech from the Throne called for an External Advisory Committee on Smart Regulations to be established to provide an external perspective and expert advice on regulatory issues spanning economic and social policy objectives. Environment Canada will continue to support this Committee and look for opportunities to develop innovative, market-based economic instruments to reduce environmental threats.

**Partnerships for Sustainable Development:** Environment Canada will develop innovative partnership strategies with the corporate sector to support industry, especially small and medium-sized enterprises, to: catalyze the deployment of new technologies; increase the quantity and quality of corporate social responsibility and sustainability reporting; and, identify the financial and other business benefits, as well as challenges, associated with corporate environmental and sustainability performance. The Department will also work with other government departments and other partners to enhance productivity and environmental performance and provide sustainable development tools and best practices to the corporate sector.

## II. Priority 2: Moving Forward on Climate Change

Addressing climate change is important to Canada's competitiveness and the health and security of Canadians. Implementing near term and enduring emission reductions and setting long-term goals to make the deep emission reductions needed to successfully address climate change and starting to work towards them will *accelerate a shift to sustainability*.

The larger challenge for all countries is developing and deploying the next generation technologies needed to make the transformative changes that will be required to make the economies of the world less carbon intensive and sustainable for the long term. Canada's long-term competitiveness will be determined by how we manage the situation overall.

**Information for Decision-Making:** Domestic emission reductions will rely on sustainable electricity production and use, sustainable transportation, clean and efficient industry and sustainable cities. Working with provinces, territories and stakeholders to develop long term industrial strategies for key sectors will require strengthening our understanding of business cycles, capital stock replacement rates, investment hurdles, research and development cycles and technology development timelines.

Improving our scientific understanding of the challenges and opportunities posed by climate change for our resources and economy and developing strategies, scenarios and options are essential to guide decision-making on adaptation in areas vulnerable to a changing climate.

**Innovative Instruments:** Canada needs to take an integrated approach to drive the transformational shifts that are needed to address climate change. This means collective accountability based on shared goals and common principles. It means a long-term process where today's decisions are shaped by the realities one to two decades in the future. It means setting longer-term goals to make the deep emission reductions needed to successfully address climate change and starting to work towards them. Finally, it means providing the tools, incentives and standards needed to align economic and environmental signals.

**Partnerships for Sustainable Development:** Environment Canada will develop sector-based approaches to develop long term sector specific agendas containing measurable targets, transition incentives and reporting requirements. These partnerships will have broad participation from the value-chain in key sectors and will also include provincial, municipal, Aboriginal and non-government organization participation tailored according to the sector.

The Department will continue to be involved in international negotiations. Kyoto is an important first step in addressing climate change. However, a new agreement will be needed for the long term. This agreement must include all industrialized countries and key developing countries. The commitments and timeframes in it must be based on the transformative changes that are required to successfully address climate change over the long term. Canada is committed to being an active part of the long term global solution.

While the majority of Canadians are aware of the climate change issue, and many acknowledge that there is something they can do personally to address this issue, greenhouse gas emissions continued to rise during the late 1990's. As consumers, individual Canadians are responsible for more than one quarter of Canada's greenhouse gas emissions. The One Tonne Challenge aims to engage Canadians providing them with information on how their individual consumption choices contribute to the emissions that drive climate change.



### III. Priority 3: Sustain Our Natural Environment

Sustaining our natural environment presents significant opportunities to further sustainable development at the ecosystem, community and regional levels. The key sustainable development challenges are related to new knowledge and indicators for decision-making and partnerships, especially those with other levels of government.

Jurisdiction for this complex issue of safe and secure water is shared across the federal, provincial and territorial governments. Partnerships are key to addressing this issue. The Department is working with its provincial, territorial and health counterparts to address water quality, water quantity and water use.

**Information for Decision-Making:** In the next three years, Environment Canada will focus on developing the models and tools for integrated analysis of water quality and quantity and using this information to address sustainable water management issues. The department will also develop national agri-environmental standards related to water quality, water conservation, pesticides, air quality and biodiversity.

**Innovative Instruments:** One of the Department's most significant instruments to influence individual landowner behaviour is the Ecological Gifts Program. This program will be evaluated and expanded in the next three years.

**Partnerships for Sustainable Development:** To better meet our sustainable development objectives, improved governance is required for the implementation of a number of strategies and Acts, including Ecosystems Initiatives, the *Species at Risk Act (SARA)* and the Canadian Biodiversity Strategy.

Implementation of *SARA* and related provincial and territorial activity under the Accord for the Protection of Species at Risk presents Canadians with a significant opportunity to renew our approach to wildlife conservation, protect and conserve habitat, and secure new resources for conservation programming. *SARA* implementation presents a good opportunity to develop new models of partnership with communities, Aboriginal peoples, provinces, territories, other government departments, wildlife management boards, industry, non-governmental organizations, etc.

As well, under the North American Bird Conservation Initiative, Environment Canada will work with industry to influence land-use decisions and practices related to migratory bird habitats.

#### **IV. Priority 4: Reduce Risk from Weather, Environmental Change and Other Hazards**

The risks to health, safety, property and the economy from naturally occurring environmental hazards, such as ice storms, floods, droughts and wind are increasing. It is estimated that \$150 billion of Canada's economy is weather-sensitive, with some sectors (e.g. transportation, agriculture, forestry, health) relying extensively on accurate forecasts and warnings to mitigate risks posed by weather events. Other environmental hazards, such as poor air and water quality, may be produced or intensified by human activity. Property and economic losses due to environmental hazards have increased dramatically in recent years.

**Information for Decision-Making:** A long-term goal of the Meteorological Service of Canada (MSC) is to improve Canadians' capacity to anticipate, mitigate, withstand, and recover from high-impact events and related hazards. Over the next three years the MSC will, as part of its transformation activities, improve the Canadian environmental threats forecasting and warning systems through: science to strengthen our prediction capability and monitoring technology to increase lead-times as the basis for improved weather warning services to Canadians; and, enhanced outreach strategies for public alerts, new National Service Offices and new service partnerships/strategies with first responders and emergency organizations (e.g. Health Canada, Emergency Preparedness, provincial and municipal emergency measures and response agencies).

**Partnerships for Sustainable Development:** Environment Canada will develop innovative partnership strategies with the corporate sector to support industry, especially small and medium-sized enterprises, to: catalyze the deployment of new technologies and identify the financial and other business benefits.

Further information on all SDS commitments and progress on implementation for Sustainable Development Strategy 2004-2006 will be included in upcoming Departmental Performance Reports. For more detailed information on Sustainable Development Strategy 2004-2006, please visit Environment Canada's Green Lane: [http://www.ec.gc.ca/sd-dd\\_consult/](http://www.ec.gc.ca/sd-dd_consult/).

# Section 7: Strategic Context Chart

## 7.1 Strategic Context Chart

Strategic Outcome	Protect Canadians and their environment from domestic and global sources of pollution.			Conserve biodiversity in healthy ecosystems.					Help Canadians adapt to their environment in ways that safeguard their health, safety and security, optimize economic activity and enhance environmental quality.				Provide strategic and effective departmental management to achieve environmental results.		
Lead Business Line	Clean Environment Business Line			Nature Business Line					Weather and Environmental Predictions Business Line				Management, Administration and Policy Business Line		
Key Result	Atmosphere and Air Quality		Toxic Substances	Biological Diversity		Health of Ecosystems	Priority Ecosystems		Reduced Impact of Weather and Related Hazards		Adaptation to Environmental Changes		Policy Priorities and Plans	Well Performing Organization	
Priority Area	Air	Climate Change	Toxic Substances	Broader Conservation Strategies	Wildlife	Leadership in Ecosystem Science	Water	Ecosystem Initiatives	High-Impact Weather and Atmospheric Threats	Building an Improved & Sustainable Service	Improving the quality of forecasts from days to seasons	Informing Policy through Science	Innovative and Integrated Policy	Integrated Management	
SOE Indicators and other performance measures	Concentration of Air Pollutants	Greenhouse Gas Emissions	On-site releases of selected toxic substances	Biodiversity Index (proposed)	Status of reassessed species	To Be Decided	Water Quality Index (proposed)	To Be Decided	Vulnerability to and impact of weather-related disasters	To Be Decided	To Be Decided	To Be Decided	To Be Decided	To Be Decided	
Priority Components	<p>Clean Air Agenda:</p> <ul style="list-style-type: none"> <li>- Canada-wide standards for particulate matter and ozone</li> <li>- Emissions from vehicles, engines and fuels</li> <li>- Transboundary flows of air pollution are reduced</li> <li>- Air quality monitoring, forecasting and reporting</li> <li>- Public engagement</li> </ul> <p>Other areas of work on air:</p> <ul style="list-style-type: none"> <li>- Acid Rain</li> <li>- Hazardous Air Pollutants</li> <li>- Stratospheric Ozone</li> </ul>	<p>National climate change plan with long term targets and aggressive near term action in collaboration with provinces, territories and industry.</p> <p>Helping Canadians to do their part</p> <p>Providing leadership in bridging to a new long term sustainable climate change regime</p> <p>Adapting to climate change</p>	<p>Risk assessment</p> <p>Risk management</p> <p>Pollutants directly managed</p> <p>Compliance</p> <p>Monitoring and reporting</p>	<p>Canadian Biodiversity Strategy</p> <p>Natural Legacy Agenda</p>	<p>Species at Risk</p> <p>Migratory Bird Populations</p> <p>Habitats</p>	<p>Status and trends monitoring and reporting</p> <p>Scientific understanding</p> <p>Science-based tools and approaches</p> <p>S&amp;T policy and management</p>	<p>Research Governance</p> <p>Awareness</p> <p>Tools and instruments</p> <p>International and bi-national water initiatives</p>	<p>Atlantic Coastal Action Program</p> <p>St. Lawrence Action Plan</p> <p>Great Lakes Basin 2020</p> <p>Western Boreal Conservation Initiative</p> <p>Northern Ecosystem Initiative</p> <p>Georgia Basin Action Plan</p>	<p>Weather, climate, surface water, ice and stratospheric ozone monitoring</p> <p>Warnings of severe and high impact weather and related hazards</p> <p>Atmospheric, hydro-meteorology and ice science and associated predictive modeling capacity</p> <p>Security and emergency response</p>	<p>MSC forecast operations</p> <p>National Service Offices, outreach &amp; partnerships</p> <p>Networks life cycle management</p> <p>Research &amp; Development</p> <p>Key employee skill sets and recruitment</p>	<p>Short-term forecasts for citizens, weather sensitive industries and institutions</p> <p>Data collection &amp; Archiving</p> <p>Extended range and seasonal forecasts</p> <p>Outreach to citizens and weather sensitive sectors</p>	<p>Climate and climate change, air quality and associated predictive modeling capacity</p> <p>Climate change impacts and adaptations science</p> <p>Integrated science assessments on key policy issues</p>	<p>Lead in the development of a government-wide environment and sustainable development agenda</p> <p>Enhance knowledge and use of innovative policy instruments</p> <p>Policy Partnerships &amp; Coordination</p> <p>Strategic communications advice to the Minister and senior management</p>	<p>Accountability, stewardship and risk management</p> <p>Citizen-focused service</p> <p>People</p>	
Gross Planned Spending	\$242.7M		\$173.8M	\$99.2M		\$48.1M	\$67.8M		\$204.2M		\$78.2M		\$27.1M	\$98.6M	

## Section 8: Other Information

### 8.1 Horizontal Initiatives

<b>Clean Environment Business Line</b>			
<b>Key Result: Air Quality</b>			
<b>Horizontal Initiative</b>	<b>Initiative Description</b>	<b>Annual Funding</b>	<b>Total Funding</b>
National Pollutant Release Inventory (NPRI)	The NPRI provides Canadians with access to information on the releases, disposal and recycling of key pollutants from facilities located in communities across Canada. Reporting to the NPRI is mandatory for those facilities that meet the NPRI requirements, and the information reported is made publicly available. Sections 46 to 53 of CEPA give the Minister authority to undertake the NPRI program.	\$ 6.8M for 2002-2003	n/a
National Air Pollutant Surveillance Network (NAPS)	National Air Pollution Surveillance Network. This is a federal-provincial territorial program to measure ambient air quality, mainly in urban centres. Note that BC and Quebec have delegated responsibilities to the GVD in Vancouver and the Ville de Montreal respectively. Major air pollutants are measured on a daily basis with others such as ions, metals and toxic chemicals being measured normally one day in six. Data from the stations are used by provinces to publish air quality indices. Environment Canada uses the data to measure long-term trends for support of abatement measures including development of regulations.	\$ 17.2M	\$ 17.2M per year from 2004-2007

**Key Result: Toxic Substances**

<p>The Federal Contaminated Sites Accelerated Action Plan</p>	<p>Federal contaminated sites are a legacy of past practices that have led to contamination that poses risks to human health and the environment today. These sites are the result of federal actions or operations that occurred on federal lands, or at sites that are now the direct responsibility of the federal government, such as abandoned mines in the North or former military bases located on federal lands. In 2002, the Treasury Board Secretariat (TBS) developed a <i>Federal Contaminated Sites Management Framework</i> in cooperation with custodial departments and Environment Canada (EC). This Framework includes the Federal Contaminated Sites Inventory and a suite of policies, guidelines and best practices. The 2003 federal Budget announced \$75M in 2003-2004 and \$100 million in 2004-2005 for accelerated action on federal contaminated sites (FCSAAP). Approximately 90% of these annual amounts have been identified for action on sites. The additional 10% of funding is directed to management, administration and expert support. This fund will generally be used in a 70:30 cost share (fund:department) to investigate potential new sites and to remediate and risk-manage the highest risk federal sites. The objectives of the FCSAAP are to accelerate the risk management and/or remediation of federal contaminated sites having the highest human health and environmental risks and reduce their associated federal financial liability. In regards to governance, Environment Canada and Treasury Board Secretariat co-chair an ADM-level Federal Contaminated Sites Steering Committee (SC) representing all 14 departments with federal contaminated sites, and three technical member departments namely Health Canada, Environment Canada and Department of Fisheries and Oceans. The Interdepartmental ADM Steering committee oversees the implementation of the FCSAAP program, and is responsible to set project priorities, monitor progress and provide recommendations on the funding of FCSAAP projects. FCSAAP Interdepartmental Regional Working Groups (IRWG) have also been established in each of Environment Canada's 5 regions or sub-regions, to provide technical advice on health, environmental and fish habitat related issues and to coordinate training and development of guidelines and approaches to the more than fourteen federal departments and agencies having custodial responsibility for federal contaminated sites.</p>	<p>\$ 100M</p>	<p>Not yet approved</p>
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## Nature Business Line

### Key Result: Ecosystem Health

<p>Ecological Monitoring and Assessment Network (EMAN)</p>	<p>The Ecological Monitoring and Assessment Network (EMAN) is made up of linked organizations and individuals involved in ecological monitoring in Canada that work together in order to better detect, describe, and report on ecosystem changes. The network is a cooperative partnership of federal, provincial and municipal governments, academic institutions, aboriginal communities and organizations, industry, environmental non-government organizations, volunteer community groups, elementary and secondary schools and other groups/individuals involved in ecological monitoring.</p> <p>Environment Canada's Ecological Monitoring and Assessment Network Coordinating Office (EMAN CO) supports and coordinates network sites and partners to improve the effectiveness of ecosystem monitoring to ensure informed decision-making. Further information on EMAN is available from <a href="http://www.eman-rese.ca">www.eman-rese.ca</a>.</p>	<p>\$ 40M from all partners</p>	<p>\$ 40M from all partners per year from 2004-2007</p>
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### Key Result: Priority Ecosystems

<p>Great Lakes Ecosystem Initiative</p>	<p>The Great Lakes Ecosystem Initiative is a model of horizontal integration. Its purpose is to ensure Canada's commitments under the Canada-United States Great Lakes Water Quality Agreement (GLWQA) are met, and to contribute to realizing the vision of a "healthy, prosperous, and sustainable Great Lakes Basin ecosystem." The initiative, which was first launched in 1989, has been twice renewed. It is led by Environment Canada and currently engages seven federal departments and provides the federal focal point for cooperation with both Ontario and the United States at the federal and state level. The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem is the mechanism used to harmonize objectives and coordinate actions between federal and provincial departments, while the Bi-national Executive Committee brings together federal, state and provincial departments from Canada and the United States to plan and manage initiatives developed pursuant to the GLWQA which require bi-national coordination. The ecosystem approach employed to restore and maintain environmental quality in the Great Lakes Basin and the bi-national and multi-jurisdictional nature of the resource requires a high degree of horizontal integration of science, policy and program implementation, provided for through the Great Lakes Ecosystem Initiative.</p>	<p>\$ 40M for 2003-2004</p>	<p><b>\$ 137.8M</b></p>
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## 8.2 Contacts for Further Information

### Departmental Contacts

#### Environment Canada

##### General Enquiries

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