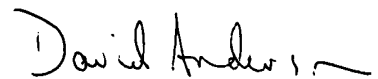


Environment Canada

2003–2004

Estimates

Part III – Report on Plans and Priorities

A handwritten signature in black ink, reading "David Anderson", positioned above a horizontal line.

David Anderson

Minister of the Environment

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Section 1 — Minister's Message and Management Presentation Statement

1.1 Minister's Message



Environment Canada's Report on Plans and Priorities for 2003–2004 identifies what we intend to achieve over the next three years. In particular, the report identifies an agenda that responds to the priorities of Canadians: reducing the health impacts of environmental threats, sustaining our natural environment and moving forward on climate change.

These priorities support the three themes of Budget 2003: building the society Canadians value; the economy Canadians need; and building the accountability Canadians deserve. The Budget announced the investment of \$3 billion for government-wide environmental initiatives. This brings the total new investment in environmental action by the Government of Canada to \$5.3 billion since 1997. As recognized in the September 2002 Speech from the Throne, our health, the quality of life in our communities and our continued economic prosperity depend on a healthy environment. The actions outlined in this report will enable Environment Canada to do its part to deliver on this core government priority.

Environment Canada's approach to addressing environmental issues has increasingly emphasized the importance of innovation and partnership in achieving real results for Canadians. Partnerships at all levels have always been vital, but they must be strengthened and renewed. This report details how Environment Canada intends to work in partnership with other governments, Aboriginal communities, businesses, the academic community and all Canadians to promote cleaner air and safe and secure water, to protect our extraordinary range of habitats and species, to reduce risks from weather-related and environmental hazards, and to achieve our climate change goals.

Protecting our environment provides a great opportunity to promote Canadian innovation in new technologies and sustainable practices. New approaches to addressing environmental challenges, including voluntary actions, informed consumer choices and incentives, have the potential to promote our environmental objectives in parallel with our economic and social objectives. I believe, for example, that Canadians can be the most sophisticated and efficient consumers and producers of energy in the world — and leaders in the development of new, cleaner technologies.

I am confident that by working together, by being innovative and creative, we can achieve an improved quality of life for current and future generations. I invite you to contact my Department for information on how you can join those who are working to promote made-in-Canada solutions to these challenges.

David Anderson, P.C., M.P.

Minister of the Environment

1.2 Management Presentation Statement

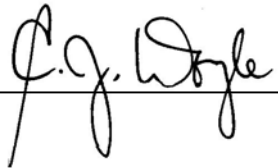
I submit, for tabling in Parliament, the 2003–2004 Report on Plans and Priorities (RPP) for Environment Canada.

This document has been prepared based on the reporting principles and disclosure requirements contained in the *Guide to the preparation of the 2003–2004 Report on Plans and Priorities*:

- ☐ It accurately portrays the Department'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:



Date:

March 7, 2003

Section 2 — Strategic Context

2.1 Departmental Profile

2.1.1 Raison d'être: Mandate, Vision and Mission

MANDATE

The mandate of the Minister of the Environment is to preserve and enhance the quality of the natural environment, including water, air and soil quality; conserve Canada's renewable resources, including migratory birds and other native flora and fauna; conserve and protect Canada's water resources; carry out meteorology; enforce the rules made by the Canada–United States International Joint Commission relating to boundary waters; and co-ordinate environmental policies and programs for the federal government (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://www3.ec.gc.ca/EnviroRegs>

MISSION

Environment Canada's mission is to make sustainable development a reality in Canada by helping Canadians live and prosper in an environment that needs to be respected, protected and conserved. To this end, we undertake and promote programs to:

- ☐ protect Canadians from domestic and global sources of pollution;
- ☐ conserve biodiversity and the ecosystems that support it; and
- ☐ enable Canadians to adapt to weather and related environmental influences and impacts on human health and safety, economic prosperity and environmental quality

OUR VISION

At Environment Canada, we want to see a Canada:

- *where people make responsible decisions about the environment; and*
- *where the environment is thereby sustained 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. Our efforts include research, monitoring and assessment, technology and indicators development, and reporting activities. Environment Canada uses its 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 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 2.2.4 for further details of Environment Canada's science-related initiatives

2.2 Departmental Planning Overview and Priorities

2.2.1 Planning Context and Strategic Issues

The pursuit of sustainable development is central to our quality of life and prosperity, now and into the future. It is critical to our health, our sense of well-being and the livability of our communities. It is increasingly a driver of innovation, a determinant of long-term growth and competitiveness, and a valuable asset in attracting and retaining talent and investment.

There are clear signals that human activity globally is now substantially affecting the planet's absorptive and productive capacity. The results of these stresses include: compromised health as a result of environmental pollutants and hazards; loss of property and profitability due to shifting climate and weather patterns; and loss of biodiversity. Projected population and economic growth patterns will likely increase these pressures. Many of these issues are exceedingly complex and increasingly global in nature. Nowhere is this truer than in the case of climate change. Getting the planet onto more sustainable footing represents one of the most important challenges facing humanity in this century.

A Pivotal Time for Environment Canada

The federal government made significant progress in 2002–2003 on a number of key environmental issues. The Kyoto Protocol was ratified by the federal government; the *Species at Risk Act* (SARA) received Royal Assent after nine years of hard work; amendments were progressing related to the *Canadian Environment Assessment Act* (CEAA) to improve environmental assessment; and Environment Canada completed reviews of how it was implementing the *Canadian Environment Protection Act, 1999* (CEPA 1999) and on approaches to modernizing Canada's weather services. Budget 2003 provided an additional \$3 billion for key environmental priorities, bringing the total new funding for the environment, since 1997, to \$5.3 billion. Furthermore, it directs new infrastructure funding and existing industry and other programs to make climate change objectives a priority.

These are substantial accomplishments to celebrate and the new resources allocated to this government-wide agenda in Budget 2003 will enable the Government of Canada to move forward in an increasingly integrated fashion. It will support a comprehensive national environmental management system and enable the federal government to focus on areas such as: implementing its environmental legislation and meeting other obligations; ensuring that Canadians have the science, environmental knowledge, warnings and forecasts required to make informed decisions; shaping a natural legacy agenda to sustain our natural environment; continuing Canada's international leadership on environmental issues; and pursuing innovative approaches to our environmental challenges.

Meeting Our Obligations

The ratification of the Kyoto Protocol requires that Canada reduce its greenhouse gas emissions by 6% from 1990 levels. Meeting this goal will require that all governments, industry and Canadians work together. SARA helps the federal government fulfill its international commitments under the Biodiversity Convention and its commitments to the provinces and territories under the 1996 Accord for the Protection of Species at Risk. SARA requires the scientific assessment of the status of species, the development of recovery strategies and action plans for species deemed at risk, and support for voluntary action by citizens to protect critical habitat.

The Government of Canada remains committed to implementing CEPA 1999. This legislation requires that the 23,000 substances currently in use in Canada be reviewed for their potential impact on human or environmental health. If the substances are found to pose a risk, then the federal government is obligated to develop and implement measures to prevent or control the harm they pose to human health and the environment. We must further examine how the innovative use of smart regulations can help develop lasting solutions.

Environment Canada is responsible for monitoring through observing stations, measurement programs and a wide array of technologies, the vast expanse of atmospheric and water resources within its borders. A reliable monitoring infrastructure is indispensable to Canadians and to all levels of government within Canada and abroad for sustainable management of the environment. Environment Canada, faced with significant infrastructure and resource challenges, is taking necessary steps to restore the integrity of the Meteorological Service of Canada (MSC) infrastructure to meet its goals and obligations to Canadians and to the international atmospheric, environmental and water monitoring communities. In light of a recent review, priorities have been set to remove or replace obsolete infrastructure, to integrate new and more innovative technologies into the monitoring networks in order to enhance our observing capacity, and to enhance public access to all of these data holdings. The availability of resources will be a critical factor in determining the speed at which this work will be carried out.

Informing Decision-making

As past experience has demonstrated, successful environmental management depends on our ability to fully engage individuals and communities in defining the problems, finding the solutions and taking action to improve the quality of our environment. In the end — whether the source of the problem is in our backyard or on the other side of the globe — the problem becomes a local one. As such, individuals and communities must do their part, and governments and others must support their efforts to do so. Environment Canada has many initiatives in place to support local decision-making and action, ranging from publications and websites, to public fora on solutions to urban smog, Eco-watch networks, community wetlands programs, and sustainable community pilots. This effort helps governments and communities work together to solve particular issues.

Public concern about the environment continues to be motivated by the growing awareness of how environmental factors affect our health. Fully 61% of Canadians feel that their health is now affected a great deal (29%) or a fair amount (32%) by environmental problems (Environmental Monitor 2002–2003). Most Canadians (88%) also feel that environmental problems will have a great deal (59%) or a fair amount (29%) of an effect on the health of future generations, a view that has found stable support (87%) since tracking began in 1992 (Environmental Monitor, 2002–2003).

These perceptions are supported by scientific research suggesting that environmental quality is a major determinant of human health especially for the elderly, children and those with pre-existing health conditions. Research also indicates that there are no safe levels of exposure to particulate matter and ozone, two of the main “ingredients” of smog. Thousands of people die prematurely each year due to air pollution, and the Walkerton and North Battleford water contamination incidents clearly demonstrate how the environment impacts on our health. Having a clean environment does more than protect our health, it also enhances our productivity. The Ontario Medical Association estimates that air pollution costs the Ontario economy at least \$1 billion annually, due to lost work time, emergency room visits and hospital admissions.¹

Given the growing complexity of environmental issues, scientific research is increasingly critical to the development of sound policy directions: on health-environmental linkages; on climate change impacts and adaptation; on the impact of genetically modified organisms and biotechnology on the environment; and on invasive species.

The Government of Canada, and Environment Canada in particular, has a fundamental role to play in ensuring that Canadians have the information needed to make economically, environmentally and socially sound decisions. This information must empower individuals and communities to act — to make choices that weigh all the factors that can impact on our quality of life. This would include the establishment of comprehensive information systems to fill critical gaps in areas such as air and water quality, greenhouse gas emissions and bio-diversity. This work would ultimately enable the development of a set of sustainable development indicators, so that Canadians can measure our progress towards creating a truly sustainable Canada.

Environment Canada’s Meteorological Service is the collector, archivist and disseminator of Canada’s largest atmospheric and water state knowledge. These data holdings, with records dating as far back as the 1840s, are accessed and used on a daily basis by 9 out of 10 (92%) Canadians as they seek current and forecasted weather information. Weather warnings are considered to be amongst the most important types of weather information they receive. More than half (54%) of Canadian workers rely on weather information for job-related decisions. Approximately 18% (\$150 billion annually) of the Canadian Gross Domestic Product is weather-sensitive and could therefore benefit from or reduce negative impacts through improved access to and use of these vast data holdings.

Strengthening the science behind weather and environmental prediction is important to help governments, agencies, industry, academia and citizens understand and respond to environmental, economic, social and policy issues, such as environmental emergencies, climate change, natural disasters, the safety of mass transportation systems, air quality prediction, and the impacts of bulk water exports.

¹ OMA news release from June 2000; <http://www.oma.org/pcomm/pressrel/pr270600.htm>

Environment, Canadian Identity and Stewardship

Leaving a healthy environment for future generations (64%) is the **number one** issue by which Canadians define what being a Canadian means to them. This feeling is strongest in the Prairies (79%). Women and older Canadians are more likely to state that environmental legacy best defines what being a Canadian means to them (Ekos, North American Integration, 2002).

Canada has a key role to play as a global steward of the world's natural wealth: we are responsible for 20% of the world's wilderness, 24% of its wetlands, 9% of its fresh water, 10% of its forests and the longest coastline in the world. Despite this richness, we are not immune to the pressures experienced across the globe — population growth, increasing urbanization and unsustainable resource use.

Canada is home to an estimated 71,000 species. To date, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has assessed 589 species to see if they are at risk of extinction; of these, 382 species were declared endangered, threatened or of special concern. Declines in population are usually linked to habitat destruction or fragmentation. Our natural species are also threatened by foreign plants, animals and micro-organisms entering Canada by accident. Some of these species are “invasive” and have a significant negative impact on our natural biodiversity, second only to habitat loss.

Many of Canada's environmental challenges are in the North. Investment is required to build upon the foundation of knowledge about northern issues, in order to support sustainable development of the North and its resources. Canada's North and northern research activities need to be supported by collaboration among governments, universities, industry, stakeholder groups and communities.

Environment Canada continues to shape and promote broad ecosystem and species strategies to encourage the conservation, protection and sustainable use of our natural resources.

Demonstrating International Leadership

Canadians recognize that the quality of our environment is increasingly dependent upon activities occurring throughout the rest of the world. As we are seeing with issues such as climate change and air pollution, actions in other countries can have major impacts on our ecosystems and the quality of life in Canada.

Much of the air pollution in southern Ontario, Québec and the Maritimes, for example, comes from sources in the United States, and Canada contributes to the air pollution in the northeastern United States. Traditional foods in the North are often contaminated with substances such as dichlorodiphenyl trichloroethane (DDT), which was banned in Canada years ago but continues to be carried by air and ocean currents from half-way around the world. The world's ecosystems are clearly interdependent. Global pressures such as population growth and consumption, and how we deal with these pressures, have consequences for us all.

It is clear that domestic action must be complemented by global action. Canada must work with other countries and use international mechanisms to find new ways to tackle these enormous global challenges. We have a good reputation in this regard, which positions us well.

Pursuing Innovative Approaches

The real opportunity to successfully manage environmental issues and put the planet on a sustainable path lies with technology and innovation. As a trading nation, we need to build upon our past successes, including substantial investments in research and development (R&D), to position ourselves as developers of new innovative technologies and efficient approaches. Meeting the sustainable development challenge will require technological innovation in a broad range of areas, from alternative energy to biotechnology, from information technology to nano-technology. This represents a tremendous opportunity for Canada. We have world-class expertise in a number of areas, including fuel cells, waste water treatment and soil remediation.

Our natural resources sectors — forestry, fishing, mining, energy, agriculture — have made great strides in reducing the environmental impact of their activities, and many have become sustainable development leaders in their field. By ensuring that environmental and social costs and benefits are more fully reflected in economic decisions, by encouraging research and development in technologies for sustainable development, and by promoting eco-efficient practices and corporate social responsibility in all sectors, Canada can be positioned as a leader in sustainable development solutions.

2.2.2 Policy and Program Priorities

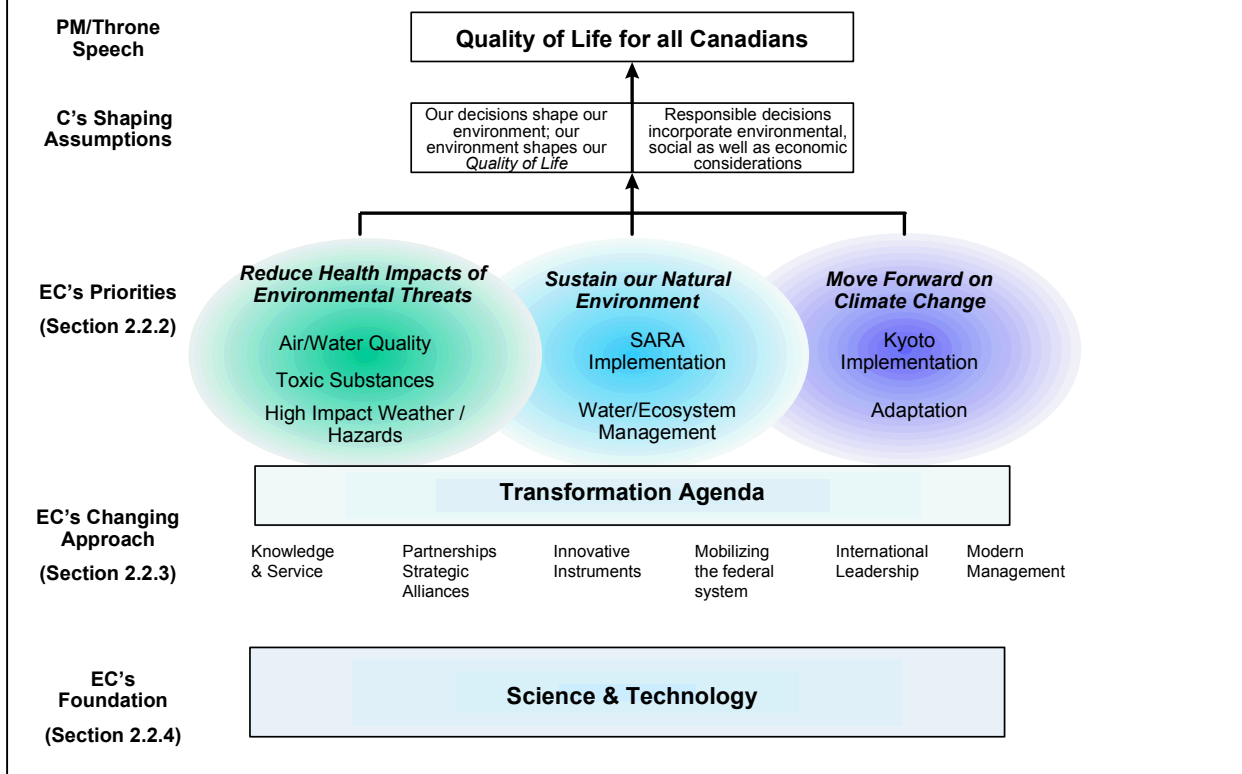
The issues described above make it clear why we must take action to protect and adapt to our environment — for the health, security and economic prosperity of present and future generations of Canadians. As an agenda and mandated area of government, environment and sustainable development are relatively new areas compared with concerns such as health, education, the economy and labour. Key measures have been put in place to deal with the impacts of environmental neglect, but there is still too much emphasis on clean-up. We need to continue to build towards an environmental management system for Canada that would develop lasting solutions to address the root causes of problems.

The 2002 Speech from the Throne placed strong emphasis on Canada's environmental agenda and reflected the need to integrate social, economic and environmental objectives. It recognized that our health and the health of our children, the quality of life in our communities and our continued economic prosperity depend on a healthy environment. In response to the priorities set out in the Throne Speech, Environment Canada's agenda over the next several years will focus on the following critical areas:

- ☐ *Reduce the Health and Safety Impacts of Environmental Threats*: focusing on concerns related to air, water, toxic substances, contaminated sites, high-impact weather and other hazards;
- ☐ *Sustain Our Natural Environment*: continue to shape and promote a natural legacy agenda, including implementation of the new SARA; and
- ☐ *Move Forward on Climate Change*: implement Canada's Climate Change Plan.

We are taking a long-term innovative approach that enables us 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 with provinces and territories, and other key stakeholders.

Environment Canada's Forward Agenda



Priority #1: Reduce the Health Impacts of Environmental Threats

We must re-orient our approach to managing environmental problems that impact on the health of Canadians. 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 four critical issues, which proactively ensure that Canadians will benefit from an environment that sustains their health:

- ☐ working to ensure Canadians have clean air to breathe;
- ☐ working to ensure Canadians have clean, safe and secure water;
- ☐ safeguarding Canadians from toxic substances and environmental contaminants; and
- ☐ helping Canadians reduce their vulnerability to high-impact weather and related hazards.

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 as well as achieving physical improvements in air quality. The Agenda addresses concerns related to air quality by research and actions on transportation emissions, transboundary pollution and industrial emissions. It also encourages the many different actions that can be taken at the corporate level and by individuals. In Budget 2003, the government has invested \$40 million over the next two years, which is in addition to the \$120 million announced in 2001, to further the 10-year Clean Air Agenda.

In December 2000, Canada and the United States signed an historic agreement, known as the Ozone Annex to the 1991 Canada–United States Air Quality Agreement, to significantly reduce smog-causing pollutants and improve air quality.

The Ozone Annex commits Canada to meet Canada-wide Standards (CWS) for Particulate Matter (PM) and Ozone and to accomplish very specific results related to transportation, air quality monitoring and reporting. As the implementation of the CWS for PM and Ozone progresses, the federal government will continue to work with provinces and territories to develop strategies to reduce emissions from specific industrial sectors. In 2004, the Ozone Annex will be re-visited with the intent to review progress and assess the need to negotiate further reductions.

Vehicle emissions are the largest contributor to Canada's air pollution problem. In February 2001, as part of the Clean Air Agenda, the Minister of the Environment published a 10-year plan for cleaner vehicles, engines and fuels. The Vehicle, Engine and Fuels Plan, a requirement of the Ozone Annex, commits the federal government to action on a number of items, including regulations for on-road and off-road vehicles and engines, and the introduction of standards for reducing the level of sulphur in various fuels.

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 co-operative projects for the years ahead. Led by Environment Canada, the federal government will work with the government of the United States to identify pilot projects aimed at demonstrating new strategies to improve air quality and address transboundary air pollution of concern to Canadians and Americans alike.

Environment Canada is also working with provinces, territories and municipalities to better inform Canadians about air quality conditions in their community. Through air quality forecasting, Canadians can make plans and take actions that reduce their personal health risk and avoid any contributions they inadvertently may make to air quality problems. In 2002, summertime smog forecasts were available to more than 60% of Canadians. We are continuing to advance the science needed to support more comprehensive forecasts in a national program built on local and regional forecasts.

- Refer to Section 3.1, Part C, Priority #1 for further description of the challenges, management strategies and commitments for this area
- To learn more about clean air issues and protecting our environment, visit:
http://www.ec.gc.ca/air/introduction_e.cfm

WATER

Water is second only to air as the environmental issue of most concern to Canadians, both in terms of the most serious top-of-mind environmental problem facing their province (Environmental Monitor, 2002–2003) and the area through which they are most likely to develop health problems (PwC Health Insider, 6-2001).

Responsibility for the management of fresh water is shared among governments, industry and individual Canadians. The Canadian Council of Ministers of the Environment (CCME) is the forum for facilitating federal, provincial and territorial collaboration on environmental priorities of national concern. Through the CCME, Environment Canada is working with its provincial and territorial and “health” counterparts with a priority focus on water quality, and environmental and drinking water standards based on sound science. Environment Canada is a major contributor of science research into the impacts of human activities on water quality and ecosystem health.

The federal water vision aims to ensure clean, safe and secure water and a safe environment for Canadians. With the goal of reducing risks to Canadians, the vision recognizes that water is one element of a broader ecosystem and that there must be an integrated, sustainable approach to good governance across jurisdictions from “source to tap”. This approach broadens the traditional focus on water quality treatment by highlighting the importance of protecting the lakes, rivers and aquifers that are the sources of our drinking water, as well as ensuring effective treatment and distribution systems.

Federally, departments are working together to ensure stronger integration of efforts, continued development and application of an approach to enforceable national water quality guidelines, and effective handling of challenges in the management of federal facilities and lands, particularly First Nations reserve lands. Budget 2003 earmarked \$600 million over the next five years to improve water quality systems on First Nation reserve lands.

Environment Canada leads the federal strategy on water in a number of ways, including policy development, direct involvement on issues such as municipal wastewater, infrastructure, research and monitoring that inform international and domestic policies, the development of management tools, reporting, outreach and ongoing collaboration with the provinces, territories, and universities, in the development of consistent approaches and guidelines for the protection of water quality.

- Refer to Section 3.2, Part C, Priorities #5, #6 and #7 for further description of the challenges, management strategies and commitments for this area
- To learn more about issues relating to water quality, visit:
http://www.ec.gc.ca/envpriorities/cleanwater_e.htm

MANAGEMENT OF TOXIC SUBSTANCES

The goal of the renewed CEPA 1999 is to contribute to sustainable development through pollution prevention, and to protect the environment and human life and health from the risks associated with toxic substances. CEPA 1999 also recognizes the contribution of pollution prevention and the management and control of toxic substances and hazardous waste to reducing threats to Canada's ecosystems and biological diversity. Environment Canada is responsible for the implementation of most of CEPA 1999 but jointly administers the research, categorization, assessment and management of toxic substances with Health Canada. CEPA 1999 has given us new tools that encourage innovation in environmental protection measures, new levers for environmental management and new opportunities for partnership with industry to put in place pollution prevention policies and programs.

Budget 2003 provides an additional \$75 million over the next two years to ensure an appropriate regime for pollution prevention and to address the legacy of unassessed chemicals in the Canadian marketplace. The Toxics Management Process is reflective of the new approaches being taken to develop management tools, including preventive or control instruments for substances that are declared toxic under CEPA 1999. Using this process, Environment Canada and Health Canada develop risk management strategies in a way that ensures that stakeholder consultations are effective and that the timelines set out in the Act are met.

Environment Canada's priority is to deliver on its responsibilities associated with CEPA 1999. The Department has set four immediate tasks to protect the health of Canadians by preventing toxic substances from entering the environment or controlling their use:

- ☐ categorize by risk all substances that we currently use and further assess those that are categorized as persistent or bioaccumulative and inherently toxic (PBT);
- ☐ prevent or control those assessed as toxic under CEPA 1999;
- ☐ assess and control as necessary new substances before they are used; and
- ☐ ensure that toxic chemicals and hazardous wastes are disposed of safely.

Environment Canada continues to play a leadership role with the Treasury Board Secretariat in the management of federal contaminated sites. This role will intensify over the coming years with the announcement in Budget 2003 of an additional \$175 million over the next 2 years for accelerated action on federal sites which pose the greatest risk to human and environmental health.

Environment Canada is working with other government departments to support the province of Nova Scotia and the community in the development of remedial options for the Sydney Tar Ponds.

- Refer to Section 3.1, Part C, Priority #3 for further description of the challenges, management strategies and commitments for this area

HIGH-IMPACT WEATHER AND RELATED HAZARDS

The risks to health, safety, property and the economy from naturally occurring environmental hazards, such as ice storms, floods, drought, and wind, are increasing. Other environmental hazards, such as poor air quality, may be produced or intensified by human activity. Property and economic losses due to environmental hazards have climbed dramatically in recent years. Canadians are becoming more vulnerable to high-impact weather and related hazards because of growing urban density, ageing infrastructure and the creation of complex but vulnerable production and delivery systems.

In reducing the vulnerabilities, Environment Canada's work on high-impact weather and related hazards involves modernizing and ensuring the continued integrity of Canada's national weather service, including: renewing its workforce; applying advances in science and technology; developing new automated tools to improve monitoring, weather forecast production and dissemination; increasing community services; working through partners; and restoring mission-critical infrastructure. To this end, two priority areas on which we will be working are the completion of the National Radar Project with the installation of four additional Doppler radar sites and the installation of a new supercomputer.

Renewal of the weather service brings important benefits to Canadians beyond improved high-impact weather and climate-event forecasting. In particular, it supports research and development in atmospheric and climate prediction, as well as fostering innovation in new technologies to improve service to Canadians.

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. Many of the skills, models, techniques and infrastructure needed to forecast weather-related hazards can be deployed rapidly to forecast the effect of human-made hazards.

- ▶ Refer to Section 3.3, Part C, Priorities #1 and #2 for further description of the challenges, management strategies and commitments for this area
- ▶ To learn more about issues relating to high-impact weather and related hazards, visit: http://www.msc-smc.ec.gc.ca/index_e.cfm
- ▶ For real-time information on weather, visit: http://weatheroffice.ec.gc.ca/canada_e.html

Priority #2: Sustain Our Natural Environment

Environment Canada is continuing to shape and promote a natural legacy agenda by encouraging the conservation, protection and sustainable use of natural resources. In setting our priorities, the Department will continue to strive towards more integrated ecosystem approaches to conservation while also addressing the unique needs of individual species and species groups. The efforts of Environment Canada, working with its partners, will focus on the following areas:

- ☐ broader ecosystem strategies; and
- ☐ species strategies.

BROADER ECOSYSTEM STRATEGIES

Ecosystems are a way of describing a particular geographic area that highlights the interrelated nature of all of its parts. Environment Canada recognizes that for conservation strategies to be successful over the longer term, they must integrate the social, economic and environmental factors at play within ecosystems. There are obvious advantages to working horizontally with other governments and partners, including information sharing for greater program effectiveness.

Canada's priorities for action in this area include implementing the Canadian Biodiversity Strategy, completing Environment Canada's Protected Areas Strategy, promoting stewardship and continuing to focus on Ecosystem Initiatives.

Canadian Biodiversity Strategy

Environment Canada will continue to work towards implementing an overall Canadian Biodiversity Strategy by addressing the priorities for collaborative action that have been identified by federal, provincial and territorial partners.

- Refer to Section 3.2, Part C, Priority #4 for further description of the challenges, management strategies and commitments for this area

Protected Areas Strategy

A key component of a broader integrated strategy for conservation and stewardship is the establishment of protected areas. In 2003–2004, Environment Canada will complete its Protected Areas Strategy and work with other key federal departments in developing a federal protected areas strategy. One of the ways in which the Department's habitat protection goals are met is through the departmental protected areas network of Migratory Bird Sanctuaries and National Wildlife Areas.

- Refer to Section 3.2, Part C, Priority #3 for further description of the challenges, management strategies and commitments for this area

Stewardship

In 2002, at a joint meeting of Forestry, Wildlife, Fisheries and Aquaculture Ministers, Canada's Stewardship Agenda was approved, thus delivering on a commitment for a stewardship strategy under both the Canadian Biodiversity Strategy and the Accord for the Protection of Species at Risk. The Agenda is a plan for collaboration that proposes a national vision for stewardship and operating principles. The federal, provincial and territorial governments will implement the Agenda through a co-ordinated set of priority actions that support stewardship initiatives appropriate for each jurisdiction.

The stewardship programs led by Environment Canada include the Ecological Gifts Program, the Habitat Stewardship Program for Species at Risk, the North American Waterfowl Management Plan and the North American Bird Conservation Initiative. All of these programs directly engage Canadians in a wide range of initiatives supporting ecosystem and wildlife conservation.

- Refer to Section 3.2, Part C, Priorities #1 and #4 for further description of the challenges, management strategies and commitments for this area

Ecosystem Initiatives

Through its Ecosystem Initiatives Program, Environment Canada is playing a leadership role in bringing together a broad array of partners at the local level to address stresses and effect solutions within specified ecosystems. At present, the Department works in six different ecosystem initiatives in Canada — namely, the Atlantic Coastal Action Program, the St. Lawrence Action Plan, the Great Lakes 2020, the Northern River Ecosystem Initiative, the Georgia Basin Ecosystem Initiative/Georgia Basin Action Plan and the Northern Ecosystem Initiative.

The program promotes holistic solutions that integrate environmental, social and economic considerations to protect and enhance the environment — our country's "natural capital" — and improve the quality of life of Canadians. The program has the capacity to lever government resources; focus science; co-ordinate efforts; generate public, industry and political support; and produce the informed decisions necessary to address ecosystem issues in an integrated manner. Existing and future ecosystem initiatives will continue to act as an effective mechanism for acting on a range of departmental priorities.

- Refer to Section 3.2, Part C, Priority #8 for further description of the challenges, management strategies and commitments for this area

SPECIES STRATEGIES

Picking up on the themes and approaches identified above under "Broader Ecosystem Strategies" the Department will also be focusing on two areas of federal responsibility: implementing SARA and continuing to find innovative approaches to the management of migratory birds.

Species at Risk

Priorities in this area include implementation of the new SARA and advancement of the federal, provincial and territorial Accord for the Protection of Species at Risk.

In April 2000, the Minister of the Environment announced the National Strategy for the Protection of Species at Risk. The approach involves three main pillars: the 1996 Accord for the Protection of Species at Risk, SARA, and the Habitat Stewardship Program for Species at Risk.

On December 12, 2002, SARA received Royal Assent bringing to a close a nine-year legislative process to enact federal legislation for the protection of Canada's species at risk and their critical habitat. SARA is expected to come into force in 2003. The Act ensures that species are assessed under a rigorous and independent scientific process. It also requires the development of recovery strategies and action plans for species that are found to be most at risk. To address the critical habitat requirements of listed species, the Act emphasizes cooperation with Canadians as the first and preferred approach. A critical habitat safety net is available as a backstop if cooperative measures fail. Compensation provisions are also included, and work has already begun on general regulations.

Budget 2003 provides \$33 million over two years for the implementation of the Act. This amount is in addition to the \$45 million allocated annually in Budget 2000 for a national strategy on species at risk. The Habitat Stewardship Program for Species at Risk contributes to both broader ecosystem conservation and the recovery and protection of habitat for species at risk by targeting

investments towards the stewardship of priority landscapes. Environment Canada's priority is to continue to implement the Habitat Stewardship Program and align it with SARA legal obligations and recovery strategies and action plans.

- Refer to Section 3.2, Part C, Priority #1 for further description of the challenges, management strategies and commitments for this area

Migratory Birds

The North American Bird Conservation Initiative has been embraced to deliver on the full spectrum of bird conservation programs through regionally-based, biologically-driven, landscape-oriented partnerships. The four pillars of the North American Bird Conservation Initiative are the North American Waterfowl Management Plan for waterfowl, Wings Over Water for waterbirds and seabirds, the Canadian Shorebird Conservation Initiative for shorebirds and Partners in Flight for landbirds.

Priority concerns in the near-term for operationalizing the North American Bird Conservation Initiative include developing a Boreal Strategy and securing agreement among federal departments on co-ordinated investigations and enforcement to protect Canada's marine birds from chronic discharges of oily bilge water by ships at sea.

- Refer to Section 3.2, Part C, Priority #2 for further description of the challenges, management strategies and commitments for this area

Priority #3: Move Forward on Climate Change

On December 17, 2002, the federal government announced its ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change. Budget 2003 commits \$2 billion over the next five years, in addition to the \$1.7 billion in new resources already invested since 1997, to help Canada achieve its Kyoto target. It also commits an additional \$3 billion for infrastructure and calls for climate-change-related projects to be given particular consideration under infrastructure funding. Government programs, such as Technology Partnerships Canada, the granting councils and the regional development agencies, will be asked to report on how their contribution to Canada's climate change objectives can be improved within existing resource levels.

The Climate Change Plan for Canada, released on November 21, 2002, by the Government of Canada, sets out a three-step approach for achieving Canada's climate change objective of reducing annual greenhouse gas emissions by 240 megatonnes (Mt). First, there are the investments to date that will address one-third of the total reduction (80 Mt). Second, it articulates a strategy for a further 100 Mt reduction. Finally, it outlines a number of current and potential actions that should enable Canada to address the remaining 60 Mt reduction. To achieve its goal, the Plan proposes five instruments:

- ☐ emissions reductions targets for large industrial emitters established through covenants with a regulatory or financial backstop;
- ☐ a Partnership fund;
- ☐ strategic infrastructure investments;

- ❑ a coordinated Innovation Strategy; and
- ❑ targeted measures, including a consumer one-tonne challenge, information, incentives, regulations and tax measures.

Environment Canada shares the lead (with Natural Resources Canada) on a number of policy, program and scientific initiatives related to climate change, including implementation of the Plan and the Climate Change Action Fund (renewed in 2001). The Fund is a \$150 million commitment over three years to develop a national implementation strategy on climate change and to support early actions to reduce greenhouse gas emissions. As the federal lead on Climate Change Science, Environment Canada undertakes and supports a broad range of scientific research in climate modelling and impacts and adaptation assessment, including initiatives of the Canadian Centre for Climate Modelling and Analysis and participation in the work of the Intergovernmental Panel on Climate Change (IPCC).

- ▶ Refer to Section 3.1, Part C, Priority #2 for further description of the challenges, management strategies and commitments for this area
- ▶ To learn more about Environment Canada's work on climate change, visit:
<http://www.ec.gc.ca/climate#index.html>

2.2.3 Environment Canada's Transformation Agenda

Environmental issues are complex, wide-ranging and multi-jurisdictional. Emerging environmental science is providing a continuous flow of new insights into environmental risks that require significant time and resources to analyze and integrate into federal policies and programs.

Canadians want governments to respond to their needs and provide integrated service through a variety of delivery channels. Within Environment Canada, there are pockets of excellent accessible and connected services, such as weather information and the CEPA Registry, which have been recognized for their citizen focus. What is needed is greater emphasis on ensuring that programs and services are designed and delivered from a citizen's perspective.

Given the complexity of environmental issues and the public's rising expectations for responsive service, Environment Canada needs to develop new approaches to environmental management to achieve substantive and lasting results. We are transforming the way we work both internally, and with partners and stakeholders. Our efforts can be characterized through three linked initiatives, which will support fundamental change to the way in which Canada addresses environmental priorities and issues over the long term:

- ❑ applying "Knowledge in the Service of Canadians";
- ❑ taking an innovative approach to the environmental agenda; and
- ❑ implementing Modern Management.

Applying “Knowledge in the Service of Canadians”

As stated in the departmental vision, at Environment Canada, we want to see a Canada where people make responsible decisions about the environment and where the environment is thereby sustained for the benefit of present and future generations. This goal can be achieved only if the Department is successful in generating, acquiring and disseminating our knowledge to deliver innovative and responsive services internally and to Canadians. The Knowledge in the Service of Canadians (KISC) agenda is a commitment made by the senior management of the Department to deliberately integrate our approaches to people, knowledge and service into the fabric of our work throughout Environment Canada. The agenda reflects Environment Canada’s growing appreciation of the centrality of knowledge to our approach and our important service role in supporting effective decision-making on the part of Canadians.

The KISC agenda will support transformation of Canada’s approach to environmental management. It is structured according to four components:

- ❑ The “**People**” component focuses on creating a vibrant and diverse workplace where people are valued, can grow and can be confident that they are “making a difference.” In turn, this will enable us to attract and retain the best and the brightest who wish to serve the public. This component will also ensure that we have the means to preserve the knowledge of those who will leave our Department or the public service.
- ❑ The “**Knowledge**” component will guide us in taking a more deliberate approach to managing and sharing our knowledge internally and externally. It will foster and support communities of interest and will practise and nurture the climate of trust, risk-taking and innovation that is so important to transforming the whole of the Department to a high-performance, learning organization.
- ❑ The “**Outreach and Dialogue**” component will increase our understanding of the needs, concerns and expectations of citizens, clients, partners and stakeholders and improve the quality of dialogue that we all practice.
- ❑ The “**Service**” component will enable us to change the way in which we respond to the needs and expectations of citizens and clients, both by acting directly and in collaboration with others. This will build on our knowledge and the knowledge we acquire through outreach and dialogue. This will strengthen our accountability for the services we provide to Canadians.

Environment Canada is committed to these components and their respective goals. The Department is building the capacity to realize them, and progress will be measured against a Charter of Principles signed by the senior management team of the Department.

- ▶ Refer to Section 3.4, Part C, Priority #3 for further description of the challenges, management strategies and commitments for this area

TAKING AN INNOVATIVE APPROACH TO THE ENVIRONMENTAL AGENDA

The KISC agenda provides the Department with a road map for transforming the way in which we think about our approach to the environment and how we conduct our activities. The KISC agenda will support the development of strategies that emphasize a more **innovative approach** to the environment agenda. It will encourage a more integrated and long-term perspective.

There are five elements to this systematic approach that will become components of how we act on all environmental issues:

- ❑ science, information and indicators — to drive sound decision-making and management;
- ❑ innovative tools and instruments — to promote changes in attitudes and behaviours, shift our focus to prevention, more fully value our natural capital and realize opportunities;
- ❑ partnerships and strategic alliances — to achieve efficiencies, ensure effectiveness and attain concrete results;
- ❑ mobilizing the federal system — to play a leadership role in mobilizing the delivery of the federal government's environment agenda; and
- ❑ international leadership—to work in collaboration with other countries and international organizations.

Science, Information and Indicators

A prerequisite to innovative action is sound environmental knowledge — it is the only way to ensure that we identify the problems, develop effective solutions and take the required action for lasting solutions. Environmental knowledge is needed to better assess the risks we face and the measures we must take to manage these risks.

Science and Technology enables us to better understand cause and effect relationships, ensure early identification of emerging issues and help find the most effective and efficient solutions. **Information**, including indicators, monitoring systems and traditional knowledge, enables sound decision-making at all levels, lets us know what is working and where we need to make adjustments, and supports accountability.

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 Canadian Information System for the Environment (CISE) submitted its final report in October 2001 with recommendations on how to set up a credible, accessible and relevant information system on the environment. Through 2002 and into 2003, developmental work focuses on issues related to governance, infrastructure and indicators development. In 2003, Environment Canada will release two major indicator reports providing quantitative data to support environmental and economic policy activities.

Innovative Tools and Instruments

Another way of addressing environmental challenges will be to influence the behaviours of industry and Canadians. We need policy instruments that will help us manage the interaction between the economy and the environment more effectively. By using the full array of policy instruments — economic, regulatory and voluntary — we can ensure that good economic decisions will also be good environmental decisions.

There are new approaches to effect such changes that have the potential to take us beyond traditional “command and control” methods. These include voluntary programs and incentives.

Environmental Performance Agreements and pollution prevention planning approaches are examples. Corporate and citizen behaviour can also be influenced by increasing the quantity and quality of corporate sustainability reporting and by clarifying and promoting the business case for sustainable development.

In addition to voluntary programs and incentives noted above, Environment Canada will continue to explore the use of market signals and smart regulations to drive innovative sustainable development and meet our environmental commitments. Innovative tax instruments, such as the Ecological Gifts Program, will promote nature conservation in a new way.

Partnerships and Strategic Alliances

The environment is the ultimate horizontal issue. For effective risk management, the federal government must increasingly work with the provinces and territories, First Nations, 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. The following list of initiatives provides examples that give a sense of the scope and priority that Environment Canada brings to working in partnership with others:

- ❑ with research bodies — Social Sciences and Humanities Research Council (SSHRC) on the development of an environmental research agenda; Canadian Institutes of Health Research (CIHR) on environment and health research agendas; Canadian Space Agency (CSA) on the potential for environmental mapping;
- ❑ with provinces and municipalities — numerous partnership initiatives including Canada-wide Standards; Accord for the Protection of Species at Risk; ecosystem initiatives; Federation of Canadian Municipalities (Green Municipal Funds); bilateral hydrometric agreements with the National Water Survey;
- ❑ with Aboriginal communities — specific legislative obligations for Aboriginal participation and integration of traditional knowledge; and
- ❑ with industry (including the private meteorological sector), landowners and others — corporate environmental innovation; habitat stewardship; meteorological services; NAV CANADA.

Mobilizing the Federal System

Environment Canada also plays a leadership role in mobilizing the delivery of the federal government's environment 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 continues to promote sustainable development co-ordination across the federal government. Work is progressing towards the preparation of a federal sustainable development strategy. This strategy will provide an updated overarching federal policy framework to promote a shared vision and co-ordinated action on sustainable development across the federal system.

International Leadership

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, 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.

We need 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. This is a substantial challenge — but also of critical importance in terms of addressing environmental issues in Canada.

- Refer to Section 3.4, Part C, Priority #1 for further description of the challenges, management strategies and commitments for this area

Implementing Modern Management

Environment Canada's Modern Management Action Plan (MMAP) is centred on transforming the way we work by ensuring that the Department has the management capacity necessary to deliver its policy and program initiatives and contribute directly to the achievement of the KISC agenda. The Plan presents management as a series of integrated activities that improve a range of capabilities — from day-to-day decision-making to accountability to Parliament. It will provide the Department with a solid base of management capacity to ensure effective decision-making that responds to the needs of Canadians.

ENVIRONMENT CANADA'S MODERN MANAGEMENT ACTION PLAN

The Action Plan is modelled after Treasury Board's *Results for Canadians: A Management Framework for the Government of Canada*. It proposes a series of initiatives to be completed over the next two years. As a result, Environment Canada is committing to excellence in five key management areas: **responsible spending**, **managing for results**, **exemplary workplace**, **values**, and **citizen focus**. Managers are directly involved in implementing the MMAP. Some are contributing to work teams while others are being called upon to integrate new approaches into their management practices. The introduction of a departmental risk profile, the implementation of an internal control framework to strengthen financial management, and the use across the Department of a common reporting structure to link financial and performance information for decision-making, are some examples of expected results.

A priority for the Department is to manage its human resources agenda in a manner that ensures long-term effectiveness in the delivery of policies, programs and services; the well-being of its workforce; the Department's position as an "employer of choice"; and readiness to implement the reforms related to the new legislation to modernize human resources management in the federal public service. This means specifically addressing the issues of representativeness, recruitment, retention, learning and development, values and ethics, and workplace health, safety and well-being.

- Refer to Section 3.4, Part C, Priority #3 for further description of the challenges, management strategies and commitments for this area

2.2.4 Science and Technology - the Foundation of Environment Canada's Agenda

Science and technology (S&T) is essential for delivering on Environment Canada's mandate. It provides the basis for Environment Canada's policies, programs and services. It is critical for the success of Environment Canada that its S&T be of high quality, aligned with departmental and federal government goals, linked to Canadian and international environmental S&T capacity and applied in a way that effectively addresses the environmental and sustainable development needs of Canadians.

The need for strategic management of the Department's S&T capacity has never been greater. Environmental challenges facing Canadians are complex and growing. The capacity for conducting S&T in Canada is changing rapidly due to increased federal investments in universities and in industrial innovation. Internally, the Department has also recently committed itself to better management and sharing of its knowledge through the KISC agenda described above.

The Department promotes excellence in its S&T through a clear and effective management system. It consists of the recently expanded external S&T Advisory Board to the Deputy Minister, a Special Science Advisor, as well as several internal S&T management committees. This system also serves as the mechanism by which the Department contributes to and implements federal S&T policies and management practices.

Partnering and networking with other federal departments are also of great importance to Environment Canada. Over 40% of Canada's environmental research capacity lies within the federal government, with about half of that located in science-based departments other than Environment Canada. At the same time, the major environmental issues faced by the government no longer fit neatly within single departments. Current and emerging issues, such as climate change and invasive species, are integral to the mandates of several science-based departments or agencies. Changes are needed in the way in which federal S&T is managed to address such cross-cutting issues, including how federal S&T personnel work together across departments.

Environment Canada has been actively exploring new models of partnership and collaboration. It has taken the lead in developing a proposal for a new way of integrating federal and external research and development capacity aimed at national priorities. The proposal is to establish integrated research and development networks, led by federal departments or agencies and also involving universities and the private sector, to address science-based issues of high importance to public policy.

Environment Canada has several key initiatives under way to address priority S&T management issues, including:

- ❑ strengthening departmental policies and practices linking science and policy, sharing best practices in the use of S&T advice and building these activities into the Business Line planning processes;
- ❑ developing research strategies to address national issues (e.g., environmental effects of genetically-modified organisms, the degradation and protection of Canada's groundwater), and communicating Environment Canada's S&T;
- ❑ promoting a Canadian environmental sciences network, through the development of environmental research agendas and regional (e.g., Atlantic and Pacific & Yukon) and thematic (e.g., water, weather and wildlife) networks;
- ❑ collaborative use of the Canadian Foundation for Climate and Atmospheric Sciences (CFCAS) and the Climate Change Action Fund as an S&T management tool;
- ❑ following through on the Action Plan developed in response to the October 2002 Federal S&T Forum, containing recommendations on S&T excellence, human resources management for the S&T community, knowledge management, communications, a vision for federal S&T and developing new mechanisms and strengthening existing ones to better integrate federal S&T and link it with external S&T;
- ❑ working with the federal S&T community to develop policies and share best practices for managing S&T human resources, including community-wide initiatives to remove barriers and provide support for women working in federal S&T;
- ❑ developing EC XPERT as a new knowledge management tool to connect people in order to share knowledge, information and data; to enhance collaboration; and to facilitate work on horizontal or issue-based files; and
- ❑ responding to and implementing recommendations in the reports of the Council of Science and Technology Advisors (e.g., excellence in federal science, S&T human resources, and communications).

Through such initiatives and the development of policies and practices for improving its management of S&T, Environment Canada is advancing the goal set out in the 2002 Throne Speech of strengthening government science, integrating its efforts across departments and disciplines, and focusing on the priorities of Canadians.

- To learn more about Environment Canada's S&T, visit:
http://www.ec.gc.ca/scitech/index_e.htm

2.3 Departmental Accountability Framework

2.3.1 Organized to Deliver Results

Environment Canada fulfills its mandate through the efforts of its four results-based Business Lines: Clean Environment, Nature, Weather and Environmental Predictions, and Management, Administration and Policy.

Each Business Line is set up to deliver a long-term strategic outcome. Each desired outcome includes two or three more specific long-term goals, which, in turn, are divided into a series of distinct, achievable targets.

These Business Lines and their long-term goals, called “key results”, provide the framework for internal accountability and management as well as external reporting. The key results also provide a stable, results-based strategic direction against which pressures faced by the Department, and shorter-term priorities to address these pressures, are organized.

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

- 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

Business Lines are not isolated from each other: each makes important contributions to the success of the others. Business Lines have common areas of interest, such as air quality, climate change and environmental effects, and are working co-operatively to achieve results.

Organizationally, the Department is divided into five headquarters services and five regions. Environment Canada's organizational structures crosscut Business Lines in a matrix management approach, which allows co-ordinated, consistent programming and direction, as well as client-centered delivery in a manner that respects regional differences.

Program delivery in Environment Canada is achieved by drawing on the Department's scientific and technical knowledge combined with a strong regional understanding of the social, cultural and economic factors that shape attitudes, perceptions and behaviour. Environment Canada's regional offices deliver the national vision for the environment at the local level. They work in partnership with provinces, territories, communities and others across the country and encourage them to set goals sensitive to local and regional ecosystems. 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 their quality of life.

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

2.3.2 Crosswalk Between Environment Canada's Priorities and Key Results

Environment Canada uses a Business Line structure to fulfil its mandate to Canadians. This structure, focused on long-term strategic outcomes, provides a stable framework for assigning organizational accountabilities and allocating resources. Departmental priorities are typically broad horizontal issues that cut across the separate domains of the Business Lines. The Department's senior management committee, the Environment Management Board, provides corporate leadership and horizontal alignment for crosscutting departmental priorities. Table 4.3 illustrates a crosswalk between the overarching priorities of concern to Canadians, as described in this section of the report, and the comprehensive accountability framework of the Department. The detailed logic of how Business Lines deliver on departmental priorities, including management strategies and deliverables, is set out in Section 3 of this report, which follows.

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 results that we want to achieve, we will protect and sustain our natural environment for future generations.

Section 3 — Plans and Priorities by Strategic Outcomes

This section describes Environment Canada's four strategic outcomes, the key results being sought in each outcome area, and the priorities, management strategies and key commitments that will ensure success over time. Targets from Environment Canada's Sustainable Development Strategy (SDS) have been integrated under the key results to allow ongoing assessment of SDS key commitments.

This section focuses on the strategic initiatives that Environment Canada is implementing to address priority concerns. These initiatives are done within the context of the delivery of ongoing programs and services, which are provided to Canadians every day. Section 7.1 identifies these core programs and services and the partners with whom we work.

3.1 Strategic Outcome — Protect Canadians and their environment from domestic and global sources of pollution

A – OVERVIEW

Through the Clean Environment Business Line, Environment Canada acts on two fronts to protect Canadians and their environment from domestic and global sources of pollution. First, it seeks 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 or other harmful substances in the environment.

Through the Clean Environment Business Line, Environment Canada emphasizes a pollution prevention approach.

Activities under the strategic outcome are managed according to an issue model. This model follows the life cycle of a typical environmental issue — problem identification, solution development, implementation of solutions, monitoring and reporting of performance. Departmental activities begin with research on the toxic substance and assessment of its effect on ecosystems (human health effects are assessed by Health Canada). Work continues with the development of management options and implementation of the most appropriate risk management mechanisms. Finally, there is ecosystem monitoring to ensure that the desired environmental results are achieved. The cycle begins again if problems are identified through results of monitoring or new research findings.

The federal government's investment of \$75 million over the next two years in CEPA 1999 in Budget 2003 will allow us to advance both the Clean Air and the management of toxic substances, given the sunseting of Budget 1999 resources.

Key Results:

Environment Canada, through the Clean Environment Business Line, aims to achieve two key results:

- ☐ reduced adverse human impact on the atmosphere and on air quality; and
- ☐ understanding, and prevention or reduction of the environmental and human health threats posed by toxic substances and other substances of concern.

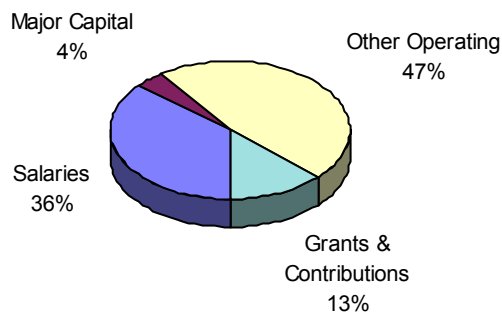
B – PLANNED SPENDING BY KEY RESULT

(\$ millions)	Forecast Spending 2002-2003*	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Key Result				
• Reduced adverse human impact on the atmosphere and on air quality.	102.5	114.1	92.7	62.9
• Understanding, and prevention or reduction of the environmental and human health threats posed by toxic substances and other substances of concern.	160.0	166.9	154.0	185.5
Gross Planned Spending	262.5	281.0	246.7	248.4
Less: Respendable Revenue	(10.8)	(11.3)	(8.9)	(7.8)
Net Planned Spending	251.7	269.7	237.8	240.6

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

Note: The amounts reflected above include funding announced in Budget 2003. At this time, planned spending is estimated as other operating funds as these figures may still be subject to interdepartmental consultations and to the Government approval process.

2003-2004 Gross Planned Spending by Input Factor (\$281.0M)



C – PLANS, PRIORITIES AND PERFORMANCE FRAMEWORK BY KEY RESULT

KEY RESULT: REDUCED ADVERSE HUMAN IMPACT ON THE ATMOSPHERE AND ON AIR QUALITY.

Through this key result, Environment Canada focuses on three broad categories of air pollutants:

- ☐ Pollutants that alter the atmosphere itself, where the resulting changes may affect human and environmental health. This category includes greenhouse gas emissions and the resulting climate change, and emissions of substances that deplete the stratospheric ozone layer.
- ☐ Pollutants that use the air as a pathway, with most environmental and health effects arising after the substances are deposited on land or in water, often at considerable distances from their source. Examples include acid rain and persistent organic pollutants. Addressing these substances requires international cooperation as well as action to control releases within Canada.
- ☐ Pollutants that alone, or in combination with each other, reduce the quality of the air we breathe. Ground-level ozone and particulate matter are significant pollutants of this type.

The ease with which air pollutants travel across borders means that addressing air issues requires cooperation both internationally and across Canada. For example, persistent organic pollutants are a significant concern for all Canadians, but especially for Canada's northern Aboriginal people, as the long-range atmospheric transport of these pollutants has led to contamination of traditional foods. By consuming some traditional foods, such as beluga and seal blubber, many Inuit people exceed Health Canada's "tolerable daily intake" levels for chlordane and toxaphene, substances never used in the North. Increasingly, Environment Canada seeks to take actions with its partners that address several pollutants simultaneously, thus providing multiple benefits for the same investment.

Reducing human impacts on the atmosphere and on air quality is essential to creating a sustainable society. As our thinking and work on degraded air quality has evolved, we increasingly recognize the importance of a second dimension in this area — protecting human health from the effects of air pollution. The federal government undertakes program activities such as air quality forecasting to provide warnings that inform Canadians of health risks associated with smog and poor air quality. This effort helps Canadians make plans and take actions that reduce personal health risks and avoid any inadvertent contributions they may make to air quality problems.

Plans and Priorities:

Environment Canada's priorities for the next three years will be to focus on:

- ☐ **Air Quality** — Key areas of work include implementing the requirements of the Ozone Annex to the Canada–U.S. Air Quality Agreement; implementing initial actions on Canada-wide Standards for Particulate Matter and Ozone; negotiating further transboundary reductions for sulphur dioxide (SO₂) and nitrogen oxides (NO_x) (to reduce Particulate Matter and acid rain) under the Canada–U.S. Air Quality Agreement; increasing public outreach; and improving air quality reporting (inventories, monitoring and forecasts).
- ☐ **Climate Change** — Actions will focus on implementation of the Climate Change Plan for Canada.

Priority #1: Air Quality

Environment Canada is working to implement the 10-year Clean Air Agenda, the Government of Canada's plan to improve air quality approved in May 2001. The Clean Air Agenda focuses on: attaining and potentially improving targets for Canada-wide Standards for Particulate Matter and Ozone; reducing transboundary emissions; reducing transportation sector and major industrial emissions; advancing science on air quality; and engaging the public so that they take action to reduce air pollution and to protect their health. In January 2003, the Minister of the Environment announced a commitment to work with the United States to develop joint air quality pilot projects.

Over the next three years, Environment Canada will continue to focus on the federal government's agenda on vehicles, engines and fuels. This involves moving forward with the development and implementation of regulations for off-road and on-road engines and fuels, including sulphur in diesel. Environment Canada is also progressing on its commitment to address air pollution from industrial sources, such as thermal power electrical generation plants. Provinces have also committed to this agenda through the Canada-wide Standards process.

Another key component of the Clean Air Agenda is to engage Canadians so that they understand how to interpret air quality information and are aware of the actions that they can take to protect their health and improve air quality. The National Pollutant Release Inventory (NPRI) and the National Air Pollution Surveillance (NAPS) Network are key sources of information about pollutant emissions, air quality trends and progress towards air quality standards and objectives. Enhancements to the NPRI, like the recent addition of criteria air contaminants, provide Canadians with important information to enable them to take action. Several non-government organizations (NGOs), including the Canadian Medical Association and the Canadian Lung Association, are actively involved in defining and addressing the effects of air pollution on human health. In collaboration with these groups and provinces, Environment Canada also provides, on a pilot basis, real-time air quality information and forecasts of immediate use to the public in planning their daily activities so that they reduce the impact of air pollution on their health and reduce the impact of their actions on air quality. We are also reaching out to Canadians through partnerships, which contribute to better air quality through "Clean Air Day" and voluntary vehicle inspection and vehicle scrappage programs.

Environmental changes occur over a long period of time. In the short term, we will see cleaner vehicles and engines enter the market. In the medium term, cleaner industrial processes will be introduced. In the longer term, as newer, cleaner technologies replace older ones, significant emissions reductions will occur, thus reducing adverse impacts on the atmosphere and on human health. Environment Canada is committed to providing information that the public can use to protect their health, contribute to improvements, and judge the success of the measures adopted.

Challenges and Management Strategies

The Clean Air Agenda received four year funding for the Ozone Annex in February 2001. This funding has allowed Environment Canada to move towards the kind of activities already in place on a long-term basis in the United States and Europe. However, Canada-wide Standards for Particulate Matter, including support for the underpinning science, was not included with the Ozone Annex funding.

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. In addition, faced with uncertain funding, our ability to address these issues may be compromised. A key priority must be 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

Priority #2: Climate Change

Over the next three years, the climate change priority will be to work towards achieving Canada's climate change commitments under the Kyoto Protocol within the 2008–2012 timeframe. Working with all stakeholders including provinces, territories, municipalities, business and industry, NGOs and the Canadian public during 2003–2004, we will continue to co-lead with Natural Resources Canada on climate change policy for Canada. We will also deliver on the Climate Change Action Fund - Public Education and Outreach (CCAF-PEO) component. We will lead on the management of climate change science and partner with Natural Resources Canada in implementing the climate change adaptation component of the CCAF and Action Plan 2000. We will also work with the Department of Foreign Affairs and International Trade on international climate negotiations. Our science, and impacts and adaptation research, will continue to represent a significant contribution to building the base of knowledge needed to support climate change policy and international negotiations.

The focus will shift from efforts to ratify the Kyoto Protocol to implementation of, and reporting on, the Climate Change Action Plan for Canada. This will include: greenhouse gas monitoring; reporting and verification; climate science; impacts and adaptation research; reporting to Canadians every two years on the effectiveness of the Plan; initiating work on the "Demonstrable Progress Report" due in 2005; and initiating preparation for the negotiation of Canada's target for the next commitment period, also due to begin no later than 2005. Environment Canada will be contributing to the 1998–2002 *Federal Climate Change Comprehensive Report to Parliament* being coordinated by the Climate Change Secretariat.

Delivering on Canada's climate change commitments will include continuing to implement current government-wide priorities (e.g., Action Plan 2000, CCAF) and moving into the third year of CCAF-PEO and Science. Eventually, CCAF-PEO will be integrated with the social marketing program of the consumer challenge and with messaging links to the Clean Air Agenda. Following Budget 2003, we will be working with government partners to specify the initiatives in the first installment of the Plan. International negotiations will focus on the post-2012 topics of future commitments involving the developed and developing country emitters adopting greenhouse gas emission targets and concerns related to adaptation capacity and support.

Challenges and Management Strategies

In implementing the Climate Change Action Plan, the first installment will reflect the federal government's commitment to meeting Canada's Kyoto target and will assist efforts to build consensus with the provinces and territories, industry, other federal, provincial and municipal government departments and stakeholders.

Other challenges include: the need to consult with industry on the design of covenants and the Domestic Emissions Trading system; the design of the new Partnership Fund, to co-invest with

provinces/territories, municipalities, Aboriginal groups and others on emission reduction projects; greenhouse gas monitoring, reporting and verification to meet our Protocol commitments; continuous assessment of the effectiveness of new actions; and provision of science advice to support our actions and future negotiations. Work is under way to ensure that Environment Canada's internal capacity is best organized to support climate change resources when they become available and to influence/communicate the implementation of the Plan.

- ▶ To learn more about climate change, visit: <http://www.ec.gc.ca/climate/home-e.html>

Key Result Performance Framework:

The "air quality" key result is divided into five sub-results. The following table shows those sub-results with the associated intermediate outcomes, indicators and targets, and initiatives and deliverables for the next three years.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Reduced adverse human impact on the atmosphere and on air quality	
Sub-Result #1: Climate Change	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Under development. 	<p>Indicator: Canadian greenhouse gas (GHG) emissions.</p> <p>Target: Reduce total emissions to 6% below 1990 levels between 2008 and 2012.</p> <p>Indicator: Improvements in carbon efficiency of the Canadian economy (i.e., production of unit of GDP with fewer GHG emissions).</p> <p>Indicator: Percentage of alternative energy to total energy used.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<p>Implement the Government of Canada Action Plan 2000 on Climate Change and Climate Change Action Fund</p> <ul style="list-style-type: none"> Co-lead role in governance of Action Plan 2000 and Climate Change Action Fund. Environment Canada initiatives include: <ul style="list-style-type: none"> Pilot Emission Removals Reductions and Learnings (Launched in October 2002 – first GHG emission reductions in 2003–2004) Greenhouse Gas Verification Centre, ongoing Federal House in Order - Leadership Challenge, ongoing to 2005 Climate Science, ongoing to 2005 International Negotiations, ongoing Public Education and Outreach in 2003–2004 GHG monitoring following transfer under EC; activity, in 2003–2004. Demonstration project on bio-diesel use (in co-operation with a number of partners), in 2003–2004. <p>Actions will focus on implementing the Climate Change Action Plan for Canada</p> <ul style="list-style-type: none"> Strengthen federal/provincial/stakeholder collaboration, ongoing. Launch One-tonne consumer challenge, ongoing. Lead/partner on: large emitters; programs (e.g., Partnership Fund); One-tonne consumer challenge; Inventory, Registry and Reporting; International; and Science, ongoing. 	

Sub-Result # 2: Air Quality	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Targets are continuously improved. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Canada-wide Standards (CWS) for Particulate Matter (PM) and Ozone are reviewed and improved to the level required to achieve the desired health outcome. Transboundary flows of air pollution are reduced.</p> <p>Target: The CWS for PM_{2.5} is 30 µg/m³ averaged over 24 hours, to be achieved by 2010. The CWS for Ozone is 65 parts per billion (ppb) averaged over 8 hours, to be achieved by 2010.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Strategy: Continue to lead CCME discussions on Canada-wide Standards; continue to improve the science base on air quality; and continue to provide scientific, policy and socio-economic support.</p> <p>Deliverables</p> <ul style="list-style-type: none"> Guidance Document on Continuous Improvement and Keeping Clean Areas Clean, published on the CCME web site. Biennial update of Federal Implementation Plan for Particulate Matter and Ozone, published in 2003. Review of PM_{2.5} and Ozone Canada-wide Standards and recommendation on whether to have a coarse fraction (PM_{2.5-10}) standard. Particulate Matter and Ozone science updates. Work with provinces to develop Canada-wide Standards for mercury from coal-fired power plants. Updating Canadian Standards Association standard on wood space heaters. National Wood Heating Education Program. Evaluating alternative for a wood combustion appliances exchange program. 	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Transboundary flows of air pollution are reduced. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Commitments to reduce air pollution (from Particulate Matter and Ozone, acid rain and any other emerging sources) are implemented per negotiated agreements between Canada and the United States.</p> <p>Target: Reductions by 2010 are estimated to be 44% for NOx and 20% for volatile organic compounds (VOCs) in the ozone transboundary region of eastern Canada.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Strategy: Conduct regional airshed analyses and modeling of pollution and joint scientific, technical and socioeconomic studies with the US to build the case for new agreements.</p> <ul style="list-style-type: none"> Report on potential transboundary NOx and sulphur oxides (SOx) trading, in 2003-2004. Joint Report on Transboundary Particulate Matter to Canada–U.S. Air Quality, in 2003-2004. Federal Action Plan for Reduction of Emissions of Volatile Organic Compounds (VOCs) from Consumer and Commercial Products completed and published in Canada Gazette, in 2003-2004. National Standards for VOC content in three categories of products established through CEPA Regulation, in 2006. Establish a Particulate Matter monitoring station in southern Alberta, in 2003–2004. 	

<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Emissions from vehicles, engines and fuels are reduced. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Smog-forming emissions from new vehicles and new off-road equipment.</p> <p>Target: Smog-forming emissions from new vehicles are reduced by 90% by 2010 compared to 2000.</p> <p>Target: Smog-forming emissions from new off-road equipment are reduced by at least 60% by 2010 from 2000 levels.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Implementation of <i>On-Road Vehicle and Engine Emissions Regulations</i>, in 2003–2004. Development of Amendments to the <i>Benzene and Sulphur in Gasoline Regulations</i>, in 2003–2004. Off-Road Regulations: <ul style="list-style-type: none"> Development of <i>Off-Road Small Spark Ignition Engine Emissions Regulation</i>, in 2003–2004 Development of <i>Off-Road Diesel Engine Emissions Regulation</i>, in 2003–2004 Development of <i>Recreational Marine Engine Regulation</i>, in 2003–2004 Development of <i>Sulphur in Off-Road Diesel Fuel Regulations</i>, in 2003–2004 	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Emissions from industrial and other sectors are reduced. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Smog-forming emissions from major industrial sectors.</p> <p>Target: Smog-forming emissions from major industrial sectors in the most polluted areas are reduced by 50% from 1990 levels.</p> <p>Target: 50% increase from base year in number of Canadian companies producing sustainable development reports.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> CEPA 1999 contingency planning for Ozone Annex NOx cap in Ontario, in 2003–2004. Reducing sulphur in heavy liquid fuel oils that the industrial sector uses, in 2003–2004. National Framework for Refinery Emission Reductions (CCME), in 2003–2004. <p>Updating CSA standard on wood space heaters</p> <ul style="list-style-type: none"> National Wood Heating Education Program, in 2003–2004 Evaluating alternative for a wood combustion appliances exchange program, in 2003–2004 Plan, deliver and participate in the 4th Annual Toronto Smog Summit, a collaborative commitment by all three levels of government to combat air pollution in the Greater Toronto Area, in 2003–2004. Report on 2002 Air Pollutant Emissions Inventory, in 2003–2004. 	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Canadians take action to reduce air pollution. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Canadians and their communities are engaged in actions to reduce their emissions and support government actions.</p> <p>Indicator: Canadians take action to reduce air pollution.</p> <p>Target: Increase in communities with air quality projects, and community-based smog reduction programs.</p> <p>Target: Increase in commuters who are carpooling, ridesharing, using public transportation and other methods.</p> <p>Target: Increase purchase and use of more efficient vehicles and equipment.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Work with other government departments (OGDs) on development and support of air quality indicators, in 2003–2004. Extend adoption of Particulate Matter into Air Quality Indices (AQIs) across Canada, providing a better indicator of daily air quality and more realistic air quality alerts and advisories (increased frequency and year-round occurrence), in 2003–2004. Work with municipalities in Ontario by providing technical and financial support to local communities wishing to engage in actions to improve their air quality. Activities range from air quality studies on paving and exhaust systems, bike utilization master plans, public education through newsletters and outreach to schools, identification of local sources of particulate pollutants and ground-level ozone, in 2003–2004. Engage partners to participate in Clean Air Day activities as part of Environment Week, in 2003–2004. Voluntary vehicle inspection and test clinics to be held across Canada, in 2003–2004. Vehicle scrappage programs for high-emitting vehicles, in 2003–2004. 	

Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Canadians understand how to interpret air quality information and are aware of actions they can take. Increased engagement of citizens in action to reduce their risk and their exposure to air pollution. 	<p>Indicator: Canadians have better access and make better use of information and tools to interpret air pollution information and the impact on their health and on the health of vulnerable populations.</p> <p>Target: Increased number of Canadians taking actions to protect their health and the health of vulnerable Canadians.</p> <p>Target: Canadians and their communities are engaged in actions to reduce their emissions and support government actions.</p> <p>Indicator: Canadians understand how to interpret air quality information and are aware of actions they can take.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<p>National Air Quality Forecast Program, in 2003-2004.</p> <ul style="list-style-type: none"> Development of Canadian Air Quality Index (AQI) based on health Risk, in 2003–2004. Continue daily Summer Smog Forecast Programs (four regions) in collaboration with provinces and municipalities, in 2003–2004. Expand daily wintertime ventilation forecast program (relates to local accumulation of Particulate Matter from woodsmoke, etc.), currently in Quebec to Atlantic and other regions, in 2003–2004. Introduce public Particulate Matter forecast, Lower Fraser Valley, in 2003–2004. Advance forecast models to develop Particulate Matter forecasting in other regions (potential for collaborative Particulate Matter forecast pilots in some communities), in 2003–2004. Border project — integration of Particulate Matter into reporting and mapping (New England Governors/Eastern Canadian Premiers NEG/ECP), in 2003–2004. Introduction of AQI/Particulate Matter health messages in NEG/ECP mapping and elsewhere (depends on negotiations with provinces), in 2003–2004. Completion of adoption of PM_{2.5} into existing AQIs through federal–provincial–stakeholder process in accordance with 2002 recommendations, in 2003–2004. Development of revised health risk model for AQI (process led by EC in collaboration with Health Canada), in 2003–2004. Outreach activities, including enhancement of Sky Watchers and programs in schools and museums, web site development, public opinion research, joint programs with Health Canada and environmental NGOs targeting health community and other groups, in 2003–2004. 	
Sub-Result # 3: Acid Rain	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Implement Canada-wide Acid Rain Strategy for Post-2000 and conduct ecosystem monitoring. 	<p>Indicator: Canadian emissions of SO₂ and NO_x.</p> <p>Target: Continue to meet permanent national limit on SO₂ emissions of 3.2 million tonnes and 1.75 million tonnes Sulphur Oxide Management Area (SOMA) target annually.</p> <p>Target: Reduce SO₂ emissions by 50% from Eastern Canada Acid Rain Program caps by 2010 in Ontario, Quebec, New Brunswick and Nova Scotia.</p> <p>Indicator: Transboundary flows of acidifying air pollutants are reduced.</p> <p>Target: Emissions reductions from 1980 levels in areas in the United States covered by the Acid Rain Annex:</p> <ul style="list-style-type: none"> For SO₂ – by about 10 million short tons from 1980 For NO_x – by about 2 million short tons from 1980 <p>Target: Canada–U.S. agreement for further NO_x and SO₂ cuts in United States, beyond 2004.</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
Strategy: Continue to build science partnerships with regional programs to build acid rain knowledge base <ul style="list-style-type: none"> Report to Canada–U.S. Air Quality Committee on progress in meeting acid rain targets, in 2003–2004. Ratify UN-ECE Gothenburg Protocol (Acidification, Eutrophication and Ground-level Ozone in 2004 to reflect Canadian Program elements for NO_x, SO₂, including a revised SOMA SO₂ target), in 2003–2004. Confirm new SO₂ emission reduction commitments of Ontario, Quebec, New Brunswick and Nova Scotia, in 2003–2004. 	
Sub-Result # 4: Hazardous Air Pollutants	
Intermediate Outcome(s) <ul style="list-style-type: none"> Support international control regimes for persistent organic pollutants and heavy metals. Implement Canada-wide Standards for mercury emissions and products. 	Indicator(s)/Target(s) <p>Indicator: Atmospheric deposition of hazardous air pollutants (HAPs).</p> <p>Indicator: Implement Canada-wide Standards for mercury emissions and products.</p> <p>Target: Under development for mercury.</p> <p>Target: Virtually eliminate 12 persistent organic pollutants identified in the United Nations Environment Programme (UNEP) (global) persistent organic pollutants Convention from the Canadian environment.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Develop and complete Canada's Implementation Plan for Persistent Organic Pollutants (POPs), in 2003–2004. Develop and complete federal strategy for negotiating addition of emerging POPs to UN-ECE POPs Protocol, in 2003–2004. Implement Canada-wide Standards for mercury emissions and products for specific sectors, in 2003–2004. 	
Sub-Result # 5: Stratospheric Ozone	
Intermediate Outcome(s) <ul style="list-style-type: none"> Implement domestic ozone-depleting substances (ODS) program. 	Indicator(s)/Target(s) <p>Indicator: Domestic consumption and production of ODS.</p> <p>Target: Reduce consumption of hydrochlorofluorocarbons (HCFCs) –35% by 2004 (base year 1996) and consumption of methyl bromide –70% by 2003 and 100% by 2005 (base year 1991).</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Implement HCFC and methyl bromide phase-out program (CEPA 1999 Regulations and other instruments), in 2003–2004. 	

KEY RESULT: UNDERSTANDING, AND PREVENTION OR REDUCTION OF THE ENVIRONMENTAL AND HUMAN HEALTH THREATS POSED BY TOXIC SUBSTANCES AND OTHER SUBSTANCES OF CONCERN.

Addressing the problem of toxic substances is complex, for several reasons. Some substances are concerns in themselves; others are part of larger environmental and health issues, such as urban smog, water quality, ozone layer depletion and Arctic contamination. Substances can be released from “point sources” (e.g., specific industrial plants) and “non-point sources” (e.g., vehicle exhaust). Many substances enter the environment from local sources, but others originate beyond Canada's borders. Other substances occur naturally in the environment (e.g., heavy metals) or are released through natural processes, but primarily through human activity.

Plans and Priorities:

In this context, Environment Canada's priority for the next three years for achieving this key result includes:

- ☐ **Managing Toxic Substances** — Implementing and delivering on CEPA 1999. The focus will be on risk assessment, environmental emergency regulations, hazardous waste and enforcement.

Priority #3: Toxic Substances

Environment Canada is working to meet the legislative requirements set by CEPA 1999, while ensuring that emerging environmental issues are addressed. The assessment and management of toxic substances are vital to achieving government-wide priorities, such as efforts on national security, management of federal contaminated sites and ensuring the health of Canadians, especially Aboriginal peoples. In addition to harmful effects on health and the environment, there are economic consequences associated with the release of toxic substances into the environment. Our recognition of the impacts of substances and the implications of managing them have led us to consider a broad spectrum of environmental, economic and social issues that affect the health of Canadians and the environment. Our challenge is to protect human health and the environment by influencing behaviour towards more environmentally sound practices. This involves the development of new risk management tools and approaches, which include pollution prevention plans as well as voluntary initiatives, based on partnerships and innovation.

Budget 2003 strengthens the federal government's commitment to better assess and manage toxic substances to ensure the health of Canada's environment and its citizens. The federal government will invest \$75 million over the next two years to advance an appropriate pollution prevention regime and to address the legacy of unassessed chemicals in the Canadian marketplace.

In 2005, the mandatory review of CEPA 1999 must commence. This will be a time to reflect on the effectiveness of programs in reducing the impact of toxics and other pollutants and to consider possible legislative amendments to CEPA 1999. We have incorporated a number of recommendations that the Auditor General made in the 1999 Audit of Toxics Management and the subsequent follow-up report in 2002, to further improve how we manage toxic substances and other substances of concern.

Challenges and Management Strategies

Our continuing strategy for managing the risk of toxic substances focuses on using the most appropriate tool 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 are committed to forming effective partnerships with industry, other levels of government, including provinces, territories and municipalities, Aboriginal groups and other government departments.

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 on the protection of the environment and health of Canadians, but they 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 continues to implement measures in the following areas: Environmental Emergencies, Hazardous Waste and Contaminated Sites, and Compliance Promotion and Enforcement.

Risk Assessment

To understand the risk of toxic substances and substances of concern, Environment Canada is categorizing the 23,000 substances on the Domestic Substances List (DSL) against Persistent, Bioaccumulative Toxic criteria by 2006. Substances meeting categorization criteria will undergo further risk assessment work to identify if they are toxic under CEPA 1999. Risks for some toxic substances are very high. These substances are not only on the List of Toxic Substances under the Act, but will be added to the virtual elimination list, which will be created this year.

Risk Management

Substances determined as toxic must have risk management instruments in place within legislatively prescribed timeframes. Administered by Environment Canada in conjunction with Health Canada, the Toxics Management Process is a new approach taken to develop management tools including preventive or control instruments for substances that are declared toxic under CEPA 1999. Using this process, Environment Canada and Health Canada develop risk management actions in a way that ensures that stakeholder consultations are effective and that the timelines set out in the new Act for managing toxic substances are met. CEPA 1999 allows for a number of new flexible tools, such as pollution prevention plans.

Central to the Toxics Management Process is the development of a risk management strategy. This document describes how risks to human health and the environment posed by the use and/or release of each toxic substance will be addressed. In the next year, we will release risk management strategies for at least 10 toxic substances. We are also working with municipalities and provinces to understand and address the risks of wastewater effluents. Environment Canada plans to propose, by publishing a Notice in the *Canada Gazette* in the Spring of 2003, that selected owners and/or operators of wastewater treatment facilities must prepare pollution prevention plans to address targeted toxics found in the effluents.

Management of New Substances

Environment Canada is also working to prevent new sources of pollution from entering the environment. Industry must notify Environment Canada of any new substances (chemicals, polymers and animate products of biotechnology) that are proposed to be manufactured or imported into Canada, through our New Substances Program. Typically, between 800 and 1,000 new substance notifications are received by Environment Canada and Health Canada each year. Appropriate risk management measures are put in place. Over the next years, Clean Environment will be working to implement a series of recommendations from stakeholder consultations on the streamlining of the regulations, increasing program transparency, improving service delivery and intensifying international cooperation with other jurisdictions. In addition, environmental assessments ensure that environmental effects of new federal or industrial activities are considered and mitigated to the extent possible. The amended *Canadian Environmental Assessment Act*, which is expected to receive Royal Assent this year, will strengthen the role of environmental assessment follow-up and improve the consideration of cumulative effects.

Environmental Emergencies and Marine Issues

Under CEPA 1999, we are taking action to reduce the likelihood and impact of environmental emergencies whether caused by accident, vandalism or terrorism. More specifically, we will be promulgating a regulation that will require environmental emergency plans at facilities that manage toxic or other hazardous substances above certain threshold quantities that pose a threat to human health or environmental quality. These plans will address prevention, preparedness, response and recovery.

Environment Canada will continue our work to meet CEPA 1999 and international obligations to protect coastal and marine environments from land-based and sea-based activities and sources of pollution. Specifically, we will prevent ocean disposal of harmful substances through a permitting process and a disposal site monitoring system. We will also meet our responsibilities for shellfish area classification under the Canadian Shellfish Sanitation Program and address emerging marine issues.

Hazardous Waste and Contaminated Sites

We are developing, testing and implementing a real-time, secure system for tracking hazardous waste imports and exports through e-government initiatives like the “smart card” and electronic manifesting mechanisms. We will also be working to improve the hazardous waste regime in Canada by updating existing and developing new regulations that incorporate environmentally sound management (ESM) criteria. This will result in improved risk management practices at recycling, treatment and disposal facilities handling imported and exported hazardous wastes. In parallel, work will continue with provincial governments through the Canadian Council of Ministers of the Environment over the next five years to see the implementation of these ESM criteria across Canada.

Environment Canada is working with other government departments to support the province of Nova Scotia and the community in the development of remedial options for the Sydney Tar Ponds.

Compliance Promotion and Enforcement

Clean Environment is committed to working with our stakeholders to ensure effective compliance promotion and enforcement of our regulatory regime. Compliance is achieved by informing the regulated community about Canada’s pollution prevention laws and regulations and by carrying out compliance promotion and enforcement activities. In order to maximize our efforts, partnerships are formed with other government departments and agencies and with provincial/territorial departments and ministries. Our partners include the Department of Fisheries and Oceans, the Royal Canadian Mounted Police, the Canada Customs and Revenue Agency, the Canadian Coast Guard and provincial/territorial environment ministries. Intelligence gathering is key to expediting examinations and inspections of companies that are in compliance and concentrating limited resources on activities and companies where enforcement is a more appropriate response. Intelligence supports the activities of enforcement officers and provides the senior management with objectively derived foreknowledge of emerging issues.

Federal and Aboriginal Lands

We are also committed to improving the management of environmental risks on federal and aboriginal lands. To this end, we are working to develop a standard that will provide a more comprehensive framework to effectively prevent soil and groundwater contamination from storage tank systems on federal and aboriginal lands.

Key Result Performance Framework:

The “toxic” key result is divided into three sub-results. The following table shows those sub-results with the associated intermediate outcomes, indicators and targets, and initiatives and deliverables for the next three years.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Understanding, and prevention or reduction of the environmental and human health threats posed by toxic substances and other substances of concern	
Sub-Result #6: Existing Substances	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Under development. Research is carried out to assess the threats of toxics to aquatic ecosystems, to respond to new issues as they arise, and to communicate new scientific knowledge. 	<p>Indicator: Identification of “CEPA toxics.”</p> <p>Target: Categorize all of the approximately 23,000 substances on the DSL (jointly with Health Canada) by 2006.</p> <p>Target: Carry out screening-level risk assessments for those substances identified as persistent and inherently toxic, or bioaccumulative and inherently toxic, or persistent, bioaccumulative and inherently toxic in a responsible manner that ensures that resources are applied adequately to substances of concern.</p> <p>Target: Assessment of other substances of concern that become banned or severely restricted by other domestic and international jurisdictions.</p> <p>Target: Early identification of new and developing issues.</p> <p>Target: Provision of sound science advice for decision-makers.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Initial categorization decisions on approximately 6,000 organic substances on the DSL, in 2003–2004. Publish statements from the Ministers of Health and Environment in the <i>Canada Gazette</i> recommending to the Governor in Council that substances identified through the second Priority Substances List (PSL-2) process and follow-up to the first Priority Substances List (PSL-1) process be added to Schedule 1 (the List of Toxic Substances) in CEPA 1999, in 2003–2004. Develop information exchange procedures and establish criteria to apply in reviewing the decisions of other jurisdictions, in 2003–2004. Continue ongoing assessment and begin new assessments triggered by CEPA 1999, in 2003–2004. Research on the occurrence, persistence, fate and effects on the aquatic environment of priority toxic chemicals such as candidate persistent organic pollutants, endocrine disrupting substances (EDSs), pesticides and pharmaceuticals and personal care products, in 2003–2004. Research on the effects on aquatic environments of nutrients, pathogens and genetically-modified crops, in 2003–2004. Publish a draft notice in <i>Canada Gazette</i> Part I, requesting the development and implementation of pollution prevention plans for textile mills using wet processes, in 2003–2004. Integrate comments received into the notice of pollution prevention plans in order to publish the final notice, in 2003–2004. 	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Risk management actions to address sources of greatest concern for those substances added to Schedule 1. 	<p>Indicator: Preventive and control instruments in place for domestic uses and release of toxic substances.</p> <p>Target: Each year 10 CEPA-toxic substances are anticipated.</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Use the full range of CEPA 1999 instruments (including regulations, guidelines, codes of practice, pollution prevention plans, etc.) to manage and control the remaining PSL1 and PSL2 substances (e.g., textile mill effluents, municipal wastewater effluents and chlorinated solvents) and other toxic substances. Some instruments to be finalized include amendments to the <i>Prohibition of Certain Toxic Substances Regulations</i> to add benzidine and hexachlorobenzene; the <i>Solvent Degreasing Regulations</i>; and requirements for pollution prevention plans for acrylonitrile and dichloromethane, in 2003–2004. Propose amendments to streamline the <i>Pulp and Paper Effluent Regulations</i> under the <i>Fisheries Act</i>, in 2003–2004. Develop and implement voluntary programs aimed at reducing both the use and releases of toxic substances from industrial sectors, in 2003–2004. Develop an innovative approach to risk management (like Extended Producer Responsibility and Life Cycle Management), in 2003–2004. Implement Canada-wide Standards for Mercury Dental Amalgams, in 2003–2004. Work to protect coastal and marine environments from uncontrolled ocean disposal and land-based activities and sources of pollution, in 2003–2004. Delivery of the Canadian Shellfish Sanitation Program, in 2003–2004. 	
Textile Mill Effluents	
<ul style="list-style-type: none"> Publish a draft notice in <i>Canada Gazette</i> Part I, requesting the development and implementation of pollution prevention plans for textile mills using wet processes, in 2003–2004. Integrate comments received into the notice of pollution prevention plans in order to publish the final notice, in 2004–2005. 	
Municipal Wastewater	
<ul style="list-style-type: none"> Proposed instrument for ammonia dissolved in water, inorganic chloramines and chlorinated wastewater effluent published in <i>Canada Gazette</i>, Part I by June 2003 as a first step in the development of a long-term strategy to address wastewater effluents. Final instrument published in <i>Canada Gazette</i>, in 2004–2005. Establish an adequate level of wastewater treatment across Canada to address risks posed to human and ecosystem health, fisheries resources, and recreation. Initiate action by co-leading a Scoping Exercise with Saskatchewan under the aegis of Canadian Council of Ministers of the Environment/Environmental Policy and Planning Committee (EPPC) to be completed, in 2003–2004. 	
Sydney Tar Ponds	
<ul style="list-style-type: none"> Lead for the completion of activities under the Cost Share Agreement (Phase 1 plan), in 2003–2004. Implementation of a transition strategy for Phase 2 of the full-scale remediation of the site, in 2003–2004. 	
Hazardous Waste	
<ul style="list-style-type: none"> Modernize/develop several regulations (includes regulations on the import and export of polychlorinated biphenyl (PCB) wastes, import and export of hazardous waste and hazardous recyclable materials, storage of PCBs, use of PCBs, export and import of prescribed non-hazardous wastes, and interprovincial/territorial movement of hazardous waste), in 2003–2004. Working with the provinces, develop a National Regime for Environmentally Sound Management for hazardous waste/recyclables to meet our national goals and international obligations under the Basel Convention, North American Free Trade Agreement (NAFTA), Commission for Environmental Cooperation (CEC) and Organisation for Economic Co-operation and Development (OECD) in 2003–2004 Development, testing and implementation of real-time tracking of hazardous waste imports and exports through e-government initiatives like the “smart card” and electronic manifesting, in 2003–2004. 	
Creating Partnerships to Support Sustainability Leadership	
<ul style="list-style-type: none"> Environment Canada is seeking partnerships with experts and corporations to engage the financial sector to identify the financial risks and opportunities of corporate environmental performance. Activities include coordinating expertise to identify, develop and support the business case for corporate sustainability in 2003–2004 	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Under development 	Indicator: Increased rates of compliance with regulations. Target: Under development.
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Under development. 	
Sub-Result #7: New Substances	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Unauthorized use of new substances or new use of existing substances prevented. 	Indicator: All notified substances assessed and conditions or other controls issued within regulatory timeframes for all substances suspected of being toxic. Target: Under development.

<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> ▪ Process and evaluate all new substance notifications (over 800 per year) and take appropriate risk management actions within prescribed timeframes, in 2003–2004. ▪ Implement the recommendations from public consultations on amending the <i>New Substance Notification Regulations</i> and the New Substances Program, in 2003–2004. 	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> ▪ Obligations are met under the New Substances Program for Acts not listed in CEPA 1999. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Under development.</p> <p>Target: Under development.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> ▪ Cumulative Environmental Affects Management for the North, in 2003–2004. ▪ Support the activities of Health Canada on new <i>Food and Drug Regulations</i> and work with Department of Fisheries and Oceans and the Canadian Food Inspection Agency to develop an appropriate regime for transgenic fish and animals, in 2003–2004. 	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> ▪ Biological diversity is protected under the framework of the Cartagena Protocol on Biosafety. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Under development.</p> <p>Target: Under development.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> ▪ Under development. 	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> ▪ Environmental assessment. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: To be determined.</p> <p>Target: To be determined.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> ▪ Implement new <i>Canadian Environmental Assessment Act</i> pending its passage through Parliament (environmental assessment submission), and provide training to staff in order to ensure departmental compliance with the revised legislation, ongoing. 	
<p align="center">Sub-Result #8: Persistent, Bioaccumulative Toxic Substances (PBTs)</p>	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> ▪ Persistent, bioaccumulative, toxic and anthropogenic substances are virtually eliminated. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Prevention or control instruments in place for Persistent, Bioaccumulative and Toxic substances.</p> <p>Target: Reduce release of PBTs below the lowest level that can be measured.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> ▪ Establish and maintain a list of substances scheduled for virtual elimination under CEPA 1999, in 2003–2004. ▪ Support the implementation of Canada-wide Standards for Dioxins and Furans from key sectors, including iron sintering, steel manufacturing and federal incinerators, in 2003–2004. 	

3.2 Strategic Outcome — Conserve biodiversity in healthy ecosystems.

A – OVERVIEW

Through the Nature Business Line, Environment Canada acts to conserve the biodiversity in healthy ecosystems, by building shared sustainability strategies for Canada's wildlife and ecosystems, contributing to scientific understanding of ecosystems, and developing partnerships to improve the health of nationally significant ecosystems. Environment Canada also discharges federal responsibilities for managing wildlife (particularly migratory birds and species at risk), fresh water and wetland resources, and establishes the science and technology policies and practices used throughout the Department.

Through the Nature Business Line, Environment Canada conserves biodiversity in healthy ecosystems.

The Canadian Wildlife Service's Strategic Plan 2000 sets out in detail the direction and scope of Environment Canada's wildlife program for the period 2000–2010. It reflects the challenges and opportunities presented by the Department's legislated mandates and authorities, the expectations of partners and the public, resource needs and limitations and, of ultimate importance, the increasing urgency of Canadian wildlife conservation concerns.

Through ecosystem-based science, Environment Canada advances scientific knowledge and understanding through the following actions: monitoring the environment to detect changes in Canada's ecosystems; creating the science knowledge required to understand the effects of human activities on the health of ecosystems; developing science-based options, recommendations and tools to support the development of management actions and ecosystem rehabilitation techniques; and establishing science-based goals for the quality of the Canadian environment and the health of ecosystems.

Environment Canada is engaged in a number of initiatives aimed at promoting ecosystem approaches that respond to the unique problems of targeted areas and communities. The initiatives address environmental, economic, and social concerns. Large ecosystem initiatives include the Atlantic Coastal Action Program, the St. Lawrence Action Plan, the Great Lakes 2020, the Northern Ecosystem Initiative, the Northern Rivers Ecosystem Initiative, and the Georgia Basin Ecosystem Initiative/Georgia Basin Action Plan.

Key Results:

Environment Canada, through the Nature Business Line, aims to achieve, in partnership with others, the following three key results:

- ☐ conservation of biological diversity;
- ☐ understanding and reduction of human impacts on the health of ecosystems; and
- ☐ conservation and restoration of priority ecosystems.

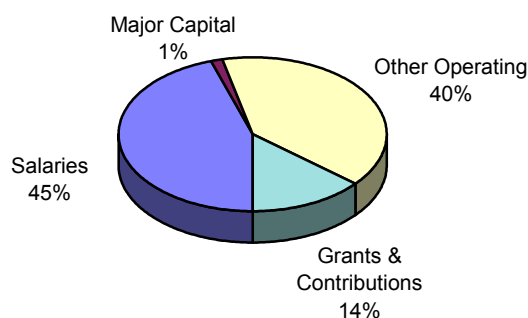
B – PLANNED SPENDING BY KEY RESULT

(\$ millions)	Forecast Spending 2002-2003*	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Key Results				
• Conservation of biological diversity.	85.7	92.0	94.6	62.9
• Understanding and reduction of human impacts on the health of ecosystems.	47.4	43.2	41.3	40.7
• Conservation and restoration of priority ecosystems.	65.1	65.2	65.9	65.1
Gross Planned Spending	198.2	200.4	201.8	168.7
Less: Respendable Revenue	(10.2)	(7.7)	(7.6)	(7.6)
Net Planned Spending	188.0	192.7	194.2	161.1

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

Note: The amounts reflected above include funding announced in Budget 2003. At this time, planned spending is estimated as other operating funds as these figures may still be subject to interdepartmental consultations and to the Government approval process.

2003-2004 Gross Planned Spending by Input Factor (\$200.4M)



C – PLANS, PRIORITIES AND PERFORMANCE FRAMEWORK BY KEY RESULT

KEY RESULT: CONSERVATION OF BIOLOGICAL DIVERSITY

While Canada is blessed with an abundance of natural resources, it is not immune from threats. Canada's wetlands continue to disappear, old-growth forests on the west coast and in the boreal regions are shrinking and less than 5% of Canada's tall-grass prairie and 10% of Ontario's Carolinian forests remain. On-going stresses are resulting in the disappearance of prime agricultural land, water and soil pollution and/or depletion, the loss of critical vegetation cover and biodiversity, as well as the pending extinction or extirpation of some of Canada's species. In

fact, 12 species native to Canada are known to have become extinct, while another 403 are listed as special concern, threatened, endangered or extirpated. Without continued, strategic action on the part of all governments, external stakeholders and Canadians, biodiversity loss in Canada will increase, putting pressure on ecosystems and exacerbating environmental, economic and social progress.

Plans and Priorities:

Environment Canada's priorities for the next three years will focus on:

- ☐ implementing the National Strategy for the Protection of Species at Risk;
- ☐ implementing the North American Bird Conservation Initiative;
- ☐ developing a Protected Areas Strategy; and
- ☐ developing the four priorities of the Canadian Biodiversity Strategy.

Priority #1: Implement the National Strategy for the Protection of Species at Risk

Upcoming priorities for the implementation of a National Strategy for the Protection of Species at Risk include: regional collaboration with the provinces and territories in the development of bilateral agreements under the Accord for the Protection of Species at Risk; implementing Year 4 of the Habitat Stewardship Program and conducting an evaluation of the Program's results to date; and proclaiming and beginning to implement SARA. Other initiatives that will assist in meeting the long-term objectives of this program include actions relating to the Committee on the Status of Endangered Wildlife in Canada and the national recovery process for species at risk (RENEW – the Recovery of Nationally Endangered Wildlife).

While wildlife tends to be under federal or provincial/territorial jurisdiction, actions that conserve these species need to be identified and undertaken co-operatively. Such approaches are outlined in: A Wildlife Policy for Canada; the Canadian Biodiversity Strategy; the Accord for the Protection of Species at Risk; the North American Bird Conservation Initiative; and the North American Biodiversity Conservation Strategy that is currently under development. The Department will continue to maintain and enhance these approaches as it tries to achieve its conservation-related results.

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

Priority #2: Operationalize the North American Bird Conservation Initiative

In 1995, the Protocol amending the Migratory Birds Convention was signed, bringing this historic treaty up-to-date. This international treaty places priority on the conservation of North American migratory birds and recognizes the aboriginal and treaty rights of the Aboriginal Peoples of Canada. With the Protocol now in force, a new, more comprehensive approach to migratory bird conservation is being implemented internationally and within Canada. The North American Bird Conservation Initiative has been embraced to deliver on the full spectrum of bird conservation programs through regionally-based, biologically-driven, landscape-oriented

partnerships. The four pillars of the North American Bird Conservation Initiative are: the North American Waterfowl Management Plan for waterfowl; Wings Over Water for waterbirds and seabirds; the Canadian Shorebird Conservation Initiative for shorebirds; and Partners in Flight for landbirds.

Priority concerns in the near-term for operationalizing the North American Bird Conservation Initiative include developing a Boreal Strategy and securing agreement among federal departments on co-ordinated investigations and enforcement to protect Canada's marine birds from chronic discharges of oily bilge water by ships at sea.

Assessment of the impacts on wildlife of industrial and commercial activities such as mining, forestry, agriculture, energy development and transportation continue to be a priority for the Department. As such, Environment Canada will continue to work co-operatively with other government departments, non-government organizations and resource associations to foster sustainable industrial activities to maintain ecological integrity and conserve biodiversity. A good example of this approach is the expansion of the North American Bird Conservation Initiative partners to include members of the forestry and mining sector.

- To learn more about the North American Bird Conservation Initiative, visit: http://www.cws-scf.ec.gc.ca/birds/nabci_e.cfm

Priority #3: Develop a Protected Areas Strategy

Environment Canada has a number of new and ongoing initiatives designed to protect, conserve and rehabilitate habitats significant to migratory birds and species at risk. All of the programs are of a stewardship nature — working with key partners, landowners and resource users — to achieve a common set of conservation goals. Our goals are achieved through the Ecological Gifts Program, the Habitat Stewardship Program, the North American Waterfowl Management Plan and our own departmental protected areas network of Migratory Bird Sanctuaries and National Wildlife Areas. Through these programs, the Department influences approximately \$100 million in stewardship programming in Canada. Our own departmental focus this year will be on advancing Environment Canada's Protected Areas Strategy and addressing some of the issues associated with the Department's system of National Wildlife Areas and Migratory Bird Sanctuaries.

There is an increasing challenge to resolve landscape-level pressures on wildlife and wildlife habitat as a result of environmental, social and economic factors. The Department will address this challenge by furthering such initiatives as: the North American Bird Conservation Initiative; developing regional strategies (i.e., the Boreal Strategy); implementing Canada's Stewardship Agenda; advancing Environment Canada's Protected Areas Strategy; and contributing to a federal protected areas strategy.

Priority #4: Develop the four priorities of the Canadian Biodiversity Strategy

In terms of leading national efforts to define Canada's response to the Convention on Biodiversity, Environment Canada plays a policy co-ordinating, catalyzing, and facilitating role. It operates through an extensive network of contacts within and outside government. At the federal level, an Interdepartmental Committee on Biodiversity provides advice and guidance on

domestic and international policy issues. The Federal/Provincial/Territorial Biodiversity Working Group focuses on national biodiversity issues, while the Canadian Biodiversity Forum provides a basis for a wide range of stakeholders (including representatives from many sectors of government, industry, academia and non-government organizations) to advise governments. Environment Canada is also working with indigenous groups to advance Convention issues relating to this constituency. In addition, the Department undertakes a variety of public awareness and educational activities, helping to create tools and systems for national application.

In 2003–2004, efforts will be focused on working with the provincial and territorial governments and other government departments to advance the plans for each of the four Canadian Biodiversity Strategy priorities as they were endorsed by Ministers at the Joint Ministerial meeting in September 2002. The four priorities include: developing a biodiversity science agenda for Canada including a biological information management component; enhancing our capacity to monitor and report on the status and trends of biodiversity; addressing the threat of alien invasive species (in doing so, Environment Canada will be addressing the recommendations of the 2002 Auditor General Report on Invasive Species); and engaging Canadians through biodiversity stewardship.

- To learn more about the Canadian Biodiversity Strategy, visit:
<http://www.bco.ec.gc.ca/bco/en/activities/ProjectsDomestCBS.cfm>

Challenges and Management Strategies (Priorities #1, #2, #3 and #4)

Although the Department's conservation challenges and obligations have continued to expand, the resources to address some of the challenges have not increased accordingly. 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 species, together with threats to migratory species when they are outside Canada, add to international concerns. Many of the international conventions and agreements to which Canada is a signatory are now seen as bringing new obligations as well as opportunities. Environment Canada, along with other federal departments and the provinces and territories, is currently addressing the issue of invasive species as one of four commitments selected from the Canadian Biodiversity Strategy as requiring priority action.

There is a need to develop new regulatory and conservation regimes to accommodate the active participation of Aboriginal Peoples in wildlife management. The Department has developed a draft Aboriginal Engagement Strategy to address some of these issues.

Key Result Performance Framework:

The "biodiversity is conserved" key result is divided into four sub-results. The following table shows those sub-results with the associated intermediate outcomes, indicators and targets, and initiatives and deliverables for the next three years. Note that "SDS" marks the commitments that are part of Environment Canada's Sustainable Development Strategy.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Conservation of biological diversity	
Sub-result #1: Species at Risk are Conserved	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> National Strategy for the Protection of Species at Risk is implemented. Species at Risk Program Plan implemented. Continue to engage Aboriginal organizations and communities. Continue to use stakeholder consultations and participation as a way to achieve the desired results. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Change in species status over time.</p> <p>Indicator: Recovery trends for species at risk, percentage of threatened and endangered species of migratory birds with stable or increasing populations.</p> <p>Target: Threatened or endangered species populations under federal jurisdiction meet the objectives of recovery strategies and action plans within 15 years.</p> <p>Target: No species of special concern under federal jurisdiction is listed as threatened or endangered.</p> <p>Target: Species at risk are protected through continuing implementation of the Accord for the Protection of Species at Risk in Canada by all jurisdictions.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Regional collaboration with the provinces and territories to draft bilateral agreements. Develop and begin implementation of the Species at Risk Program Plan by end of 2003. On-going implementation of the Habitat Stewardship Program: Implement Year 4 of the Habitat Stewardship Program and conduct an evaluation of the Program to date using the evaluation strategy outlined in the Results Management and Accountability Framework, in 2003–2004; and implement the national project tracking system, which links recovery and Habitat Stewardship Program initiatives, in 2003–2004. 	
Sub-Result #2: Migratory Bird Populations are Conserved	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Implementation of the North American Bird Conservation Initiative begun and with new partners, on-going. The 2003 Update to the North American Waterfowl Management Plan is completed, signed by Canada, the United States and Mexico and implemented in Canada through Joint Ventures. Continue to foster existing and develop new science partnerships with universities and other federal departments. Continue to engage Aboriginal organizations and communities. Establish a new flexible strategy for hunting regulations that allows rapid selection of regulatory packages under an adaptive harvest management framework. Continue to foster international co-operation through our work on various international agreements, conventions and strategies. Continue to use stakeholder consultations and participation as a way to achieve the desired results. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Population trends of migratory bird species.</p> <p>Target: Migratory bird populations are sustained at healthy levels by the year 2020 and ensure access to migratory birds in a fair and equitable manner.^{SDS}</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Develop a Boreal Strategy for the North American Bird Conservation Initiative Council, by October 2003. Publish the Canadian Wildlife Service Migratory Birds Program Plan that enunciates its strategy for contributing to bird conservation in the context of the North American Bird Conservation Initiative by December 2003 and implement new program management components.^{SDS} Develop a strategy for managing the incidental take of migratory birds through some combination of regulation amendments and/or public information packages and through workshops with affected industry sectors. This process began in 2002 and will continue to 2004. Participate in the development of the 2003 Update to the North American Waterfowl Management Plan through involvement in the International NAWMP (Plan) Committee, the 2003 Update Steering Committee, leading to signature by Fall 2003. Participate in the implementation of the Update over the next five years, from 2004 to 2008, through continued involvement in the Plan Committee, the Science Support Team and the Joint Ventures. Secure inter-agency agreement among EC, Transport Canada and Department of Fisheries and Oceans and implement co-ordinated investigation and enforcement initiatives towards protecting Canada's marine birds from chronic discharges of oily bilge water by ships at sea. 	
Sub-result #3: Habitats Significant to Migratory Birds and Species at Risk are Conserved, Restored and Rehabilitated	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Environment Canada Protected Areas Strategy completed. Continue to promote the stewardship approach in all new and renewed conservation initiatives. Continue to engage Aboriginal organizations and communities. Continue to use stakeholder consultations and participation as a way to achieve the desired results. 	<p>Indicator: Trends in area of wildlife habitat conserved, protected and rehabilitated under direct Environment Canada actions.</p> <p>Indicator: Trends in area of wildlife habitat conserved, protected and rehabilitated through stewardship, conservation land agreements, ecological gifts, etc.</p> <p>Target: Habitats are conserved, protected, and rehabilitated to meet the objectives of the Canadian Wildlife Service's conservation plans for migratory birds and species at risk within 15 years.^{SDS}</p> <p>Target: Use ecosystem approach principles when making resource management decisions.^{SDS}</p> <p>Indicator: Increased rates of compliance with regulations.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Continue to implement the Ecological Gifts Program, including implementing enhanced income tax incentives in 2003. In addition, conduct an evaluation of the Program using the strategy outlined in the 2003 Results Management and Accountability Framework and secure new resources for program continuation in 2003-2004 and onwards. 	
Sub-Result #4: Facilitate Delivery of a Broader Conservation Agenda	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Ongoing and enhanced partnerships with provinces/territories, non-government organizations and our international partners are critical to the delivery of results under this broader agenda. Canada's Stewardship Agenda implemented. 	<p>Target: Facilitate the development of a broader conservation agenda.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Develop implementation plans for the four priority areas of the Canadian Biodiversity Strategy including: <ul style="list-style-type: none"> developing a biodiversity science agenda with a biological information management component in 2003; by 2003, developing a draft framework for a Canadian Biodiversity Index and a web portal prototype as two elements of a national biodiversity reporting system aimed at enhancing capacity to monitor and report on biodiversity status and trends in Canada by 2005; by 2003, developing detailed workplans for the four thematic groups established to advance the draft plan on invasive alien species; by 2003, developing progress reports on priority actions under Canada's Stewardship Agenda. 	

KEY RESULT: UNDERSTANDING AND REDUCTION OF HUMAN IMPACTS ON THE HEALTH OF ECOSYSTEMS

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 so that it can 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 an effective ecosystem-based management approach and of fundamental importance to sound decision-making.

Plans and Priorities:

In this context, Environment Canada's priorities for the next three years for achieving this key result include:

- ☐ enhanced environmental quality status and trends monitoring, and reporting; and
- ☐ advanced scientific understanding of the effects of human activities on the health of ecosystems.

Priority #5: Enhanced environmental quality status and trends monitoring and reporting

The major challenges are: the need to enhance existing partnerships and build new ones at the national and international level in order to have an integrated approach and agenda for addressing key environmental issues; to identify and address gaps for research, monitoring, and reporting on existing and emerging issues; and to rethink old methods, use new tools, and design systems to provide integrated, timely and accessible information and advice to Canadians.

Environment Canada will enhance environmental quality status and trends monitoring and reporting by: strengthening and promoting the development of environmental quality monitoring and surveillance nationally with all partners; targeting water quality monitoring efforts on key threats and stressors; developing water quality guidelines against which monitoring data can be compared; releasing water quality information (e.g., water quality index) to Canadians and other status and trends reports on key areas; and producing an environmental indicator synthesis report on 10 years of tracking.

Priority #6: Advanced scientific understanding of the effects of human activities on the health of ecosystems

Environment Canada is committed to generating new scientific knowledge to help us understand the impact of human activities on the health of ecosystems and to providing timely and credible information and advice to decision-makers in Canada and abroad so they can make informed decisions.

Advancing the scientific understanding of the effects of human activities on the health of ecosystems will be accomplished through further development of Canadian environmental science networks (e.g., network on water); expanding the existing role of the National Water Research Institute (NWRI) geographically; building capacity on key issues; and developing a federal research strategy to address the ecosystem effects of genetically modified organisms.

Key Result Performance Framework:

The “health of ecosystems” key result is divided into four sub-results. The following table shows those sub-results with the associated intermediate outcomes, indicators and targets, and initiatives and deliverables for the next three years. Note that “SDS” marks the commitments that are part of Environment Canada’s Sustainable Development Strategy.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Understanding and reduction of human impacts on the health of ecosystems	
Sub-Result #5: Canadians Receive Timely Information and Advice on the Status and Trends of the Health of Ecosystems	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Environmental monitoring to describe ecosystem status and trends and provide early detection of ecosystem changes. Communication of status and trends of ecosystem health. Enhance existing partnerships and build new ones.^{SDS} 	<p>Indicator: Effective monitoring and reporting systems in place.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Produce Ecosystem Status and Trends Reports, e.g., Water Quality Index in Atlantic Provinces and nationally through the National Round Table on the Environment and the Economy (NRTEE); metals in wildlife, climate change and hydrology, during 2003–2005. Produce environmental indicator synthesis report on ten years of tracking, in 2002–2003 and develop new indicators in areas such as biodiversity, emissions and effects of toxic chemicals, water, solid waste generation and management, during 2003–2005. Improvement in the integration of monitoring, enhanced access to information and reporting on key issues, e.g., a water quality monitoring network of networks and national water quality data referencing network, during 2003–2005. Strengthen commitment to better link water quality monitoring networks nationally through the development of a Canada-wide framework on water quality monitoring under the Canadian Council of Ministers of the Environment, in 2003–2004. Focused water quality information on priority areas of national importance such as improved surveillance on pesticides in Canadian aquatic ecosystems. 	
Sub-result #6: Understanding of the Impacts of Human Activities on the Health of Ecosystems Is Advanced	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Enhance partnerships on existing issues and build new partnerships on emerging ones. Integrated science assessments to create, review, interpret and synthesize knowledge on known and emerging environmental issues. Communicate new scientific knowledge. 	<p>Indicator: Evidence of new tools to advance scientific understanding.</p> <p>Target: Under development.</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Enhance scientific research by strengthening the role of the NWRI through: <ul style="list-style-type: none"> The geographical expansion of the current mandate by shifting the lead for current program areas, e.g. integrated basin management and cumulative impact research to Atlantic region, and climate change to Pacific region, in 2003. Expansion of the NWRI mandate, e.g., rebuilding the capacity for microbiological water quality research and wastewater management research, during 2003–2005. Develop new knowledge on research issues identified in the Nature Research Agenda, during 2003–2005: Develop a federal research strategy to address the effects of genetically-modified organisms on ecosystems, in 2003. Develop a research strategy on pharmaceuticals, in 2003. Transferring new knowledge and linking water science to policy on the degradation and protection of Canada's groundwater, as well as its impact on private and public drinking water, aquatic ecosystems, and surface waters to policy; assess effects of agricultural activities on water quality; groundwater quality; and water re-use and re-cycling, in 2003. Conduct and publish science assessments on key environmental issues e.g., pulp and paper 10-year retrospective, taste and odour in drinking water sources, contaminated sediments, dioxins and furans and freshwater aquaculture, during 2003–2005. 	
Sub-result #7: Contribute to Science-Based Advice and Solutions to Reduce Human Impacts on the Health of Ecosystems	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Development of science-based solutions, including the development of science-based benchmarks and tools to assess and measure the state of ecosystem health and advice on management actions. 	<p>Indicator: Under development</p> <p>Indicator: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Review and explore, together with federal, provincial and territorial partners, opportunities for enhancing and accelerating the development of national guidelines for water quality, during 2003-2005. Action will focus on: <ul style="list-style-type: none"> Management tools for agriculture and aquaculture through the development of a phosphorus ecozone environmental quality guideline, nitrate guideline, and three priority pesticide guidelines. Working with industry and the provinces to produce guidelines for diisopropanolamine, sulpholane, fluoride, nonylphenol, aluminum, mercury and uranium and updating of guideline protocols for metals and safety factors; Development of a suite of biocriteria aimed at the municipal waste water sector and promoting these for national approval through the Canadian Council of Ministers of the Environment. In addition, site-specific objectives reports for ammonia and chloramines to assist the sector will be made available; Through its collaboration with the Federal/Provincial/Territorial Drinking Water Committee, intends to pursue the development of a source water guideline for turbidity to assist water managers with their implementation of watershed/aquifer management plans; and Develop agri-environmental standards under the Agriculture Policy Framework for use in the management of impacts on air, water, soil and biodiversity stemming from the agricultural sector. Develop guidance for the municipal water sector through the development of a site-specific guidance document on implementing guidelines or objectives for substances not captured by minimum treatment standards. Advance environmental effects monitoring (EEM) through the release of Cycle 2 Results on Pulp and Paper in 2003; the implementation of Metal Mining EEM program in 2003; and explore application of EEM to other sectors, e.g., aquaculture and municipal wastewater, during 2003 to 2005. 	
Sub-result #8: Environment Canada's Science and Technology Policies are Developed Consistent with the Federal S&T Strategy to Promote the Effective Management of its Scientific Community and Infrastructure	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Environment Canada's Science & Technology is of high quality. EC's S&T efficiently and effectively supports the Department's mission and contributes to achieving the federal government's goals. EC's S&T is integrated with federal, Canadian and international environmental S&T capacity and contributes to its excellence. EC's S&T effectively addresses the environmental and sustainable development needs of Canadians. 	<p>Indicator: Under development.</p> <p>Indicator: Under development.</p>

Strategie(s)/Initiative(s) and Deliverable(s)

- Strengthen Environment Canada policies and practices linking science and policy and communicating EC's Science and Technology.
- Develop new mechanisms and strengthen existing ones to better integrate federal S&T and link it with external S&T (e.g., ecosystem effects of GMOs).
- Promote the establishment of a Canadian Environmental Sciences Network, as well as regional and issue-specific networks.
- Support the work of the EC S&T Management System, the S&T Advisory Board and the Council of S&T Advisors, and implement their recommendations within EC.
- Work with the federal S&T community to develop policies and share best practices in managing S&T human resources, and transfer these into EC.
- Enhanced partnerships to advance excellence in science, i.e., facilitate and assist in the development of regional water quality science capacity (e.g., leadership on regional watershed initiatives, e.g., Bow Council, Sask Partners, Red River, etc., build cooperative opportunities with First Nations, and Co-management Boards).

KEY RESULT: CONSERVATION AND RESTORATION OF PRIORITY ECOSYSTEMS

Major ecosystems are under continual long-term threat from a number of stressors such as increased population, industrial activity and unsustainable land use. These activities are leading to increased air and water pollution and the disappearance of habitat required to maintain the natural balance of living things and their environment. In particular, water issues have become of increasing concern to Canadians and their governments. Science capacity is critical for understanding and addressing these threats. Environment Canada plays a strong role in research, the monitoring and assessment of freshwater resources and ecosystems, the development of water quality guidelines, the control of toxic substances and the promotion of pollution prevention.

Plans and Priorities:

Environment Canada's priorities for the three years will focus on:

❑ Water

- protecting drinking water and aquatic ecosystems through enhanced collaboration with provinces and territories on issues of national significance through the Canadian Council of Ministers of the Environment and other federal departments;
- protecting water quality and quantity of waters shared with the United States;
- preventing transboundary water pollution and protection of water resources;
- conserving and protecting priority ecosystems through partnerships and action;
- contributing Canadian expertise and technology to addressing global water issues (e.g., World Summit on Sustainable Development targets); and
- promoting integrated water resource management domestically and internationally.

❑ Ecosystem Initiatives (EI) – changing decision-making/human behaviour

Priority #7: Water

Canada is not immune to risks associated with the contamination of water. Canadians are concerned about the quality and sustainability of their water resources, including drinking water and source water protection. There is an increasing need to re-evaluate the instruments and institutional arrangements that govern water management in Canada.

Challenges and Management Strategies

Federally, Environment Canada is working with other departments to fulfil our responsibilities for water. The Department's strategy for addressing this challenge relies upon stronger integration at the federal level to ensure complementary actions and policies related to water. A more strongly integrated federal family will be better able to support integration at the federal–provincial–territorial level.

Through the Canadian Council of Ministers of the Environment, Environment Canada has been working with its provincial and territorial counterparts to ensure clean, safe and secure water for Canadians. Ongoing and future efforts aim to protect water quality from “source to tap” by focusing on the following areas: water quality research priorities; sharing best management practices; developing a water quality monitoring network of networks; improving Internet-based information on water quality; and accelerating the development of water quality guidelines.

In addition to environment ministries, water management responsibilities are shared by well over 10 other federal departments. Issues such as agriculture, ground water, transportation, manufacturing and mining, energy (hydro and thermal), forestry, fisheries and management of water on federal and aboriginal lands are just some key examples of how water management is complex and cuts across various departments and jurisdictions. Progress is occurring at differing rates within each of these sectors, and an important challenge over the next three years will be to better integrate and collaborate the work of these sectors.

- To learn more about issues related to water, visit: http://www.ec.gc.ca/water_e.html

Priority #8: Ecosystem Initiatives

Ecosystem initiatives are co-operative efforts to address complex environmental issues affecting targeted ecosystems. Ecosystem initiatives help Canadians achieve environmental results through partnerships, pooling resources, focusing science, co-ordinating 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 in Canada — namely, the Georgia Basin Ecosystem Initiative/Georgia Basin Action Plan, the Northern Rivers Ecosystem Initiative, the Northern Ecosystem Initiative, the St. Lawrence Action Plan, the Atlantic Coastal Action Program and the Great Lakes 2020.

- To learn more about ecosystem initiatives, visit: <http://www.ec.gc.ca/ecosyst/backgrounder.html>

Key Result Performance Framework:

The “priority ecosystems” key result is divided into three sub-results. The following table shows those sub-results with the associated intermediate outcomes, indicators and targets, and initiatives and deliverables for the next three years.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Conservation and restoration of priority ecosystems	
Sub-Result #9: Federal Leadership and Expertise, through Partnerships, Is Provided to Conserve and Protect Canada's Water Resources and Aquatic Ecosystems	
Intermediate Outcome(s) <ul style="list-style-type: none"> Under development. 	Indicator(s)/Target(s) <p>Indicator: Under development.</p> <p>Target: Clean, safe and secure water for all uses.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <ul style="list-style-type: none"> Production of Guidance for Safe Drinking Water in Canada: From source-to-tap through collaboration with Federal/Provincial/Territorial Drinking Water Committee and Canadian Council of Ministers of the Environment. Production of a drinking water guidance document through Health Canada, Environment Canada, Indian and Northern Affairs, and First Nations Committee. Production of a drinking water guidance document through the Federal interdepartmental Committee. Water Strategy through Canadian Council of Ministers of the Environment Water Action Plan — coordinating research, monitoring, guidelines and public outreach information and production of water policy. 	
Sub-Result #10: Innovative Tools are Provided for Sound Ecosystem and Environmental Decision-Making	
Intermediate Outcome(s) <ul style="list-style-type: none"> Under development. 	Indicator(s)/Target(s) <p>Indicator: Under development.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <ul style="list-style-type: none"> Under development. 	
Sub-Result #11: Ecosystem Initiatives	
Intermediate Outcome(s) <ul style="list-style-type: none"> Intermediate outcome under development. 	Indicator(s)/Target(s) <p>Indicator: Evidence of increased scientific understanding.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <ul style="list-style-type: none"> Report in 2003 on the results of the scientific research conducted under the Northern Rivers Ecosystem Initiative, in areas such as contaminants, endocrine disruption and hydrology. Through the Georgia Basin Ecosystem Initiative, support local government planning processes to sustain ecosystem health through the provision and co-ordinated dissemination of science and best management practices for watershed and habitat protection, and “smart growth” urban planning tools and processes. 	
Intermediate Outcome(s) <ul style="list-style-type: none"> Under development. 	Indicator(s)/Target(s) <p>Indicator: Evidence of public awareness and capacity.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <ul style="list-style-type: none"> Through the Georgia Basin Ecosystem Initiative and the Georgia Basin Futures Project (using GB QUEST), improve the understanding of the inter-related dynamics of the ecological, economic and social systems in the Georgia Basin through a two-year public consultation and outreach program, in 2002–2003. 	
Intermediate Outcome(s) <ul style="list-style-type: none"> Under development. 	Indicator(s)/Target(s) <p>Indicator: Evidence of behavioural change and incremental environmental improvements.</p> <p>Target: Under the Georgia Basin Ecosystem Initiative, re-open greater than 25% of closed shellfish harvesting areas in selected Georgia Basin communities by 2005.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <ul style="list-style-type: none"> Through the Georgia Basin Ecosystem Initiative, implement a Georgia Basin Toxic Chemicals Management Strategy, in 2003. Through the Georgia Basin Ecosystem Initiative, implement the Sensitive Ecosystem Inventory in the Sunshine Coast Region, in 2003. 	

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

A – Overview

As Canadians, we are affected by weather and environmental conditions such as tornadoes, winter storms, floods, droughts, smog, variable lake water levels, extremes in temperature and precipitation, aircraft turbulence, and road icing. These conditions affect our health and safety, 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 365 days per year, 24 hours per day, to forecast weather and environmental conditions from coast to coast.

Environment Canada works to reduce risks to Canadians from weather-related and environmental hazards by providing warnings of hazardous and severe weather to Canadians and by supporting other federal departments and governments in their decision-making. The Department's work also helps weather-sensitive industries, such as transportation, energy, fisheries, forestry and tourism, improve their productivity and competitiveness as well as rendering their operations environmentally sustainable. Finally, the Department 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.

Through the Weather and Environmental Prediction Business Line, Environment Canada helps Canadians adapt to their environment in ways that safeguard their health and safety, optimize economic activity and enhance environmental quality.

Key Results:

Environment Canada, through the WEP Business Line, aims to achieve two key results:

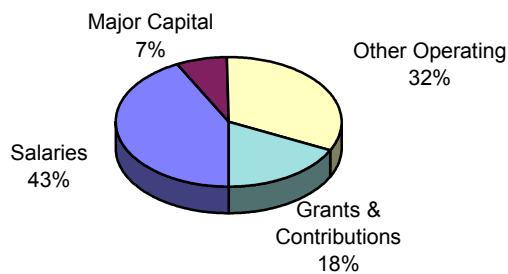
- ☐ reduced impact of weather and related hazards on health, safety and the economy; and
- ☐ adaptation to day-to-day and longer-term changes in atmospheric, hydrological and ice conditions.

B – Planned Spending by Key Result

(\$ millions)	Forecast Spending 2002-2003*	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Key Results				
• Reduced impact of weather and related hazards on health, safety and the economy.	186.2	221.7	180.6	177.7
• Adaptation to day-to-day and longer- term changes in atmospheric, hydrological and ice conditions.	77.0	81.8	70.3	65.6
Gross Planned Spending	263.2	303.5	250.9	243.3
Less: Respendable Revenue	(69.3)	(62.8)	(63.9)	(64.7)
Net Planned Spending	193.9	240.7	187.0	178.6

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

2003-2004 Gross Planned Spending by Input Factor (\$303.5M)



C – PLANS, PRIORITIES AND PERFORMANCE FRAMEWORK BY KEY RESULT

KEY RESULT: REDUCED IMPACT OF WEATHER AND RELATED HAZARDS ON HEALTH, SAFETY AND THE ECONOMY

Through its warning program, Environment Canada informs Canadians, primarily by way of mass media or delivery systems such as Weatheradio, of imminent or short-term weather and related environmental hazards. In addition, Environment Canada continues to make extensive and growing use of the Internet as a dissemination tool both to the general public and as a targeted tool for national and local media organizations. Doing so ensures that Canadians have the knowledge and the time to react to protect themselves, their property and their businesses.

Each year, Environment Canada, through the MSC, issues approximately 14,000 severe weather warnings and 3,500 ice hazard warnings. The Department also provides education and outreach to Canadians in addition to offering direct support to clients and partners. For example, Environment Canada provides information to assist the following areas: provinces in support of

flood programs; the inter-jurisdictional apportionment of critical water resources and critical ice information in support of Coast Guard activities; international shipping; and offshore resource extraction. All are supported by a strong research and development program.

Plans and Priorities:

Environment Canada's priorities for the next three years will be to focus on:

- ❑ **Having Canadians recognize Environment Canada as the official source of warnings and the authority on meteorological standards in Canada** — Actions will concentrate on renewing the MSC and on increasing its visibility with and accountability to Canadians.
- ❑ **Optimizing the time that Canadians have to respond to high-impact events, not only through accurate and effective warnings but also through a philosophy of fostering resilient communities** — Objectives are to help Canadians understand the social and economic vulnerabilities from high-impact weather and climate events and to give them enough advance warning that they can react to minimize the impacts.

Priority #1: Official source of warnings and the authority on meteorological standards in Canada

A cornerstone of government has always been 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 needs. Environment Canada is challenged to build a more forward-looking and sustainable MSC. The MSC must deal with the continuing expansion of scientific knowledge in its fields of work, the rapid pace of technological change and increasing competition in the public and private sectors for skilled employees.

Challenges and Management Strategies

Infrastructure and Capacity Issues

The Department is faced with significant infrastructure and resource challenges and is taking the necessary steps to restore the integrity of the MSC in order to meet its 2011 vision. To that end, Environment Canada has set priorities in the following areas: remove or replace obsolete infrastructure; recruit and train new technicians, meteorologists and scientists to replace staff who will be retiring over the next five years; and integrate new and more innovative technologies into the monitoring networks to enhance our observing capacity. The availability of resources will be a critical factor in determining the speed at which the MSC can transform to a sustainable service and meet its goals.

Enhancing Recognition of Contributions

In order to be recognized as an authority and official source of weather warnings, Environment Canada also must increase its visibility with the Canadian public. Canadians have access to weather and environmental information from a variety of sources. The quality of this information varies widely. Environment Canada wants to ensure that Canadians are able to recognize, trust and act on quality information originating from the Department. The Department works closely with the media, a key partner in the dissemination of weather information, and the private

meteorological sector to clarify responsibilities and to increase attribution to Environment Canada for its information in broadcasts and the print media.

Maintaining Expertise

To ensure credibility, the quality of forecasts and warnings needs to be upheld. Both experienced and new staff need substantial training and development opportunities to maintain the existing level of skill and expertise and to continue providing Canadians with a high-level of service. A multi-year training partnership with the Co-operative Program for Operational Meteorology, Education and Training in the United States, signed in 2001, provides meteorologists with learning opportunities. Comparable partnerships are being explored with Canadian universities.

Modernizing Networks

Environment Canada operates many monitoring networks. Some of them are modern and in a good state, such as the lightning and radar networks. Other long-standing networks, however, such as portions of the surface weather network, have very outdated equipment and there is a risk of failure. Efforts are under way to modernize monitoring networks and to move to a philosophy of “life-cycle management” for critical infrastructure so that all new equipment installed is maintained and its eventual replacement is planned. Many partners contribute funds to operate these networks and are involved in data collection or share data. Partners include the provincial and territorial governments, NAV CANADA, other federal departments and agencies (e.g., National Defence, Department of Fisheries and Oceans, Canadian Space Agency) and international organizations (e.g., National Oceanic and Atmospheric Administration, National Weather Service, World Meteorological Organization, etc.). New technologies, such as satellite-based remote sensing and aircraft-borne weather sensing systems, will provide new and enhanced data that can be used to improve the quality of forecasts and warnings. The Department has an agreement with Air Canada Jazz to provide upper-atmosphere measurements through such systems installed on some of their aircraft.

Priority #2: Optimizing response to high-impact events

To protect themselves, Canadians need promptly disseminated accurate forecasts and warnings, in addition to guidance about what to do when severe weather threatens. Timely meteorological information is essential for reducing risks to Canadians, and Canadians have increasing expectations on the advance notice they need to prepare themselves.

Challenges and Management Strategies

In partnership with others, Environment Canada wants to improve society’s capacity to adapt, anticipate, mitigate, withstand and recover from high-impact events and related hazards by improving lead time, accuracy, utility and satisfaction with warnings. This will be accomplished by taking the following actions: focusing more attention on high-impact events and automating routine forecasts as much as possible; applying the advances that science and technology offers for the future; transferring scientific knowledge from research to production; helping Canadians understand and reduce their vulnerability through outreach, education and services; improving access to and dissemination of weather and environmental information and warnings; and improving support to first responders and emergency organizations (e.g., Health Canada,

Emergency Preparedness, National Defence, provincial and municipal emergency measures and response agencies, etc.).

Improving Response to Hazards and Other Issues

The importance of weather and environmental services is increasing as Canadians become more vulnerable to weather and environmental conditions. The change in vulnerability comes about as the population concentrates in urban areas, the infrastructure ages and new technology creates complex but vulnerable production and delivery systems (e.g., a power grid susceptible to icing, implications of just-in-time inventory approaches to manufacturing). 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 their governments time to anticipate, prevent, withstand or adapt to them more effectively. Along with the responsibility of more advanced notice, the Department must continue to work with media and other partners to inform and educate Canadians about how best to react in order to reduce the number of injuries, casualties and damage from natural disasters.

The Department will place a greater focus on forecasting high-impact weather and climate events. By automating routine forecast production, meteorologists will be able to devote greater attention to diagnosing, forecasting and providing advanced warning of high-impact weather, which can have a significant impact on public safety and the economy. Production offices will be modernized and will work in collaboration and consultation with governments, industry and the academic community across Canada and internationally to enhance scientific understanding, and to ensure the transfer of the resulting science to improved forecasts and other products and services provided to Canadians.

Working with Partners

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, and these sectors work closely with one another to address this national concern. The MSC is a member of the Laboratoire universitaire sur le temps extrême and, together with the Institute for Catastrophic Loss Reduction, contributes partial financial support of a McGill University Chair in Extreme Weather.

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 improve dissemination of weather 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 opportunity for new partnerships with broadcasters and cable and telecommunications companies at some future time.

Key Result Performance Framework:

The “hazards” key result is divided into three sub-results. The following table shows those sub-results with the intermediate outcomes, the indicators and targets, and the initiatives and deliverables for the next three years.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Reduced impact of weather and related hazards on health, safety and the economy	
Sub-Result #1: Increased Margin of Safety from High-Impact Weather and Related Hazards	
Intermediate Outcome(s) <ul style="list-style-type: none"> Increased quality, utility and satisfaction as a result of focusing production offices on warnings and increasingly automating routine products such as the day-to-day weather forecasts. 	Indicator(s)/Target(s) <p>Indicator: Under development.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <p>Weather Services Standards</p> <ul style="list-style-type: none"> Develop and communicate public weather service standards, in 2004. <p>Innovative Technology for Routine Forecast Production</p> <ul style="list-style-type: none"> Enhance the software that uses statistical techniques to improve on the raw outputs of the weather prediction models in 2004–2005. Develop a weather forecast production tool to assist the operational meteorologist in preparing marine weather bulletins, in 2004. Improve national software applications used by operational forecasters, in 2006. 	
Intermediate Outcome(s) <ul style="list-style-type: none"> Improved visibility as Canada’s supplier of warnings. 	Indicator(s)/Target(s) <p>Indicator: Visibility as the authority on high-impact weather.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <p>Expand Attribution in Daily Media Broadcasts to EC for Weather Information</p> <ul style="list-style-type: none"> Ensure that the return on the public’s investment in weather services is made visible through the enforcement of an attribution policy for daily weather services in broadcast and print media, in 2004. 	
Intermediate Outcome(s) <ul style="list-style-type: none"> Increased quality, utility and satisfaction as a result of increasing research and development on detecting potential hazards and developing new forecast techniques and transferring knowledge to the production offices and external partners. 	Indicator(s)/Target(s) <p>Indicator: Under development.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s) <p>Weather Forecast Improvement through Advancements in Numerical Weather Prediction</p> <ul style="list-style-type: none"> Migrate the weather prediction computer software to the new IBM supercomputer, in 2003. Implement a four-dimensional approach (time and space) to better use all available information in computer models, in particular the observations received from satellites “4D-VAR project,” during 2003–2006 Introduce new probabilistic forecast products based on the ensemble prediction system, in 2004–2005. Increase the resolution of the weather prediction computer models from 15 km to 2.5 km over selected areas of Canada in order to improve the forecasting of small-scale high-impact weather events, in 2004. <p>Knowledge Transfer to Production Offices</p> <ul style="list-style-type: none"> Operational centres working with MSC research and development and partners to build expertise in key areas and share science and knowledge nationally, in 2005. 	
Intermediate Outcome(s) <ul style="list-style-type: none"> Improved forecast and warning service delivery. 	Indicator(s)/Target(s) <p>Indicator: Under development.</p> <p>Target: Under development.</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
Service Delivery Systems <ul style="list-style-type: none"> Assess options for telephone access to weather information and begin implementation as appropriate, including a possible 911 phone number, improving the existing Automatic Telephone Answering Devices system, and options for 1-900 calls, in 2004. With partners, advance implementation of national public alerting systems for weather warnings, in 2004. Implement weather radio-transmitted broadcast content and wording standards, in 2004. Work with the Canadian Association of Broadcasters to develop warning protocols (levels and types of warnings), in 2005. Expand the "Warning Preparedness Program." Increase the number of staff to liaise with and support the media, emergency management agencies and other clients, in 2005. Standardize marine warning and forecast formats to improve automatic dissemination, in 2005. 	
Sub-Result #2: Quality and Citizen-Centred Weather and Related Environmental Prediction Service	
Intermediate Outcome(s) <ul style="list-style-type: none"> Rust-out, technological obsolescence and occupational health and safety issues addressed through implementing a full life cycle management system for all networks. 	Indicator(s)/Target(s) <p>Indicator: Integrity of the monitoring networks.</p> <p>Target: Replace and/or upgrade systems so that all networks are operating within their expected technological life cycle. Timelines for each network to meet this target are dependent on available funding.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
Monitoring Network Modernization <ul style="list-style-type: none"> Modernize 15 surface weather stations each year. Modernize 15 Reference Climate Stations each year. Modernize eight volunteer observing ships with automated weather systems, in 2003–2004. Replace aircraft ice reconnaissance radar, in 2006. 	
Strategie(s)/Initiative(s) and Deliverable(s)	
Intermediate Outcome(s) <ul style="list-style-type: none"> An effective governance structure in place to ensure nationally cohesive and coherent monitoring programs. 	Indicator(s)/Target(s) <p>Indicator: Formal agreements developed.</p> <p>Target: Agreements with key stakeholders are developed and signed.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
Partnerships for Monitoring <ul style="list-style-type: none"> Formal agreements signed with key federal government departments that will help to sustain the weather and climate monitoring networks, in 2003–2004. Renewed bilateral hydrometric agreements signed with all the provinces and territories, in 2003–2004. Establish memorandum of understanding (MOU) with Canadian Coast Guard to secure marine buoy deployment (and other) services, in 2003–2004. Maintain/develop agreements with Natural Resources Canada (NRCan), Radarsat International, European Space Agency for continuity of access to satellite radar for ice monitoring, in 2004–2005. Establish MOU with NOAA/National Environmental Satellite, Data, and Information Service (NESDIS) for bilateral data exchange, data archive and research and development with the United States, in 2003–2004. Other Partnerships <ul style="list-style-type: none"> Establish "North American Ice Service" Agreement for integrated ice monitoring and production between MSC and U.S. National Ice Centre, in 2003–2004. 	
Strategie(s)/Initiative(s) and Deliverable(s)	
Intermediate Outcome(s) <ul style="list-style-type: none"> Innovative technologies deployed that will enhance Canada's composite observing capabilities. 	Indicator(s)/Target(s) <p>Indicator: New data sources and improved spatial coverage.</p> <p>Target: Complete the National Radar Implementation Plan which will provide 85% of Canadians with radar coverage that will lead to improved warnings.</p> <p>Target: Establish agreements with Canada's regional airlines to provide AMDAR data.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
Innovative Monitoring Technologies to Measure Changes in Atmospheric Parameters <ul style="list-style-type: none"> Install remaining four Doppler Radars as per the plan, in 2003–2004. Continue to expand the AMDAR data acquisition system installation with Canadian air carriers, during 2003–2006. 	

<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> EC demonstrates leadership in environmental stewardship. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Contaminated federal monitoring sites cleaned up.</p> <p>Target: Clean up the 500 discontinued hydrometric stations.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Complete decommissioning and clean up of the 500 discontinued stations, in 2005–2006. 	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Capacity, affordability and sustainability issues resolved through increasing recruitment and training to ensure the right skills and address demographic issues. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: An effective S&T workforce to meet the monitoring and forecast program requirements.</p> <p>Target: Effective recruiting and training systems for developing the scientific and technical workforce.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Workforce Renewal</p> <ul style="list-style-type: none"> National recruiting is conducted as required to address the forecast program needs, in 2003–2004. National recruiting is conducted as required to address the monitoring program needs, in 2003–2004. Occupational Training Programs are developed for the meteorological and hydrometric technologists, in 2003–2004. 	
<p>Sub-Result #3: Improve Society's Capacity to Adapt to, Anticipate, Mitigate, Withstand and Recover from High-Impact Weather and Other Hazards</p>	
<p>Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Increased outreach and education on high-impact weather and climate events and other hazards to ensure that Canadians are aware of their vulnerability, understand our products and services and how to use them, and are prepared for hazardous events. 	<p>Indicator(s)/Target(s)</p> <p>Indicator: Awareness of vulnerability.</p> <p>Target: Under development.</p>
<p>Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Nature and Characteristics of High-Impact Weather and Climate, Vulnerabilities and Adaptations</p> <ul style="list-style-type: none"> Develop a national research and development program to provide information on the nature and characteristics of high-impact weather and climate events, including floods, droughts, etc.; associated vulnerabilities; and adaptation strategies and measures to reduce those vulnerabilities, in 2003–2004. <p>Environmental Emergency Response</p> <ul style="list-style-type: none"> National models for environmental emergency response adapted for improved Numerical Weather Prediction input, in 2003–2004. <p>Public Outreach</p> <ul style="list-style-type: none"> Develop a national public outreach program to enhance awareness of Canadians of the risks and vulnerabilities of high-impact weather and climate events, in 2004. 	

KEY RESULT: ADAPTATION TO DAY-TO-DAY AND LONGER-TERM CHANGES IN ATMOSPHERIC, HYDROLOGICAL AND ICE CONDITIONS

Each year, Environment Canada issues approximately 500,000 public weather forecasts, 200,000 marine weather forecasts and 400,000 aviation forecasts. The Department provides information on water quantity in our rivers and lakes, including information and advice on changing water levels in the Great Lakes and transboundary water allocations. Environment Canada provides information on ice, wind and waves for shipping and navigation. Such information is essential for Canadians to adapt to their environment and understand the opportunities from their changing environment.

Plans and Priorities:

Environment Canada's priorities for the next three years will be to focus on:

- ❑ **Ensuring that Canada has the meteorological, climatological and hydrological data, information and science capacity to produce sound environmental policies** — advance scientific knowledge through meaningful research, support policy development, and develop science and policy capacity in academic and private sectors.
- ❑ **Supporting growth in Canada's environmental prediction capacity** — stimulate the growth of the private meteorological sector to encourage the development of value-added services and improve services and outreach to weather-sensitive industries to improve their competitiveness and productivity.

Priority #3: Ensuring that Canada has the meteorological, climatological and hydrological data, information and science capacity to produce sound environmental policies

Climate variability, combined with other high-profile weather events, has raised interest in several sectors, including agriculture, shipping, construction, media, health, environmental conservation, forestry and recreation, as well as among the public. These sectors are quickly becoming aware of the emerging risks of climate change and variability. They see the impacts of extreme weather events on businesses, homes and infrastructure, and citizens in many parts of Canada feel the stress from unusually hot summers.

Challenges and Management Strategies

The Department conducts research in a wide variety of areas related to climate change and variability, air quality, weather research and water quantity to ensure that it provides a solid scientific foundation on which to develop policies and strategies to safeguard our environment and to protect human health. The Department participates in a multitude of co-operative projects with universities and research agencies in Canada and internationally (e.g., UK Hadley Centre, European Centre for Medium Range Weather Forecasts, World Climate Research Program, Intergovernmental Panel on Climate Change, Inter-American Institute for Global Change Research) to conduct research related to atmospheric and environmental sciences. It also supports the development of atmospheric science and policy capacity in academic and private sectors partly through collaboration with partners such as the Canadian Foundation for Climate and Atmospheric Studies and is working to provide better access to data, models and climate scenarios.

Environment Canada is developing a plan to address the specific peer review recommendations made by a panel of international atmospheric and climate scientists. The research and development program was found to be fundamentally sound and responsive to the needs of the Department and Canadian citizens. However, some specific areas for action were identified, including personnel succession planning, ongoing peer review process, increased university collaboration, better client interactions and a strategic science plan.

In response to client demand, the MSC will continue to make improvements to its complex climate models and is researching whether human influence on climate change is detectable on smaller scales (e.g., continental scale).

The ultimate key to 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. In addition, attracting and retaining talented young scientists is a critical challenge faced by the Department, given competitors offering much more attractive salaries and secure positions.

Priority #4: Supporting growth in Canada's environmental prediction capacity

Challenges and Management Strategies

Working with Industry

The private meteorological sector in Canada is small, but diverse. Environment Canada is working to build stronger relations with this sector and to encourage the development and use of value-added meteorological services. These services will benefit all Canadians, as \$150 billion of our nation's economy is weather-sensitive. In addition to responding to the strategic needs of the private meteorological sector and identifying areas where it can play a supporting or co-operative role, Environment Canada is working to improve data access, to identify new and emerging business opportunities for this sector, and to implement better cost recovery practices to ensure that it does not compete for business. The Department meets with the Canadian Meteorological and Oceanographic Society Private Sector Task Force to advance work of common benefit.

For Canadian weather-sensitive industries — such as transportation, energy, construction, forestry, agriculture, fishing, recreation and tourism — awareness, access, and the use of high-quality, timely and reliable weather, water quantity, climate and related information can significantly improve their productivity and competitiveness.

Meeting the Expressed Needs of Canadians

Some key needs of Canadians, as expressed in a recent national survey, include: safer roads; improved extended-range and seasonal forecasts; and improved information on the nature of high-impact weather and climate events, including appropriate community responses.

Environment Canada plans to work with Transport Canada and the provincial and territorial governments to set up road weather observational networks. Real-world case studies in Canada and elsewhere have shown that road weather information systems together with road weather forecasts and road maintenance training can reduce snow and ice-related fatalities by as much as 15%. Additionally, road salt use is reduced by approximately 25%. Effort in this area will diminish impacts on the environment, reduce road maintenance costs, and decrease damage to road infrastructure.

The Department plans to improve the forecasts out to 15 days, as well as monthly and seasonal predictions and scenarios. The resulting information is key to the weather-sensitive private and public sectors, as it provides the following benefits: increased efficiencies and reduced risks in those sectors; more effective water management decisions; improved energy supply, demand planning and government service (such as natural resource management and municipal planning); and increased competitiveness of Canadian industries.

Environment Canada plans to improve understanding and services directed to communities and weather-sensitive government services (e.g., municipal planners and engineers, emergency

planning organizations, etc.) on: the nature of high-impact weather and climate events; the associated vulnerabilities and risks; and appropriate preparation and response strategies.

Key Result Performance Framework:

The “adaptation” key result is divided into three sub-results. The following table shows those sub-results with the intermediate outcomes, the indicators and targets, and initiatives and deliverables for the next three years.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Adaptation to day-to-day and longer-term changes in atmospheric, hydrological and ice conditions	
Sub-Result #4: Increased Economic Efficiency, Productivity and Competitiveness	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Increased quality, utility and satisfaction of services. 	<p>Indicator: Satisfaction and quality of products and services.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<p>Improve Weather Information</p> <ul style="list-style-type: none"> Increased reliability of and more accurate and faster access to information on the single-window web site because of improved infrastructure and site maintenance, in 2004. Improve seasonal and multi-seasonal forecasts, in 2004–2005. <p>Improve Climate Information</p> <ul style="list-style-type: none"> Increase the spatial resolution of climate change scenarios to better serve the impacts adaptation and policy communities, in 2004–2005. Provide interactive, web-based analysis of historical mean and extreme temperature and precipitation for user-defined periods and areas of Canada, in 2004–2005. Provide 10 km resolution “blended” snow cover (snow-water equivalent) product for western Canada based on satellite and conventional data, in 2004–2005. <p>Services to Natural Resource Sectors</p> <ul style="list-style-type: none"> Partnership with the energy sector (formal agreement for collaboration), in 2003–2004. Implement national standard agricultural bulletin, in 2003–2004. 	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> MSC repositioned in the marketplace by implementing strategies to promote growth of the environmental prediction capacity of the private sector. 	<p>Indicator: Value of Canada’s private meteorological sector.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<p>Practices for Developing the Private Sector</p> <ul style="list-style-type: none"> Implementation of better cost-recovery practices to encourage the growth of the private sector and increase the use of weather information, in 2004. Improvements to media services through dedicated media web site based on client feedback and needs, e.g., make improvements targeted towards emergency measures organizations and print media, in 2004. 	
Sub-result #5: Improve the Quality and Enjoyment of Life for Canadians	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Improved quality, satisfaction and utility of products and services. 	<p>Indicator: Communities apply appropriate adaptation strategies in response to the potential impacts of sea-level rise.</p> <p>Target: Appropriate adaptation strategies delivered to coastal communities in case study area along the southeast coast of New Brunswick, in 2006.</p>

<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Strategy: Increased understanding of the impacts of climate change and sea-level rise in coastal communities.</p> <ul style="list-style-type: none"> Project management and scientific participation in a three year, multi-disciplinary project to study the impacts of climate change and sea-level rise on the southeast coast of New Brunswick. This study includes integrating results from the physical, ecological and social sciences. Project completion, by April 2006. <p>Assess Utility of Warnings</p> <ul style="list-style-type: none"> Develop a strategy for measuring the degree of satisfaction with weather warnings and the consequential public reaction, in 2004. <p>Road Weather Information</p> <ul style="list-style-type: none"> Contribute to the development and operation of a road weather information system in partnership with other federal agencies, the provinces and the private sector, in 2004. 	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Improved access to basic meteorological, hydrometric and climatological data by the public, private and academic sectors. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Decrease the lead-time and increase the quality of the basic data disseminated to Canadians.</p> <p>Target: Meet industry standards for searching, locating and downloading basic data from the MSC.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Wider Access to Data</p> <ul style="list-style-type: none"> On-line access to selected real-time and historical quality-controlled meteorological, hydrometric and climatological data, by 2003–2004. Sea ice and iceberg information and data will be made available from a publicly accessible MSC web-site, in 2003–2004. The 1971–2000 Canadian Climate Normals will be available on-line for Canadians to use, by 2003–2004. On-line tools for private and academic sectors to locate and download a large volume of selected meteorological, climatological and hydrometric data, by 2004–2005. National implementation of the real-time automatic data quality control system for meteorological, hydrometric and climatological data, by 2004–2005. Make a mesoscale version of the Global Environmental Multiscale model available to scientific and operational communities and the private sector, in 2003–2004. 	
<p>Sub-result #6: Demonstrate Scientific Leadership</p>	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> National leadership in addressing global issues and commitments. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Canadian climate data and information required to address global needs are collected, disseminated and archived.</p> <p>Target: Install and upgrade 40 climate stations in the North to enhance Canada's contribution to the Global Climate Observing System Surface Network (GSN).</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <p>Enhance contribution to the GSN</p> <ul style="list-style-type: none"> Remaining 25 northern climate stations deployed, in 2004–2005. Timely reporting from all of Canada's GSN stations, in 2004–2005. Cooperative auto-station guidelines implemented, in 2003–2004. 	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Demonstration of leadership in key policy areas and in developing research and development capacity outside of WEP. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Under development.</p> <p>Target: Under development.</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
Support to Research and Development <ul style="list-style-type: none"> Provide impacts, adaptation and policy communities scenarios of climate extremes and variability in a changed climate, in 2004–2005. Provide impacts, adaptation and policy communities with tools to develop regional-scale climate change scenarios (e.g., working with OURANOS), in 2003–2004. Sea ice charts and climate statistics from 1969 to 2002 contributed to World Data Centres for Glaciology, and available on the Internet, in 2003–2004. Research and Development <ul style="list-style-type: none"> Invest in water research and development with the regions to develop a coupled hydrological basin model, in 2004–2005. Pursue research and development on techniques for identifying prospective wind generation sites, in 2003–2004. Research and development in the area of quantitative precipitation forecasting (QPF), during 2003–2005. Develop an interdepartmental research/science water hazards network, during 2004–2005. Provide new coupled climate model runs and analysis to the Intergovernmental Panel on Climate Change Fourth Assessment Report, in 2004–2005. 	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> EC demonstrates leadership in environmental stewardship. 	Indicator: Contaminated federal monitoring sites cleaned up. Target: Clean up the 500 discontinued hydrometric stations.
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Complete decommissioning and clean up of the 500 discontinued stations, in 2005–2006. 	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Capacity, affordability and sustainability issues resolved through increasing recruitment and training to ensure the right skills and address demographic issues. 	Indicator: An effective S&T workforce to meet the monitoring and forecast program requirements. Target: Effective recruiting and training systems for developing the scientific and technical workforce.
Strategie(s)/Initiative(s) and Deliverable(s)	
Workforce Renewal <ul style="list-style-type: none"> National recruiting is conducted as required to address the forecast program needs, in 2003–2004. National recruiting is conducted as required to address the monitoring program needs, in 2005–2006. Occupational Training Programs are developed for the meteorological and hydrometric technologists, in 2003–2004. 	

- To learn more about the MSC, visit http://www.msc-smc.ec.gc.ca/index_e.cfm

3.4 Strategic Outcome — Provide strategic and effective departmental management to achieve environmental results

A – Overview

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 the integrated management and policy agenda. This is the Department's strategic medium- and long-term agenda that focuses on leadership and partnerships to inform and engage citizens and develop ways to provide efficient and innovative internal and external services.

Through the Management, Administration and Policy Business Line, Environment Canada ensures strategic and effective departmental management to achieve environmental results.

On the policy side, environmental issues continue to be cross-cutting, leading to shared jurisdictions and accountabilities. A significant amount of effort has been put into developing and delivering an ambitious policy agenda in recent years and setting the stage for long-term transformation to better address the increased scope and complexity of the environmental agenda. The impact of major policy events of the past year (e.g., World Summit on Sustainable Development, ratification of the Kyoto Protocol and Royal Assent for SARA) will orient the Department towards implementation. In the coming year, emphasis will also continue to be put on promoting the integration of environmental and sustainable development considerations in support of the highest possible quality of life for Canadians, now and in the future. Environment Canada is transforming the way it works through the implementation of the Knowledge in the Service of Canadians (KISC) agenda. This will entail an enhanced focus on outreach and dialogue that will enable an increased understanding of the needs, expectations and concerns of citizens, clients, partners and stakeholders. Further, service transformation will be undertaken to modernize our business to meet evolving internal and external client needs. Finally, specific actions will be taken to foster a culture that values collaboration, learning and innovation (i.e., communities of practice, learning events) in achieving results for Canadians.

Essential to the KISC agenda is the modernization of Environment Canada's human resource management function. The goal is to continue to develop and implement a modern human resources management regime that is innovative and dynamic, respects public service values, provides for maximum delegation to line managers to meet operational needs and facilitates the ongoing development of an exemplary workplace.

Another important priority for the Department is continuing efforts to advance the implementation of modern management approach, which is both complementary and supportive of the KISC agenda and will allow the Department to commit to excellence in five management

areas — responsible spending, managing for results, values, citizen focus and exemplary workplace.

Key Results:

Through the MAP Business Line, Environment Canada aims to achieve two key results:

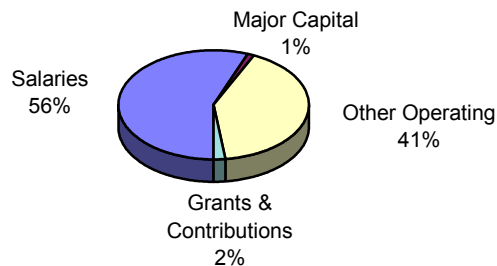
- ☐ strategic and integrated policy priorities and plans; and
- ☐ a well-performing organization supported by efficient and innovative services.

B – Planned Spending by Key Result

(\$ millions)	Forecast Spending 2002-2003*	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Key Results				
• Strategic and integrated policy priorities and plans.	56.8	47.0	48.3	47.4
• A well-performing organization supported by efficient and innovative services.	79.3	73.8	71.3	70.6
Gross Planned Spending	136.1	120.8	119.6	118.0
Less: Respendable Revenue	(0.8)	(0.8)	(0.8)	(0.8)
Net Planned Spending	135.3	120.0	118.8	117.2

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

2003-2004 Gross Planned Spending by Input Factor (\$120.8M)



C – PLANS, PRIORITIES AND PERFORMANCE FRAMEWORK BY KEY RESULT

KEY RESULT: STRATEGIC AND INTEGRATED POLICY PRIORITIES AND PLANS

Plans and Priorities:

Environment Canada's strategic policy priority for the next three years will be to focus on:

- ❑ **Shaping and advancing the medium-term environmental and sustainable development agenda** — through enhanced knowledge, partnerships and innovative policy instruments.

Priority #1: Shape and advance the medium-term environmental and sustainable development agenda

Challenges and Management Strategies

Working with Partners

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 (eg., 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 agenda. To advance these objectives, it uses strategic partnerships with both key domestic and international stakeholders.

Environment Canada took the lead in developing the *Framework for Moving Forward on the Environment Agenda*, approved in early 2002, and is currently working with other government departments to develop a federal Sustainable Development Strategy (SDS). One challenge in particular will be ensuring that the *Framework* is used by federal departments to establish environmental and sustainable development priorities and that the federal 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.

International Leadership

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 Co-operation Agreements with partners in the Americas (United States, Mexico, Chile and Costa Rica) and the Memorandum of Understanding with China. Work will continue through the Canadian International Development Agency 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 co-ordinated hemispheric action to improve human and environmental health.

Innovative 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.

Key Result Performance Framework:

The "strategic and integrated policy" key result is divided into two sub-results. The following table shows the sub-results with intermediate outcomes, indicators and targets, and initiatives and deliverables for the next three years. Note that "SDS" marks the commitments that are part of Environment Canada's Sustainable Development Strategy.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: Strategic and integrated policy priorities and plans	
Sub-Result #1: Strategic Policy and Innovative Instruments to Enable Organizational Direction Setting	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> EC's ability to make integrated decisions is enhanced through new decision support tools. 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. EC's knowledge base to support policy research and sustainable development is enhanced through improved indicators and better information. 	<p>Indicator: Under development.</p> <p>Target: Under development.</p>

Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Encourage application of the Government's "environmental framework" for policy making and priority setting. Develop an EC policy, by end of 2004, on how to incorporate local knowledge, including traditional ecological knowledge, into departmental decisions.^{SDS} Build broader support for market-based incentives and economic instruments with other federal departments, provincial and municipal governments, and key Canadian and international stakeholders.^{SDS} Promote further work on valuation studies (e.g., water valuation with Statistics Canada).^{SDS} Continue work with NRTEE on Ecological Fiscal Reform. Continue to explore feasibility of innovative policy instruments, e.g., to control transboundary air pollution, to reduce GHG emissions and to reduce risk of exposure to toxic substances. Advance incentives that encourage eco-efficient production.^{SDS} Finalize and begin implementing a national indicators and reporting strategy. Support international reporting initiatives (CEC State of Environment Report); Children's Health and Environment Report; OECD indicators; Global Environment Outlook UNEP Report). Develop support for and better linkages with other government departments' environmental reporting initiatives. Support science-policy integration, including implementation of S&T Advice Framework. Develop and pilot a sustainability assessment tool for EC policies and programs.^{SDS} Prepare EC's SDS for 2004–2006. 	
Sub-Result #2: Policy Partnerships & Communications	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none"> Progress towards sustainable development is enhanced through the development and implementation of innovative approaches for working with key partners.^{SDS} 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. 	<p>Indicator: Under development.</p> <p>Target: Under development.</p>
Strategie(s)/Initiative(s) and Deliverable(s)	
<ul style="list-style-type: none"> Develop a more deliberate approach to sharing and increasing knowledge through partnerships by providing opportunities for dialogue and consultation. In the Americas, promote dialogue and action on trade and environment issues as well as co-ordinated action to build bridges between health and environment sectors. Make available within EC the tools needed to advance sustainable development consultations and partnership practices. Put mechanisms/strategies in place (including Internet and more traditional means) to ensure that stakeholders, partners and other communities of interest have regular opportunities to put forward their ideas, concerns and perspectives on community sustainable development issues by the end of 2003–2004.^{SDS} Work with other government departments to update the government's sustainable development policy framework, by the end of 2003–2004.^{SDS} Work with other G8 countries to advance implementation of WSSD commitments through a well-prepared Canadian participation in the 2003 G8 Environment. Work in close cooperation with other federal departments and with the provinces to ensure a successful OECD environmental performance review of Canada. Continue to advance implementation of agreements reached through UNEP-led process on international environmental governance. Increasingly work with other departments to ensure a more integrated approach to policy development on issues such as environment, human health, capacity building on Aboriginal and self-government issues, trade and environment, and innovation. Develop and implement, with partners, a federal framework on sustainable communities, by the end of 2003-2004.^{SDS} Contribute to a federal agenda on urban sustainable communities. Strengthen EC's capacity to use partnerships to advance sustainable development and support and stimulate innovation, by the end of 2003-2004.^{SDS} Atlantic Region will, in collaboration with the Unama'ki Institute of Natural Resources (Nova Scotia), work within the existing MOU to develop and implement a work plan focused on monitoring, studying, conserving and protecting the environment of the Bras d'Or watershed, by the end of 2003-2004. 	

KEY RESULT: A WELL-PERFORMING ORGANIZATION SUPPORTED BY EFFICIENT AND INNOVATIVE SERVICES

Ensuring the Department has the management context and capacity to achieve its environmental results entails providing the stewardship and frameworks that will lead to good management decision-making, a healthy work environment and a productive workforce.

Plans and Priorities:

In this context, Environment Canada's management and service priorities for the next three years will be to focus on:

- ☐ **implementing the Knowledge in the Service of Canadians (KISC) agenda;** and
- ☐ **implementing the Modern Management Action Plan (MMAP) (over the next two years).**

Priority #2: Knowledge in the Service of Canadians

The Knowledge in the Service of Canadians (KISC) agenda is a commitment to deliberately integrate our approaches to people, knowledge, service and outreach, and to manage and share knowledge creatively to encourage innovation to better serve Canadians. As a catalyst for implementation, the MAP Business Line has developed a path forward with concrete actions to support this agenda.

Supporting Environment Canada's People

In addressing the people component of the KISC agenda, the development and implementation of the People Management Framework and Strategy will bring together all human resources management initiatives, such as the strategic hiring plan and employment equity and diversity management plans, within the Department and establish a plan for modernizing and improving people management. The 2002 public service employee survey will support and inform departmental human resources plans and the required actions will be integrated into other initiatives and work plans. Creating opportunities for continuous learning and personal development and providing necessary tools and information to staff will also be key strategies to enable the Department to recruit, develop and retain a highly talented and diverse workforce. An internal engagement strategy will also be implemented to better engage staff in the transformation agenda. It will include tools for managers, support for informal leaders, knowledge-sharing seminars and Department-wide events.

Knowledge Management

Environment Canada through the MAP Business Line, will act as an advocate for better knowledge management by putting emphasis on the following areas: knowledge retention and sharing; nurturing communities of practice in key Business Line areas; capturing lessons learned in cross-organizational efforts (e.g., water); testing and developing tools for knowledge sharing; and further implementation of the Canadian Information System for the Environment (CISE).

Outreach & Dialogue and Service Transformation

The Outreach & Dialogue and Service Management strategies will include: tools to assess current and new service demands on the Department; approaches to access scientific data and specialized

information; and activities to engage in a productive dialogue with clients, partners and stakeholders. The result will be increased client engagement, needs analysis, partnerships and evaluation. Within this context, e-government approaches remain a departmental priority and will continue to be advanced. These strategies will be fundamental in setting the direction Environment Canada will take with respect to its e-government initiatives over the next two years in moving forward to meet the Government of Canada, "Government On-Line" objectives.

The Department's Internet presence constitutes a valuable asset. Environment Canada continues to expand the management of its Internet assets to include Intranet and Extranet assets. The Department's goal is to leverage them to best advantage in delivering on its key result areas and to pilot the development of sites for specific client groups. The Department continues its lead role on the Sustaining the Environment & Resources for Canadians (SERC) cluster on the Canada Site.

Client-Centred Pilot Projects

Each Region will conduct a pilot project over the next two years, using Environment Canada's priorities as a foundation, to more closely examine and understand the information needs of local government, and to test various approaches to addressing urban environmental issues in a more comprehensive and client-centred fashion. The pilot projects will test such things as: broad partnerships and collaboration; Environment Canada's services in the context of local government needs; single window approaches; and different decision-making models. The projects will be carried out in the departmental context of improving knowledge management and service innovation and in the broader government context of the Prime Minister's Caucus Task Force on Urban Area, which identified four pillars for a strengthened federal urban agenda: coherence and cohesiveness; collaboration and consultation; capacity building; and communication.

Priority #3: Implementing the Modern Management Action Plan

In order to position the Department at the forefront on public service management, Environment Canada has developed a Modern Management Action Plan (MMAP). This plan presents a series of integrated activities aimed at improving a wide range of capabilities and contributes directly to the achievement of the KISC agenda. The 2003–2004 year will mark the second year of implementation. In implementing the plan, Environment Canada will build its capacity towards excellence in five key management areas: citizen focus, exemplary workplace, responsible spending, managing for results and values. Further, it will put the appropriate systems and processes in place to ensure that Environment Canada has the capacity to improve how it can achieve and report on results. For example, the Department will focus on **managing for results** by increasing its capacity for integrated planning and reporting. The continued implementation of the Department's Information Management/Information Technology (IM/IT) Action Plan and Strategy will support **responsible spending**. It is a multi-year program for restoring the IM/IT infrastructure, transforming information and for ensuring sustainability in IM/IT processes and structure throughout the Department. The new People Management Framework and Strategy will be key in making continuous improvements towards an **exemplary workplace** and, as a result, contributes to both the Modern Management and KISC agendas.

Challenges and Management Strategies

Environment Canada manages in a context of close public scrutiny and increased demands for accountability, transparency and results. 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, Modern Comptrollership). Notable challenges that the Business Line will confront in achieving its results involve service transformation efforts, maintaining momentum and ensuring adequate human resources to deal with these challenges.

Service Transformation — Expectations for innovative services have increased demands for systems and operations provided by the Business Lines that support employees in delivering external benefits for Canadians. Information technologies, for example, are evolving rapidly and, as a result, are leading to an increased demand for more efficient systems. The Business Lines' challenges will be to better manage internal and external client expectations and continue to develop financial strategies to support investments in services, systems and operations.

Maintaining Momentum — With several management improvement efforts underway, there is a risk that the functional areas covered by MAP will not have the adequate resources, both financial and human, to give each of them the optimal level of attention. MAP's challenge will be to balance efforts to improve the quality and type of management services provided internally with efforts to build our capacity to achieve results for Canadians.

Human Resources — Environment Canada's primary human resources challenge is to deal with changes in demographics: an aging workforce and a high turnover of personnel, particularly at senior levels, that put corporate knowledge at risk; and a workforce that should be more representative of the public it serves. That being said, the strategies outlined above, the People Management Framework and Strategy in particular, have been established to address them in a coherent way.

Key Result Performance Framework:

The "well-performing organization" key result is divided into four sub-results. Note that "MM" marks the commitments that contribute to Environment Canada's MMAP and "SDS" marks the commitments that contribute to Environment Canada's Sustainable Development Strategy.

Strategic Initiatives (*see explanatory note at end of Section 3)

Key Result: A well-performing organization supported by efficient and innovative services	
Sub-Result #3: Systems and Operations to Support EC's Workforce in Program and Service Delivery	
Intermediate Outcome(s)	Indicator(s)/Target(s)
<ul style="list-style-type: none">▪ New IM practices are facilitated throughout the Department.▪ Sustainability of key departmental systems and operations.	<p>Indicator: Under development.</p> <p>Target: Under development.</p>

<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Undertake investments in the network by increasing network band to reduce likelihood of saturation, communications failures and transmission delays. Update EC's Integrated Finance and Materiel Management System, by 2005–2006.^{MM} Continue implementation of the National Accommodations Strategy. Continue implementation of the Government of Canada Security Policy. Implement new Asset Management Strategy by the end of 2003–2004.^{MM} 	
<p>Sub-Result #4: Strategic Human Resource Advice, Tools and Services to Ensure a Motivated, Skilled & Representative Workforce</p>	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> EC's people feel valued and supported in a workplace that develops, retains and attracts the diverse talent needed to achieve its mandate (KISC result). 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Under development..</p> <p>Target: Under development.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Develop and implement the People Management Framework and Strategy.^{MM} Implement Employment Equity and Diversity Management Plan.^{MM} Continue implementation of Strategic Hiring Plan.^{MM} Prairie & Northern Region (PNR) is developing an automated 360-degree feedback tool, assessing competencies included in the Departmental Management Development Policy, to be completed by the end of 2003–2004. The Departmental Staff Relations Course will be developed and piloted by PNR, and national rollout to other regions will follow, in 2003–2004. 	
<p>Sub-Result #5: Sharing and Transfer of Integrated Knowledge & Information within EC, and Domestically and Internationally with Citizens, Clients & Stakeholders</p>	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Knowledge is strategically managed and readily shared, internally and externally (KISC result). 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Under development.</p> <p>Target: Under development.</p>
<p align="center">Strategie(s)/Initiative(s) and Deliverable(s)</p> <ul style="list-style-type: none"> Continue to develop CISE in partnership with other government departments and provinces, with a focus on water, air and biodiversity. Provide leadership in knowledge sharing (i.e., learning events, focus groups, communities of practice). Undertake specific projects to examine the lessons learned from large cross-organizational efforts (e.g., water, air), build upon current mechanisms and develop systematic approaches for capturing and communicating lessons learned, by the end of 2003–2004. Continue to develop the SERC cluster in partnership with other government departments and provinces, with a focus on sustainable development in the areas of water, air, climate change and land. Continue to enhance the Department's web presence through the Green Lane site to provide a ready source on environmental knowledge for Canadians. 	
<p>Sub-Result #6: Leadership and Accountability to Foster Innovative Program and Service Delivery and Improve Departmental Management</p>	
<p align="center">Intermediate Outcome(s)</p> <ul style="list-style-type: none"> Innovative and responsive services are delivered internally and to Canadians. Tools are available to improve EC's management capacity and practices. Better response to evolving client needs. Demonstrated commitment to excellence in five management areas: responsible spending, managing for results, exemplary workplace, values and citizen focus (Modern Management). EC's leadership in Federal House in Order is established. 	<p align="center">Indicator(s)/Target(s)</p> <p>Indicator: Under development.</p> <p>Target: Under development.</p>

Strategie(s)/Initiative(s) and Deliverable(s)

- Develop Outreach & Dialogue and Service Transformation Strategies to incorporate a greater role for client engagement and input, and needs analysis, partnerships and evaluation, by the end of 2003–2004.^{MM}
- Each region will conduct a 12 to 18-month pilot project to more closely examine and understand the information needs of local governments and to test various approaches to addressing urban environmental issues in a more comprehensive and client-centred fashion.
- Review the Department's Inquiry Centre operations to ensure that links across service delivery channels are strategically managed to provide improved services to Canadians.
- Implement internal engagement strategy to engage staff in the transformation agenda.
- Develop a Departmental Risk Profile (first step towards the Treasury Board Secretariat (TBS) Integrated Risk Management Framework), by the end of 2003–2004.^{MM}
- Increase capacity for corporate planning, including strategic planning and enhanced reporting.^{MM}
- Advance EC's capacity and practice of Results-Based Management.^{MM}
- Promote EC's Internal Control Framework beyond the financial community.^{MM}
- Pilot and operationalize the integrated results management tool and planning framework developed in the Atlantic Region, by the end of 2003–2004.

Catalyze Improved Environmental Performance in Environment Canada's Operations:

- Develop a GHG emissions reduction action plan to meet and exceed departmental target.
- Demonstrate leadership in EC's operations (buildings, vehicles, procurement, etc.).
- Engage employees in positive environmental and home initiatives
- Incorporate new Sustainable Development in Government Operations targets into EC's Environmental Management Systems for the end of 2003.^{SDS}

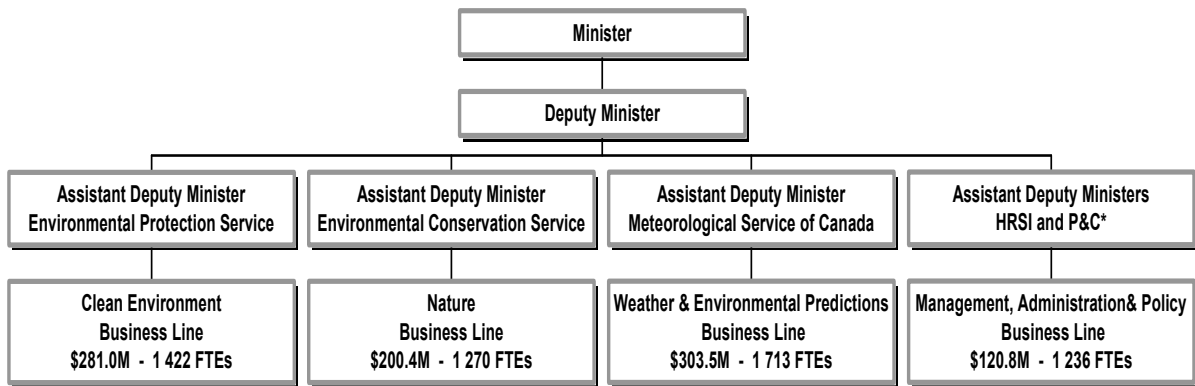
* "under development" refers to the ongoing work in the Department to establish and refine indicators and targets in support of Environment Canada's evolving results-based management approach.

Section 4 — Organization

4.1 Accountability

This chart identifies the Business Line lead including the 2003–2004 gross planned spending and full-time equivalents associated with each Business Line.

Each Business Line lead provides horizontal leadership to bring focus on the delivery of results and builds support and shared ownership among colleagues for Business Line direction, strategies and priorities.



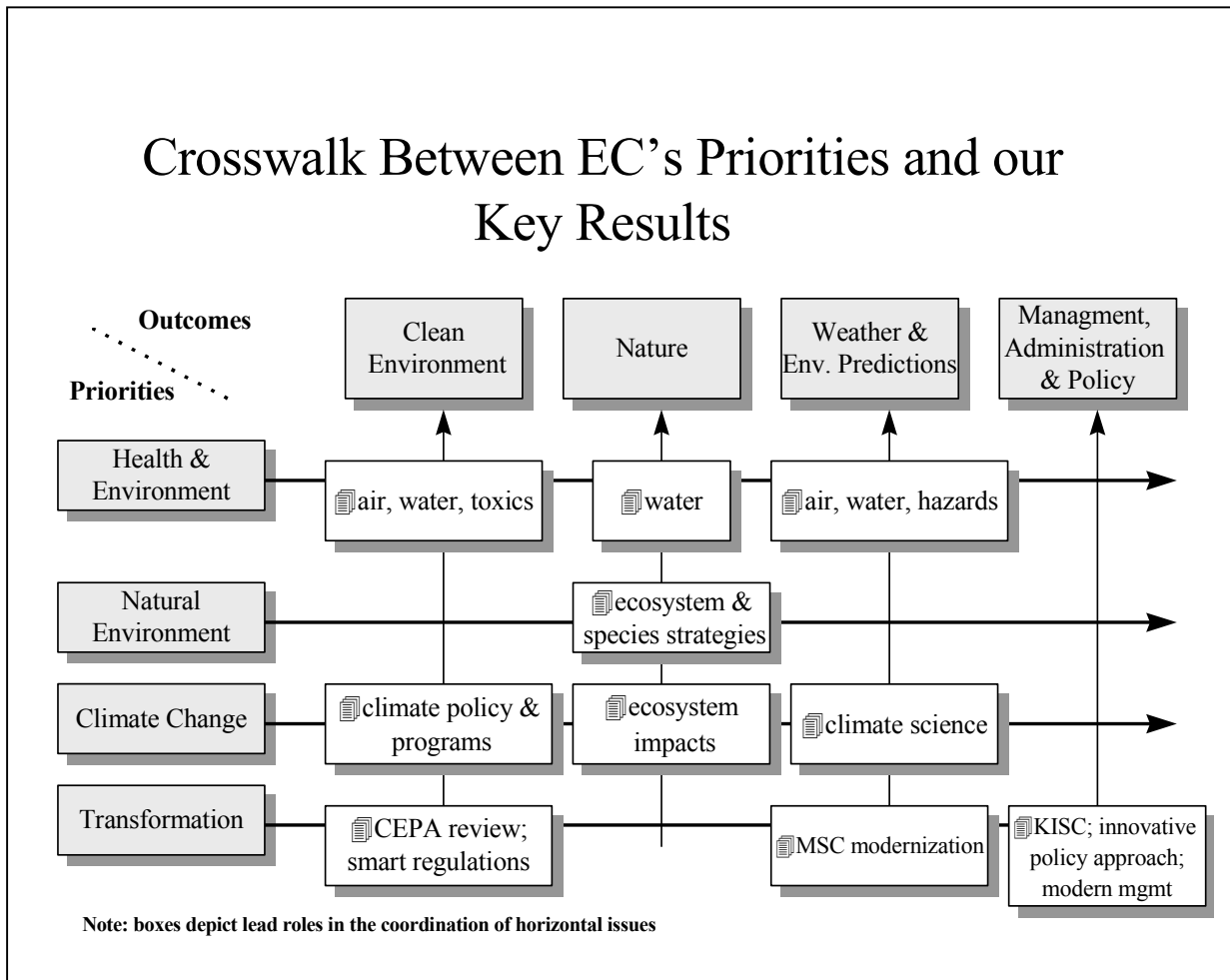
- * The Assistant Deputy Ministers of Human Resources and Service Innovation (HRSI) and Policy and Communications (P&C) co-lead the Management, Administration and Policy Business Line.

4.2 Matrix Management

<div><div>Minister</div><div>Deputy Minister</div><div><div><div>REG DIR GEN Pacific and Yukon</div><div>REG DIR GEN Ontario</div><div>REG DIR GEN Atlantic</div><div>ADM Policy and Communication</div><div>ADM Meteorological Service Canada</div><div>ADM Environmental Conservation Service</div><div>REG DIR GEN Prairie and Northern</div><div>REG DIR GEN Quebec</div><div>ADM Human Resources and Service Innovation</div><div>Corporate Offices</div><div>ADM Environmental Protection Service</div></div></div></div>													
												Total \$ Millions	Total FTE
Clean Environment	10.8	10.8	11.5	9.4	20.6	-	37.4	-	10.0	163.1	7.5	281.0	1,422
Nature	16.5	18.2	26.2	23.5	10.8	3.2	-	-	-	-	102.0	200.4	1,270
Weather and Environmental Predictions	18.8	36.9	17.3	13.3	11.7	-	-	-	205.1	-	0.4	303.5	1,713
Management Administration and Policy	10.9	9.3	10.2	5.9	5.8	47.2	23.3	4.9	1.2	1.7	0.5	120.8	1,236
Total - \$ Millions	56.9	75.2	65.1	52.1	49.0	50.4	60.7	4.9	216.3	164.8	110.4	905.7	
Full-Time Equivalents	493	689	550	526	422	523	200	40	868	722	608		5,641

4.3 Crosswalk Between EC's Priorities and Key Results

The following table provides a crosswalk between the overarching priorities of concern to Canadians, as described in Section 2 of the Report, and the comprehensive accountability framework of the Department.



Section 5 — Financial Information

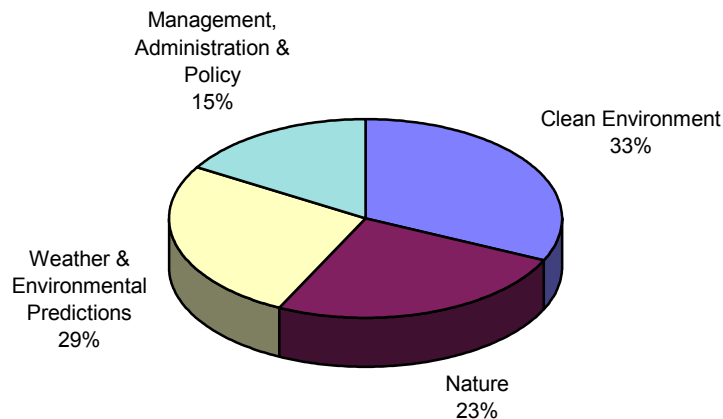
5.1 Planned Spending Overview

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 approximately \$823.2 million in 2003–2004. This total amount is allocated among four Business Lines, as illustrated in the figure below. Section 3 provides more details on budget allocation by Business Line and key results. The budget of the Department has increased from last fiscal year due to announcements made in the Federal Budget 2003 for various key initiatives. These initiatives include a one-time grant to the Canadian Foundation for Climate and Atmospheric Sciences, and funding for: the implementation of the CEPA 1999; research on air quality; the protection of species at risk; and the World Summit on Sustainable Development. The identified planned spending for these Budget 2003 initiatives may still be subject to interdepartmental consultations and to the federal government approval process.

Environment Canada is planning for a decrease in its budget over years two and three of the planning horizon due to the sunsetting of various programs. This decrease is directly attributable to the sunsetting of various programs such as: the Climate Change Action Fund; the Climate Change Action Plan 2000; the Great Lakes Action Plan; Health and Safety Capital Projects; and the one-time grant to the Canadian Foundation for Climate and Atmospheric Sciences. Note that funding for some of these programs have recently been announced in the budget 2003 as mentioned above.

The tables that follow in Section 5 depict the planned spending situation in Environment Canada for the period of 2003–2004 to 2005–2006.*

2003-2004 Net Planned Spending by Business Line
Total: \$ 823.2 Millions



* Please note that some totals may differ from one table to another due to the rounding of the figures.

Table 5.1 Departmental Planned Spending

(\$ millions)	Forecast Spending 2002-2003*	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Budgetary Main Estimates (gross)	813.1	803.2	747.7	667.5
Less: Respendable Revenue	(91.1)	(82.5)	(81.1)	(80.9)
Total Main Estimates	722.0	720.7	666.6	586.6
<i>Plus: Adjustments to Planned Spending</i>				
▪ 2002-2003 Supplementary Estimates and Technical Adjustments (less items specified below)	36.3	—	—	—
▪ G8 Legacy	0.2	0.5	0.5	0.4
▪ Pesticides	1.9	1.9	1.0	1.0
▪ Remediation of the Sydney Tar Ponds and Coke Oven Sites	6.1	1.9	—	—
▪ Canadian Environmental Assessment Act (CEAA)	—	1.5	1.3	1.3
▪ Canadian Foundation for Climate and Atmospheric Sciences**	—	50.0	—	—
▪ World Summit on Sustainable Development (WSSD)***	2.4	1.2	1.0	—
▪ Air Quality ***	—	10.9	17.4	16.0
▪ Canadian Environmental Protection Act (CEPA) ***	—	27.3	38.3	74.3
▪ Species at Risk (SARA) ***	—	8.4	12.8	19.2
▪ Other	—	(1.1)	(1.1)	(1.2)
Net Planned Spending	768.9	823.2	737.8	697.6
Less: Non-respendable revenue	(9.4)	(10.9)	(10.9)	(11.0)
<i>Plus: Cost of services received without charge</i>				
▪ Accommodation provided by Public Works and Government Services Canada (PWGSC)	30.5	33.5	33.6	33.6
▪ Contributions covering employees' share employee's insurance premiums and expenditures paid by TBS	24.6	24.6	24.1	22.9
▪ Workman's compensation coverage provided by Human Resources Canada	2.0	1.7	1.7	1.6
▪ Salary and associated expenditures of legal services provided by Justice Canada	3.4	2.4	2.5	2.6
Net cost of Program	820.0	874.5	788.8	747.3
Full Time Equivalents	5,729	5,641	5,596	5,480

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

** Table 5.1 includes an amount of \$50 million announced in Budget 2003 for a one-time grant in 2003-04 to the Canadian Foundation for Climate and Atmospheric Sciences to increase climate and atmospheric research activities, including research related to northern Canada.

*** Budget 2003 identified planned spending for key initiatives: World Summit on Sustainable Development (\$17.3M), Air Quality (\$40M), CEPA (\$75M) and SARA (\$33M). Table 5.1 includes the estimated planned spending identified for Environment Canada to fulfill its role in these initiatives. These figures may still be subject to interdepartmental consultations and to the Government approval process.

Notes:

The Government also announced as part of Budget 2003:

- its support for the implementation of the Climate Change Plan for Canada by investing incremental resources in the amount of \$1.7 billion over five years for different climate change measures. Environment Canada is a key partner in the implementation of the Climate Change Plan for Canada and will work with other partners to make substantial progress on its climate change objectives. Details of future allocations to departments are subject to interdepartmental discussions and to the Government approval process.
- incremental resources in the amount of up to \$250 million for a one-time grant in 2003-04 to Sustainable Development Technology Canada to strengthen the Government's support for the development and demonstration of technology related to climate change and clean air. The management of this transfer payment is to be arranged between Environment Canada and Natural Resources Canada, and it is expected that a portion of the payment will flow through Environment Canada.
- incremental resources in the amount of up to \$175 million over two years to address the highest-risk federal contaminated sites. It is anticipated that Environment Canada will continue to act as the secretariat as well as providing risk management expertise for Contaminated Sites. Details of future allocations are still subject to interdepartmental discussions and to the Government approval process.

Please note that totals may differ between and within tables due to rounding of figures.

Table 5.2 Summary of Capital Spending by Business Line

(\$ millions)	Forecast Spending 2002-2003 *	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Clean Environment	14.6	11.5	11.3	5.5
Nature	2.3	2.6	2.6	2.6
Weather and Environmental Predictions	29.7	22.2	21.0	17.1
Management, Administration and Policy	1.5	1.2	1.2	1.2
Total	48.1	37.5	36.1	26.4

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

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 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 focused 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 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 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 allow needs for a speedy response to programs.

Table 5.3 Details on Major Capital Project Spending

(\$ millions)	Authority	Current Estimated Total Cost	Forecast Spending to March 31, 2003	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006	Future Year Spending Requirement
Clean Environment							
Ozone – Construction of a Vehicle and Fuel Testing Facility	EPA-S	13.4	9.7	1.8	1.8	–	–
Ozone – National Air Pollution Surveillance Network and Canadian Air and Precipitation Monitoring Network (NAPS and CAPMON)	EPA-S	16.5	8.7	3.9	3.9	–	–
Weather and Environmental Predictions							
Doppler upgrade – Radar Network Modernization	EPA-S	45.7	41.7	4.0	–	–	–
Weather station construction Eureka N.W.T.	EPA-S	9.9	4.0	3.4	2.5	–	–
Modernization of the Climate Observing Program	EPA-S	8.6	2.7	0.5	0.5	0.5	4.4
Modernization of Equipment – NAVCAN	DA-S	2.1	2.1	–	–	–	–
Ocean Data Acquisition System (ODAS) – Buoy Payload Replacement	DA-I	2.2	1.6	0.5	–	–	–
Sable Island Weather Station	EPA-S	3.0	1.7	–	0.5	0.5	0.3
Hydrometric Program	EPA-S	10.0	6.3	2.0	1.7	–	–
MSC – Operational Computer Hardware Infrastructure Renewal	DA-S	1.7	1.7	–	–	–	–
MSC – Single Window Web Site	DA-S	4.6	2.3	1.3	1.0	–	–
DSAT Replacement Project	DA-S	1.9	0.9	0.6	0.4	–	–
Upper Air Hydrogen Generator Replacement Project	DA-S	1.8	0.2	0.3	0.8	0.6	–
Aircraft Meteorological Data Relay (AMDAR)	DA-S	2.1	0.7	0.5	0.4	0.4	0.2
Canadian Meteorological Centre– Facility Extension	EPA-S	8.3	6.5	1.6	0.1	–	–

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, DA implies that 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 2002-2003 *	Planned Spending 2003-2004	Planned Spending 2004-2005	Planned Spending 2005-2006
Grants				
Clean Environment	0.7	2.0	2.0	2.0
Weather and Environmental Predictions	-	50.0	-	-
Total Grants	0.7	52.0	2.0	2.0
Contributions				
Clean Environment	35.2	33.3	9.6	9.1
Nature	23.2	27.8	26.6	15.6
Weather and Environmental Predictions	4.0	3.9	2.4	2.4
Management, Administration and Policy	4.5	2.5	2.4	1.8
Total Contributions	66.9	67.5	41.0	28.9
Total Transfer Payments	67.6	119.5	43.0	30.9

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

The major decrease in transfer payment expenditures in 2004-2005 (Clean Environment) is due to the sunset of funding for the environmental clean-up of the Sydney Tar Ponds (\$8.7M) and of the Climate Change Action Fund (\$12.7M). Also, a one-time grant payment for the Canadian Foundation for Climate and Atmospheric Sciences (\$50M), was announced in Budget 2003.

The additional decrease in 2005-2006 (Nature) is due to the sunset of contributions dedicated to the Species at Risk Act (SARA) (\$10.3M).

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) \$2M	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.
Grant for the Canadian Foundation for Climate Change and Atmospheric Sciences (WEP) \$50M	To channel and strengthen Canada's scientific capacity to address climate change and air quality issues; to provide the scientific basis for a better understanding and for policies to address the consequences of extreme weather, the climate system, climate change and air quality. To provide a better understanding of the implications of these sciences for human health and for the natural environment. To foster collaborative and interdisciplinary approaches to research on meteorology, atmospheric science, air quality, climate and climate change. To encourage the participation and support of others, including the private sector, in climate and atmospheric science in Canada.
Contributions to support Environmental Research and Development (Clean Environment, Nature and WEP) \$2.7M	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 Environment Canada's objectives, priorities, programs, and activities. The expected benefits will be in the area of wildlife and toxicology.
Contributions to support Environmental and Sustainable Development Projects (Nature) \$18.3M	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.
Contributions to increase awareness and understanding of environmental and sustainable development issues (Clean Environment, Nature, WEP and MAP) \$4.7M	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 environmental 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.
Contributions to Support Canada's International Commitments (Clean Environment, Nature, WEP and MAP) \$4.3M	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 DOE strategies and priorities.
EcoAction 2000 – Community Funding Initiative (Clean Environment and Nature) \$6.4M	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 that 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.
Contribution for Canada's share of the Commission of Environmental Co-operation (CEC) Budget (Clean Environment) \$4.7M	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.

Business Lines	Objective / Planned Results
Contribution for the environmental clean-up of the Sydney Tar Ponds and Coke Ovens Sites in the Muggah Creek Watershed (Clean Environment) \$8.7M	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 labor, services, products, expertise, and compliant technologies in the process.
Climate Change Action Fund (Clean Environment and WEP) \$14.1M	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.
Contribution to the Wildlife Habitat Canada Foundation (Nature) \$2.2M	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.

Table 5.6 Sources of Respendable and Non-Respendable Revenue

<i>Respendable Revenue</i>	Forecast Revenue 2002-2003*	Planned Revenue 2003-2004	Planned Revenue 2004-2005	Planned Revenue 2005-2006
(\$ millions)				
Clean Environment				
Scientific and Professional Services	8.5	8.9	6.4	5.3
Information Products	0.3	0.3	0.3	0.3
Regulatory Services	2.0	2.0	2.1	2.1
Realty (Accommodation)	0.1	0.1	0.1	0.1
	10.9	11.3	8.9	7.8
Nature				
Scientific and Professional Services	8.8	6.4	6.3	6.3
Information Products	0.3	0.2	0.2	0.2
Regulatory Services	0.2	0.2	0.2	0.2
Realty (Accommodation)	0.8	0.9	0.9	0.9
	10.1	7.7	7.6	7.6
Weather and Environmental Predictions				
Scientific and Professional Services	13.5	13.7	13.9	14.2
Information Products	55.7	48.9	49.8	50.3
Realty (Accommodation)	–	0.1	0.1	0.1
Sale of Sponsorships	0.1	0.1	0.1	0.1
	69.3	62.8	63.9	64.7
Management, Administration and Policy				
Realty (Accommodation)	0.8	0.8	0.8	0.8
Total Respendable Revenue	91.0	82.5	81.1	80.8
Non-respendable Revenue	Forecast Revenue 2002-2003*	Planned Revenue 2003-2004	Planned Revenue 2004-2005	Planned Revenue 2005-2006
(\$ millions)				
Clean Environment				
Miscellaneous	0.1	0.1	0.1	0.1
Nature				
Scientific and Professional Services	0.2	0.2	0.2	0.2
Regulatory Services	4.4	4.4	4.4	4.4
Miscellaneous	0.4	0.2	0.2	0.2
	5.0	4.8	4.8	4.8
Weather and Environmental Predictions				
Scientific and Professional Services	0.1	0.1	0.1	0.1
Information Products	1.9	3.1	3.1	3.1
Royalties	0.2	0.1	0.1	0.1
Miscellaneous	2.1	2.7	2.7	2.8
	4.3	6.0	6.0	6.1
Total Non-respendable Revenue	9.4	10.9	10.9	11.0
Total Respendable and Non-respendable Revenue	100.4	93.4	92.0	91.8

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

Table 5.6 lists various sources of spendable and non-spendable revenue sources. 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 revenue is caused primarily by the change in the service level for Aviation Weather Services and a decrease in anticipated revenue for scientific and professional services.

Section 6 — Regulatory and Delegated Arrangements

6.1 Planned Regulatory Initiatives

Regulatory Initiatives	In 2003-2004, Environment Canada proposes to:
Clean Environment Business Line	
Clean Air	
Amendments to the Vinyl Chloride Release Regulations	▪ publish regulations in Canada Gazette, Part I during 2 nd quarter of 2003-2004
Amendments to the Ozone Depleting Substances Regulations	▪ publish regulations in Canada Gazette, Part I during 2 nd quarter of 2003-2004
Off-Road Diesel Engine Emissions Regulations	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Chromic Acid Used in Chromium Electroplating or Chromium Anodizing Regulations (Hexavalent Chromium Finishing Regulations)	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Recreational Marine Engine Regulations	▪ publish regulations in Canada Gazette, Part I during 4 th quarter of 2003-2004
Off-road Diesel Fuel Regulations	▪ publish regulations in Canada Gazette, Part I during 4 th quarter of 2003-2004
Amendments to the Gasoline Regulations	▪ publish regulations in Canada Gazette, Part II during 1 st quarter of 2003-2004
Federal Halocarbon Regulations	▪ publish regulations in Canada Gazette, Part II during 1 st quarter of 2003-2004
Amendments to the Benzene in Gasoline Regulations	▪ publish regulations in Canada Gazette, Part II during 2 nd quarter of 2003-2004
Amendments to the Sulphur in Gasoline Regulations	▪ publish regulations in Canada Gazette, Part II during 2 nd quarter of 2003-2004
Off-Road Small Spark Ignition Engine Emissions Regulations	▪ publish regulations in Canada Gazette, Part II during 3 rd quarter of 2003-2004
Clean Water	
Regulations Amending the Pulp and Paper Effluent Regulations	▪ publish regulations in Canada Gazette, Part I during 1 st quarter of 2003-2004
Federal Petroleum Products and Allied Petroleum Products Storage Tank Systems Regulations	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Clean Air/Clean Water	
Regulations Creating the Virtual Elimination List	▪ publish regulations in Canada Gazette, Part I during 1 st quarter of 2003-2004
New Substances Notification Regulations – Amendment to section 16 and 29	▪ publish regulations in Canada Gazette, Part II during 1 st quarter of 2003-2004
Solvent Degreasing Regulations	▪ publish regulations in Canada Gazette, Part II during 2 nd quarter of 2003-2004
Waste Management	
PCB Waste Export and Import Regulations – Harmonize controls for exporting and importing PCB wastes	▪ publish regulations in Canada Gazette, Part I during 2 nd quarter of 2003-2004

Interprovincial Movement of Hazardous Waste and Hazardous Recyclable Material Regulations	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Export and Import of Prescribed Non-Hazardous Wastes Destined for Final Disposal Regulations	▪ publish regulations in Canada Gazette, Part I during 4 th quarter of 2003-2004
Amendments to the Export and Import of Hazardous Wastes Regulations	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Polychlorinated Biphenyl (PCB) Regulations	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Amendments to the Storage of PCB Material Regulations	▪ publish regulations in Canada Gazette, Part I during 3 rd quarter of 2003-2004
Regulatory Initiatives	In 2004-2005, Environment Canada proposes to:
Others	
New Substances Notification Regulations – Amendments to the Chemicals and Polymers Portion	▪ publish in Canada Gazette, Part I
Regulations on Residential Wood Combustion Appliances	▪ publish in Canada Gazette, Part I
Amendments to the Export of Substances Under the Rotterdam Convention Regulations	▪ publish in Canada Gazette, Part I
Large Spark Ignition Engine Regulations	▪ publish in Canada Gazette, Part I
Recreational Vehicles Regulations	▪ publish in Canada Gazette, Part I
Amendments to the Prohibition of Certain Toxic Substances Regulations	▪ publish in Canada Gazette, Part I
Amendments to Schedule 2 of the Metal Mining Effluent Regulations	▪ publish in Canada Gazette, Part I
Amendments to the Export Control List Notification Regulations	▪ publish in Canada Gazette, Part I
Regulatory Initiatives	In 2003-2004, Environment Canada proposes to:
Nature Business Line	
Species at Risk	
First set of regulations, including compensation regulations, and as needed, amendments to the legal list and other provisions.	▪ publish regulations in 2003-2004
Migratory Birds Regulations	
Annual hunting regulations establishing hunting season dates and bag and possession limits for migratory game birds.	▪ publish regulations by the 1 st quarter of 2003-2004
Overabundant Snow Goose regulation to establish special conservation seasons.	▪ publish regulation in the 4 th quarter 2003-2004
Migratory Bird Sanctuary (MBS) Regulations	
Amendments to update regulations and establish and enlarge Iles-aux-Herons MBS (QC); delist Wascana Lake MBS (SK); adjust legal survey description for Anderson River MBS (NWT); enlarge Baie des Loups MBS; and revoke sanctuary status of Iles-de-la-Paix MBS (QC).	▪ Publish regulations by the 4 th quarter of 2003-2004
National Wildlife Area (NWA) Regulations	
Amendments to enlarge Alaskan 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).	▪ publish regulations by the 4 th quarter of 2003-2004
Amendment to create Suffield NWA (AB)	▪ publish regulation by the 1 st quarter of 2003-2004
Amendment to enlarge Point de L'Est, Lac Saint-François and Baie de l'Isle Verte NWAs (QC).	▪ publish regulations by the 4 th quarter of 2003-2004

Regulatory Initiatives	In 2004-2005, Environment Canada proposes to:
Species at Risk	
Amendments to the legal list of species and other provisions, as needed.	▪ publish regulations in 2004-2005
Migratory Birds Regulations	
Annual hunting regulations establishing hunting season dates and bag and possession limits for migratory game birds.	▪ publish regulations by the 1st quarter of 2004-2005
Overabundant Snow Goose regulation to establish special conservation seasons.	▪ publish regulation by the 4th quarter 2004-2005
Wildlife Animal and Plant Trade Regulations	
Permit and inspection fees, record keeping, marking of specimens, and designated ports of entry.	▪ publish regulations by the 2 nd quarter of 2004-2005
Provisions for pre-Convention and ranched specimens.	▪ publish regulations by the 2 nd quarter of 2004-2005
Regulatory Initiatives	In 2005-2006, Environment Canada proposes to:
Species at Risk	
Amendments to the legal list of species and other provisions, as needed.	▪ publish regulations in 2005-2006
Migratory Birds Regulations	
Annual hunting regulations establishing hunting season dates and bag and possession limits for migratory game birds.	▪ publish regulations by the 1st quarter of 2005-2006
Overabundant Snow Goose regulation to establish special conservation seasons.	▪ publish regulation by the 4th quarter 2005-2006

6.2 Foundations

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

Name (web address)	Objective	\$ Amount and Timing of Funding	Projected use of Funds	Expected Results
Canadian Foundation for Climate and Atmospheric Sciences (CFCAS) www.cfcas.org	<ul style="list-style-type: none"> ▶ Channel and strengthen Canada's scientific capacity to address climate change and air quality climate issues. ▶ Provide the scientific basis for a better understanding of the climate system, extreme weather and air quality. ▶ Provide the scientific basis for policies to address the consequences of extreme weather, climate change and air quality. ▶ Provide a better understanding of the implications of these sciences for human health and for the natural environment. ▶ Foster collaborative and interdisciplinary approaches to research on meteorology, atmospheric science, air quality, climate and climate change. ▶ Encourage the participation and support of others, including the private sector, in climate and atmospheric sciences in Canada. 	<ul style="list-style-type: none"> ▶ Year 1 2000-2001 \$1M ▶ Year 2 2001-2002 \$7M ▶ Year 3 2002-2003 \$14M ▶ Year 4 2003-2004 \$19M ▶ Year 5 2004-2005 \$18M ▶ Year 6 2005-2006 \$11M <p>Note: Budget 2003 provides a one-time grant of \$50M.</p>	<p>The CFCAS will continue to fund research that improves the scientific understanding in the areas of: climate system science; climate change; atmospheric science; extreme weather; air quality; and marine environmental prediction. This research provides relevant science to policy makers and improves understanding of the ways in which these challenges affect human health and the natural environment. CFCAS activities will also continue to strengthen Canada's scientific capacity and interdisciplinary research in these areas.</p>	<ul style="list-style-type: none"> ▶ Understanding of key climate system processes (<i>stratospheric indicators of climate variations, chemistry and physics of organics in atmospheric aerosol particles, trace gases</i>), including greenhouse gas sources and sinks (<i>nitrous oxide flux emissions, canopy fluxes, atmospheric chemistry</i>). ▶ Understanding of key meteorological and atmospheric chemistry processes that have an impact on air quality. ▶ Understanding of prediction of extreme and hazardous weather (<i>weather systems, forecasts</i>). ▶ Development and improvements of models for weather, air quality (<i>atmospheric volatile organic compounds, persistent organic pollutants</i>) and climate systems adapted to Canada's regional context. ▶ Improvement of knowledge about oceans and atmospheric processes that will lead to better marine environment predictions.

Name (web address)	Objective	\$ Amount and Timing of Funding	Projected use of Funds	Expected Results
<p>Sustainable Development Technology Canada (SDTC)</p> <p>SDTC Web Site: www.sdtc.ca</p>	<p>► To provide funding to eligible recipients for eligible projects in Sustainable Development Technology particularly focusing on climate change and clean air.</p>	<p>\$100M over 5 years</p> <p>\$50M was transferred from Treasury Board in 2000-2001. An additional \$50M was transferred by the two lead departments, Environment Canada and Natural Resources Canada, in 2001-2002 for disbursement over 5 years. As of January 2003, SDTC announced \$6.6M of funding for 8 projects, which were leveraged with an additional \$42M by the consortia applicants.</p> <p>Note: Budget 2003 provides a one-time grant of \$250M distributed between Environment Canada and Natural Resources Canada</p>	<p>► To catalyze the building of a sustainable development technology infrastructure in Canada, by funding the accelerated development, demonstration and commercialization of creative, collaborative solutions to the issues of climate change and air quality.</p> <p>► This initiative is dependent on the formation of creative and economically sound partnerships from the private sector, academia, not-for-profit organizations, and federal or provincial governments. As these partners will provide at least a further \$200 million dollars of leveraged funding, SDTC funds, 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>► 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>

Name (web address)	Objective	\$ Amount and Timing of Funding	Projected use of Funds	Expected Results
<p>The Federation of Canadian Municipalities' Green Municipal Funds (GMF)</p> <p>www.fcm.ca</p>	<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>► The Green Municipal Enabling Fund (GMEF) \$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 \$100,000.</p> <p>► The Green Municipal Investment Fund (GMIF) \$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</p> <p>(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. Funds are reviewed by 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, five from the FCM 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 2003, FCM will complete their annual statement of plans for fulfilling the Fund objectives and purposes for the coming year.</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"> 1. Encouraging local environmental action in key sectors including: <ul style="list-style-type: none"> • Energy and energy services • Water • Solid waste management • Sustainable transportation services and technologies • Sustainable community planning • Integrated community projects. 2. Leveraging private sector contributions to make cities and towns across Canada more energy efficient, at the same time reducing our greenhouse gas emissions. 3. Improving the environmental efficiency and cost-effectiveness of municipal infrastructure.

6.3 Environment Canada's Sustainable Development Strategy 2001-2003

Environment Canada's second Sustainable Development Strategy (SDS) covers the period 2001-2003. This strategy lays out an agenda for innovation that offers the basis for creative and viable long-term solutions to ensure Canada's ecological health for future generations. The SDS reinforces Environment Canada's ongoing roles to provide leadership by example, and to build capacity and commitment to sustainable development with its partners and Canadians.

Environment Canada's SDS identifies goals, objectives and targets under four themes: knowledge for decision-making; incentives; partnerships and sustainable communities; and managing for sustainable development. Commitments made by branches and services within Environment Canada under these themes, have been incorporated into the departmental Business Lines.

To achieve its SDS goals, Environment Canada believes it is necessary to gain knowledge and understanding of the linkages among environmental, social and economic issues. The Department also believes that for real progress towards sustainable development to be achieved, it is essential for federal departments to work together on shared objectives. An important element of the SDS is Environment Canada's commitment to government-wide coordinated initiatives.

Section 3 of this Report on Plans and Priorities (RPP) reflects many key SDS commitments. They are indicated by "SDS". While not all SDS commitments are in this RPP, a status report on all SDS commitments and progress on implementation for the first year was prepared as part of the departmental performance reporting process.

Environment Canada, along with other federal departments, must table a renewed SDS in Parliament by December 2003. Thus, Environment Canada is now in the process of updating its SDS. As part of the updating process, Environment Canada will be seeking the advice of Canadians from many sectors on how best to build on its current SDS while responding to changing circumstances.

For more detailed information about Environment Canada's Sustainable Development Strategy 2001-2003, including a full description of goals, objectives and targets and the Implementation Progress Report, visit Environment Canada's Green Lane: http://www.ec.gc.ca/sd-dd_consult/

Section 7 — Other Information

7.1 Ongoing Programs and Services (including Co-delivery Partners)

This table provides information on a number of Environment Canada's ongoing programs and services.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
CLEAN ENVIRONMENT BUSINESS LINE			
Key Result: Reduced adverse human impact on the atmosphere and on air quality.			
Climate Change Action Fund – Public Education and Outreach (CCAF-PEO)	<p>Build awareness and understanding among Canadians of climate change, including the underlying science and recent developments, the regional nature and timing of expected impacts and the need to adapt to them, and the associated environmental, economic and social issues.</p> <p>Prepare a foundation of support for the introduction of future policy measures, as outlined in the First National Business Plan and the Government of Canada's Action Plan 2000.</p> <p>Encourage and motivate Canadians to take personal and community/group action to reduce greenhouse gas emissions. Support Canada's Action Plan 2000 on Climate Change to meet its Kyoto Protocol commitments and to facilitate reduction of greenhouse gas emissions.</p>	Other government departments, provincial governments, business, community groups, non-governmental organizations, regional development agencies.	<ul style="list-style-type: none"> • Implement investment-driven approach to funding public education and outreach projects across Canada, focusing on youth and educators, business and industry, communities, and the general public to raise awareness of climate change and encourage action to reduce GHG emissions. (solution implementation). • Test pilot public education and outreach information and coordination centres (hubs) with provinces/ territories. (solution implementation). • Develop and promote backdrop awareness campaign that groups across Canada can utilize for their own public outreach activities. (solution implementation). <p>► http://www.climatechange.gc.ca/english/actions/action_fund/index.shtml</p>

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Government of Canada Action Plan 2000 on Climate Change	Meet one third of Canada's target under the Kyoto Protocol, or lead to a 65 megatonne reduction in greenhouse gas emissions per year in the period 2008-2012.	Other government departments, provinces, private sector.	<ul style="list-style-type: none"> • On Environment Canada – lead Emission Reduction Initiatives – Design and implement measures to ensure that maximum GHG emission reduction potential is achieved. • On OGD-lead Emission Reduction Initiatives – Influence to ensure that maximum GHG emission reduction potential is achieved. <p>► http://climatechange.gc.ca/english/whats_new/action_plan.shtml</p>
National Air Pollution Surveillance Network	Tracking ambient concentrations of pollutants to determine the effectiveness of pollution prevention interventions.	Provinces and territories, Greater Vancouver Regional District, and Montreal Urban Community.	<ul style="list-style-type: none"> • Provide information on the air quality in the majority of urban centres in Canada. • Provide information on trends for major air quality issues, ozone, particulate matter, toxic chemicals, etc. • Maintain a national air quality database.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
National Pollutant Release Inventory	Increased public access, understanding and improved tracking and decision making on pollution from industrial and commercial companies in Canada. Improved service delivery to businesses and organizations reporting pollution data.	Provinces, Commission for Environmental Cooperation, Industry, ENGOS.	<ul style="list-style-type: none"> Enhanced pollution data reporting tools and support for businesses and organizations. NPRI Public reporting and tools targeted at the public.
Multilateral Fund for the Implementation of the Montreal Protocol (MFMP)	Assist developing countries in meeting their obligations under the Montreal Protocol to phase out ozone-depleting substances (ODS).	Canadian International Development Agency (CIDA) Private sector Foreign governments UNEP	<ul style="list-style-type: none"> Reduction/minimization of ODS consumption in developing countries, according to phase-out schedules under the Montreal Protocol. Increased awareness, skills and understanding of practices and technologies to reduce ODS consumption in developing countries. Demonstration and provision of Canadian services and technologies in the field of ODS reduction (for Environment Canada bilateral projects only).
Persistent Organic Pollutants (POPs) Fund	Increase capacity of developing countries and economies in transition to reduce and eliminate releases of POPs.	Managed by the Canadian International Development Agency (CIDA) and Environment Canada.	<ul style="list-style-type: none"> Releases of POPs in countries considered significant sources will be reduced.
Acid Rain post-2000 Strategy	Ensure that critical loads for acid depositions are achieved across Canada thereby ensuring the health of our forests and aquatic ecosystems.	Federal/Provincial and Territorial Ministers of Environment and Energy.	<ul style="list-style-type: none"> New targets for SO₂ emissions in eastern Canada. Further emission reduction commitments from the U.S. Keeping "clean" areas clean. Continued science and monitoring. <p> http://www.ec.gc.ca/acidrain/strat/strat_e.htm </p>
Key Result: Understanding, and prevention or reduction of the environmental and human health threats posed by toxic substances and other substances of concern.			
Compliance Promotion and Enforcement Programs			<ul style="list-style-type: none"> Compliance with priority regulations and Section 36(3) of the Fisheries Act (FA). Promote compliance with and enforce CEPA 1999 and the FA. Implementation and Enforcement of the Metal Mining Effluent Regulations.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Emergencies Program			<ul style="list-style-type: none"> • Develop measures to reduce sudden and unplanned releases of toxic air pollutants. • Advancement of community response through PTSC (Partnership Towards Safer Communities). • CEPA Part 8 – Assessment of the risks associated with accidental releases of CEPA toxics and request for Environmental Emergency Plans under section 199 where warranted. Assess 10 substances per year.
Environmental Impact Assessment			<ul style="list-style-type: none"> • Provide advice on environmental assessments of policies, plans, programs and projects. • Promote application of Best Management Practices and Best Available Economically Achievable Technology.
Canadian Pollution Prevention Information Clearinghouse (CPPIC)	Provide Canadians information they need to enable them to adopt pollution prevention in their daily activities.		<ul style="list-style-type: none"> • Maintain the Canadian Pollution Prevention Information Clearinghouse environmental management initiation projects or in-plant pollution prevention projects.
Pollution Prevention Sector Program		Industrial sectors, municipal, provincial and federal governments.	<ul style="list-style-type: none"> • Innovative pollution prevention and control measures within various sectors in Ontario.
Great Lakes Binational Toxics Strategy		United States Environmental Protection Agency, other federal departments and agencies, Great Lakes states, the Province of Ontario, Tribes, and First Nations, the public and private partners.	<ul style="list-style-type: none"> • Progress on the virtual elimination from the Great Lakes Basin of persistent toxic substances resulting from human activity, particularly those that bioaccumulate, so as to protect and ensure the health and integrity of the Great Lakes ecosystem.
Ontario Region Mercury Reduction Plan		Province, municipalities, non-governmental organizations.	<ul style="list-style-type: none"> • Lifecycle management, take back and recycling programs.
Disposal at Sea Program			<ul style="list-style-type: none"> • Assessment and control of disposal at sea to meet CEPA and London Convention commitments.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
<p>Canada's National Programme of Action for the Protection of the Marine Environment from Land-based Activities (NPA)</p> <p>Regional Programme of Action for the Protection of the Arctic Marine Environment from Land-based Activities (RPA)</p>		DFO + provinces / territories DFO, INAC, TC, DFAIT + Arctic states (USA, Finland, Sweden, Russia, Norway, Iceland, Greenland / Faroe Islands)	<ul style="list-style-type: none"> • Protect Canadian coastal and marine environments from land-based sources of pollution to meet CEPA obligations and international GPA commitments. • Protect Arctic coastal and marine environments from land-based sources of pollution to meet Arctic Council and international GPA commitments.
Canadian Shellfish Sanitation Program		DFO, CFIA	<ul style="list-style-type: none"> • Classification of shellfish areas under the Canadian Shellfish Sanitation Program (CSSP). • Obtain Certification of the new CSSP laboratory in Iqaluit; undertake water quality field survey in the Iqaluit area..
New Substances Program	Unauthorized manufacture or import of new substances is prevented.	HC, DFO, CFIA	<ul style="list-style-type: none"> • Process and evaluate all new substance notifications (over 800 per year) and take appropriate risk management actions within the prescribed timeframes. • Support the activities of Health Canada on the new Food and Drug environmental assessment regulations and work with the Department of Fisheries and Oceans and the Canadian Food Inspection Agency to develop an appropriate regime for transgenic fish and animals. • Ensure the regulatory regime is in place to support ratification of the Protocol.
Canadian Environmental Technology Advancement Centres (CETACs)	Primary focus is to help small and medium sized enterprises (SMEs) commercialize environmental technology, thereby addressing environmental priorities while creating jobs and growth.	Business, technology developers, provincial governments, regional offices, non-governmental organizations, universities, other federal government departments, municipalities.	<ul style="list-style-type: none"> • Assist between 120 and 140 small- and medium-sized enterprises (SMEs) per year commercialize technologies, generate jobs and industry growth, deliver other government programs (e.g., ETV, NRC-IRAP Eco-efficiency, Waste exchange, etc.).

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Sydney Tar Ponds	Reduce the environmental and health impacts associated with the Sydney Tar Ponds and Coke Ovens contaminated sites in a phased approach.	Environment Canada NS Department of Transportation and Public Works Health Canada Cape Breton Regional Municipality Joint Action Group (JAG)	<ul style="list-style-type: none"> For more information on Sydney Tar Ponds, please see deliverables in the performance table under Long Term Key Result: Understanding and prevention or reduction of the environmental and human health impacts as posed by toxic substances and other substances of concern - Existing Toxics sub-result.
Eco-Action	<p>Increase capacity of Canadians to make responsible environmental decisions.</p> <p>Priority for funding given to projects in the areas of: clean air and climate change, clean water, and nature.</p>	Non-profit groups and organizations	<ul style="list-style-type: none"> For Clean Environment issues: Measurable results on greenhouse gas reductions and other air pollutants; chemical pesticide and fertilizer reductions; household hazardous waste and waste oil diversion; implementation of environmental management plans. Capacity development of non-profit sector organizations to sustain projects and partnerships into the future. <p>► http://www.qc.ec.gc.ca/ecoaction/index_a.htm</p>
EnviroClub Initiative	<p>Assist small- and medium-sized enterprises (SMEs) gain a better understanding of environmental management systems and pollution prevention practices and how to implement them.</p> <p>Draw the link between improvements in environmental management and improvements in profitability and competitiveness of SMEs.</p>	<p>Environment Canada -Quebec Region</p> <p>Canada Economic Development</p> <p>National Research Council of Canada</p> <p>Industry</p> <p>Atlantic Region: ACOA</p> <p>Environment Canada and provincial and community partners (in kind)</p>	<ul style="list-style-type: none"> Workshops to initiate SMEs to pollution prevention and environmental management. In-plant pollution prevention projects aimed at improving the competitiveness and profitability of SMEs. EnviroClub pilot projects involving 44 companies that attended the workshops and implemented environmental management initiation projects or in-plant pollution prevention projects.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
NATURE BUSINESS LINE			
Key Result: Conservation of biological diversity.			
<p>National Strategy for the Protection of Species at Risk in Canada</p> <ol style="list-style-type: none"> 1. Species at Risk Act (SARA) 2. Accord for the Protection of Species at Risk 3. Habitat Stewardship Program (HSP) 	<p>Protect species at risk.</p> <p>Conserve, protect and rehabilitate habitats of significance to migratory birds and species at risk in Canada.</p>	<ol style="list-style-type: none"> 1. SARA: Environment Canada, Department of Fisheries and Oceans (DFO), Parks Canada Agency (PCA) 2. Accord: Environment Canada, provinces, territories 3. HSP: Environment Canada, Department of Fisheries and Oceans, PCA, provinces, territories, non-governmental organizations, Aboriginal communities, private landowners 	<p>SARA</p> <ul style="list-style-type: none"> • Received Royal Assent in December 2002. Proclamation expected in June 2003. <p>Accord</p> <ul style="list-style-type: none"> • Continue work on the bilateral agreements under the Accord for the Protection of Species at Risk with pilot jurisdictions of Ontario, British Columbia and the Yukon. <p>Canada Stewardship Agenda (CSA)</p> <ul style="list-style-type: none"> • Continue implementation and planning for the CSA, including the Stewardship Portal. <p>Habitat Stewardship Program</p> <ul style="list-style-type: none"> • Implement through regional partnerships with provinces/territories, non-government organizations, resource industries and other stakeholders in 2001-2004. • Align the Habitat Stewardship Program with SARA provisions including recovery strategies and action plans in 2003.
<p>Recovery Initiatives</p> <ol style="list-style-type: none"> 1. Endangered Species Recovery Fund (ESRF) 2. Recovery strategies — development and implementation 3. Interdepartmental Recovery Fund (IRF) 	<p>Protect species at risk.</p>	<ol style="list-style-type: none"> 1. Environment Canada, World Wildlife Fund (WWF) 2. Environment Canada, Department of Fisheries and Oceans, PCA, provinces, territories, non-governmental organizations 3. Environment Canada, other government departments 	<ul style="list-style-type: none"> • EC to develop 67 new recovery strategies and implement up to 20 action plans during 2000-2005; Department of Fisheries and Oceans to develop 24 strategies and implement up to 20 action plans; PCA to develop 10 strategies and implement up to eight action plans.
<p>Committee on the Status of Endangered Wildlife in Canada (COSEWIC)</p>	<p>Protect species at risk.</p>	<p>Environment Canada, provinces, territories</p>	<ul style="list-style-type: none"> • Complete science assessments of status of listed species at risk, in 2002-2003. • Complete new science assessments, during 2001-2004.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
North American Bird Conservation Initiative (NABCI)	Conserve migratory bird populations.	Environment Canada, provinces, territories	<ul style="list-style-type: none"> An international agreement on the NABCI will be established and demonstration projects implemented. National plans will be in place or in draft form for the four bird groups of the NABCI.
North American Waterfowl Management Plan (NAWMP)	Conserve migratory bird populations.	Environment Canada, provinces, territories, AAFC, non-governmental organizations, U.S. (federal, state, non-governmental organizations), Mexico	<ul style="list-style-type: none"> The NAWMP Update will have revised international objectives.
Ecological Gifts Program	Conserve, protect and rehabilitate habitats of significance to migratory birds and species at risk in Canada.	Environment Canada, provinces, territories, non-governmental organizations	<ul style="list-style-type: none"> Continue to implement the EcoGifts Program and secure new resources for program continuation, in 2003-2004.
Protected Areas Strategy	Conserve, protect and rehabilitate habitats of significance to migratory birds and species at risk in Canada.	Environment Canada, Department of Fisheries and Oceans, PCA	<ul style="list-style-type: none"> Lead on development of federal protected areas strategy in cooperation with other government departments.
Key Result: Human impacts on the health of ecosystems are understood and reduced.			
Environment Canada Science Horizons Youth Internship Program	Science Horizons is a collaborative effort with industry, non-government organizations, universities and provinces to provide youth with necessary technical expertise and practical work experience in cutting edge science, and to give them access to networks that will help them find long-term employment in Canada. Over 500 participants have been placed in jobs across Canada since Science Horizons began in 1997-98.	HRDC, Environment Canada, industry, non-governmental organizations, universities and provinces	<ul style="list-style-type: none"> Provide meaningful work experience to at least 94 youth in 2002-2003. This program also supports the Clean Environment and Weather and Environmental Predictions Business Lines. ► http://www.ec.gc.ca/sci_hor/
Key Result: Priority ecosystems are conserved and restored.			
Atlantic Coastal Action Program (ACAP)	Reduce risks to sustainability in Atlantic Canada.	ACAP communities, Atlantic Provinces, other government departments, private sector, non-governmental organizations, academia	<ul style="list-style-type: none"> Improve public awareness and understanding of environmental issues. Build capacity to assume a leadership role for sustainability in their communities. Improve and enhance the environment through actions identified in comprehensive management plans. ► http://www.ns.ec.gc.ca/community/acap/index_e.html

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Nova Scotia Sustainable Communities Initiative	<p>Initially planned for two Nova Scotia community areas, this initiative is an innovative plan for governments to work with communities and each other in a more integrated way, which embraces the principles of modern governance and a strong societal fabric, highlighted in the Speech from the Throne.</p> <p>Depending on the shared vision and priorities identified by the partner community areas, the initiative should achieve measurable progress in quality of life, whether its a cleaner environment, higher literacy, improved health, better infrastructure, safer streets or more opportunities to earn a good living.</p>	Atlantic Region Federal Council Members, Province of Nova Scotia, municipal leaders from two pilot communities, First Nations	<ul style="list-style-type: none"> Coordinated federal approach to working with communities in support of improved quality of life. Collaborative working relationships among 35 federal and provincial agencies. Two formal secured partnerships for the achievement of a fully collaborative community-government sustainable communities approach. <p>► http://www.nsaccess.ns.ca/sci/</p>
St. Lawrence Action Plan 2003-2008	<p>In the context of sustainable development, contribute to ecological integrity, human health, economic activity which respects the environment and involve communities to ensure a healthy and prosperous St. Lawrence ecosystem</p> <p>(being negotiated)</p>	Environment Canada, AAFC, DFO, TC, CSA, with the collaboration of several other federal departments, Government of Quebec, Area of Prime Concern (ZIP) committees, non-governmental organizations, industry	<ul style="list-style-type: none"> Protection of wildlife and habitats along the St. Lawrence Better information and knowledge for the public and decision makers Monitoring and reporting on the St. Lawrence monitoring New knowledge on the effects of water level fluctuations, climate change, urban pollution and exotic species Reduction of the toxicity of municipal waste waters Implementation of the Sustainable Navigation Strategy Greater involvement of riverside communities and youth <p>(being negotiated)</p> <p>► Action plan Web site: http://slv2000.qc.ca</p>
Community Interaction Funding Program (An offshoot of the St. Lawrence Vision 2000 Action Plan)	Financial and technical assistance program for community projects.	Environment Canada, Government of Quebec and communities	<ul style="list-style-type: none"> Implement community projects to improve the St. Lawrence River.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Priority Intervention Zones (ZIP) (An offshoot of the St. Lawrence Vision 2000 Action Plan)	Enable riverside communities along the St. Lawrence and the Saguenay to identify their local priorities and develop and implement their own Environmental Remedial Action Plans (ERAP).	Environment Canada, 14 ZIP Committees	<ul style="list-style-type: none"> Strengthened local efforts to protect, conserve, restore and enhance the St. Lawrence in a manner that is consistent with the principles of sustainable development.
Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem	The remediation, protection and conservation of the Great Lakes Basin Ecosystem.	Environment Canada, DFO, TC, PWGSC, HC, AAFC, Parks Canada Agency, NRCan, Government of Ontario	<ul style="list-style-type: none"> Currently under negotiation.
Pollution Prevention Projects	<p>Industry Sector pollution prevention: The prevention and reduction of adverse impacts of toxics (existing substances).</p> <p>Agricultural pollution prevention; reduction of impacts to fish and fish habitat.</p>	<p>Industry Sector pollution prevention: there are numerous partners, including:</p> <p>Canadian Vehicle Manufacturing Association; Automotive Parts Manufacturing Association; printing and graphics industry; metal finishing industry; dry cleaning industry, marinas, recreational vehicles and campgrounds, golf courses, auto body shops, other government departments (e.g., Correctional Services, CFIA), municipalities (including City of Toronto)</p> <p>Agricultural pollution prevention: There are numerous partners, including: Christian Farmers Federation of Ontario, Fisheries & Oceans Canada, Ontario Ministry of Agriculture, Food and Rural Affairs, Ontario Ministry of Environment, Ontario Cattlemen's Association, Ontario Pork.</p>	<ul style="list-style-type: none"> Industry Sector pollution prevention: achieve reductions of toxic substances (e.g., substances listed under Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem, CEPA Toxics, substances identified under the Accelerated Reduction/Elimination of Toxics program, Priority Substances List). Annual reductions are quantified and reported in a fact sheet (to be posted in future at: http://www.on.ec.gc.ca/epb/fpd/) Agricultural pollution prevention: reduce the number of manure spills to watercourses; increased compliance with <i>the Fisheries Act</i>.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Great Lakes Basin 2020	<p>A healthy and sustainable Great Lakes Basin Ecosystem:</p> <ul style="list-style-type: none"> • Complete all federal remediation actions in 13 of the remaining Areas of Concern (AOCs). • Make progress in restoring Hamilton Harbour, Metro Toronto and Port Hope Harbour AOCs. • Develop new knowledge, tools and techniques for establishing restoration targets and restoring impaired beneficial uses of the environment. • Achieve progress/success in restoring impaired beneficial uses in the Great Lakes Basin. 	Environment Canada, DFO, TC, PWGSC, HC, AAFC, Parks Canada Agency, NRCan	<p>Examples of planned results:</p> <ul style="list-style-type: none"> • Sediment action plans implemented in six AOCs. • Completion of the Northern Wood Preservers contaminated. Sediments remediation project in Thunder Bay. • Implementation of watershed management plans for each Toronto watershed. • Communication of science through appropriate technology transfer mechanisms. • Completion of science assessments on issues related to restoration of beneficial uses in AOCs. <p>► http://www.on.ec.gc.ca/water/greatlakes/intro-e.html</p>
Northern Rivers Ecosystem Initiative	The health and integrity of the aquatic ecosystem of the Peace, Athabasca and Slave river basins is sustained and the environmental impact of human activities within these watersheds is understood.	Primary funding partners: Environment Canada, Alberta Environment	<p>There are numerous planned results; examples include:</p> <ul style="list-style-type: none"> • New scientific knowledge on the effects of contaminants and nutrients on the aquatic ecosystem of the northern river basins by 2003. • Improved knowledge of the hydrology of the northern river basins and the hydrological response to climatological, flow regulation and land-use factors by 2003. • Development of nutrient-loading guidelines by 2003. • Adoption of pollution prevention practices by basin residents. <p>► http://www.pnr-rpn.ec.gc.ca/nature/ecosystems/nei-ien/dh00s00.en.html</p>

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Northern Ecosystem Initiative	Enhance the future health and sustainability of northern communities and ecosystems.	<p>Project Partners: Environment Canada, DIAND, NRCan, AgCan, DFO, Health Canada, Government of the NWT, Yukon, Nunavut, Quebec, Ontario Newfoundland and Labrador, Innu Nation, ITC, Dene Nation, Council of Yukon First Nations, Cree Council of Northern Quebec, academia, private sector, non-governmental organizations, northern communities</p> <p>Program Partners in 2002-2003: Canadian Rural Partnership Initiative, Inuit Tapiriit Kanatimi (Inuit of Canada)</p>	<p>Numerous planned results including:</p> <ul style="list-style-type: none"> • Increased knowledge and awareness of ecosystem impacts of contaminants, climate change and development activities. • Further development of a northern monitoring network able to provide information on ecosystem status and trends. • Enhanced capacity in northern communities and Aboriginal organizations.
Fraser Basin Council	Ensure that the Fraser Basin is a place where social well-being is supported by a vibrant economy and sustained by a healthy environment truly reflecting sustainability.	<p>Direct: Environment Canada, DFO, HC</p> <p>Also includes: additional federal, provincial, municipal and non-governmental organizations partners (e.g., TC, MELP, Farm Folk/City Folk)</p>	<p>There are numerous planned results; examples include:</p> <ul style="list-style-type: none"> • Long-term and integrated resource management and land use strategic plan for all areas in the Fraser Basin by 2003. • Development of water use plans for hydroelectric facilities in the Fraser Basin by 2002. <p>► Action Plan 1999-2004: http://www.fraserbasin.bc.ca</p>

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Georgia Basin Ecosystem Initiative	Achieve healthy, sustainable and productive ecosystems and communities in the Georgia Basin (by supporting community efforts in meeting their sustainability objectives, and providing local governments with information and support that will enable them to better incorporate important environmental values into regional district growth strategies and waste management plans, local government community plans and day-to-day decision-making).	Official partners: B.C. Ministry of Environment Lands and Parks BCMA DFO	<p>There are numerous planned results, including:</p> <p><i>Air quality that supports healthy and vibrant communities and healthy ecosystems.</i></p> <ul style="list-style-type: none"> All sources of air emissions inventoried for modeling in 2002. <p><i>Clean water to protect and improve aquatic ecosystem health and human well-being in the Georgia Basin.</i></p> <ul style="list-style-type: none"> Greater than 25% of closed shellfish harvesting areas in selected Georgia Basin communities will be re-opened by 2005. <p><i>Terrestrial and aquatic fauna and flora, biodiversity and human well-being are maintained.</i></p> <ul style="list-style-type: none"> Securement plans initiated for 250 ha land for wildlife and agriculture; protection of two Garry Oak sites (implementation by 2003). <p><i>Residents, communities and decision makers take action for healthy, productive and sustainable ecosystems.</i></p> <ul style="list-style-type: none"> Georgia Basin QUEST model developed (deployed 2003). <p>► http://www.pyr.ec.gc.ca/georgiabasin/gbeIndex_e.htm</p>
WEATHER AND ENVIRONMENTAL PREDICTIONS BUSINESS LINE			
Key Result: Reduced impact of weather and related hazards on health, safety and the economy.			
Weather forecast and warning Programs <ul style="list-style-type: none"> Marine Aviation Public 	Reduce impacts of weather on the marine, aviation and public communities.	MSC: DG AEPD, RD SCPD and RDs Partners: NAV CANADA, DND, Transport Canada, private meteorological sector, media	<ul style="list-style-type: none"> Provide weather forecasts and warnings to marine, aviation and public communities.
Ice Observing and Forecasting Program	Reduce impacts of ice hazards on navigable oceans and inland waters and support policies.	MSC: DG SCPD Partners: DFO (CCG), CSA	<ul style="list-style-type: none"> Provide ice information on past, present and future sea ice, lake ice and iceberg conditions in Canadian waters.

Ongoing Program or Service Initiative	Key Result Commitment	Accountable Services and/or Regions/ External Partners	Expected Results
Canadian Hurricane Centre	Reduce impacts from tropical storms or hurricanes.	MSC: RD Atlantic Region Partner: NOAA (NHC)	<ul style="list-style-type: none"> Provide information and warnings on tropical storms and hurricanes approaching or affecting Canadian waters and Canada as well as public education and research.
Numerical weather and environmental prediction program	Support forecast production offices, client, private sector and research groups by providing numerical modelling output.	MSC: DG AEPD Partners: Other government departments and national and international organizations (e.g., WMO, ICAO, IAEA, ECMWF, CTBTO); NAV CANADA, The Weather Network/ Météomédia, and universities	<ul style="list-style-type: none"> Assure quality and provide analysis and forecast modelling outputs, provide national telecommunications for the MSC, make advances in weather modelling and provide emergency response services.
Key Result: Adaptation to day-to-day and longer-term changes in atmospheric, hydrological, and ice conditions.			
Recruitment and Training of <ul style="list-style-type: none"> Meteorologists Meteorological technicians Hydrological technicians 	Maintain a science and technology capacity.	MSC: DG AEPD, DG AMWSD, RDs	<ul style="list-style-type: none"> Recruit and train meteorologists and technicians to ensure key skill sets are maintained and to address succession.
Monitoring Network (surface weather, upper air, climate, water quantity, buoy, VOS, lightning and radar data)	Quality assured weather, climate and water data and data archives for operations and research.	MSC: DG AMWSD, RDs Partners: NAV CANADA, Airlines (e.g., AMDAR), provinces and territories, RCMQ, Mésonet	<ul style="list-style-type: none"> Monitor atmospheric conditions, climate and the quantity of water in Canadian lakes and rivers.
Internet Dissemination of weather & related information	Enhanced use of Internet to deliver service to the media, marine and general public.	MSC: DG SCPD, DG AEPD, RDs Partner: NAV CANADA	<ul style="list-style-type: none"> Provide access to services and products through the Internet.
Emergency Response	Services to first responders and emergency organizations.	MSC: DG AEPD, DG AMWSD, RDs Partners: Health Canada IAEA, ICAO, DND, OCIPEP, municipal, provincial and territorial EMOs	<ul style="list-style-type: none"> Provide support to emergency organizations and first responders.
Research and Development/policy advice/international leadership and liaison <ul style="list-style-type: none"> Adaptation and impacts Air quality Climate change research and modeling Remote sensing Numerical prediction Severe weather research Atmospheric processes Water 	Advance scientific research and transfer to operations the latest research in weather, climate and air quality, and support science policy development.	MSC: DG ACSD, DG AEPD, DG PCAD, RDs Partners: CICS, other government departments, provinces and territories, municipalities, CFCAS, ICLR, CCCMA, NWS, NOAA, IPCC, WMO, universities, OURANOS	<ul style="list-style-type: none"> Carry out R&D in a wide variety of areas related to climate change, air quality, weather and water, support the development of science policy, support external R&D and hold leadership roles in key international fora.

7.2 Contacts for Further Information

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