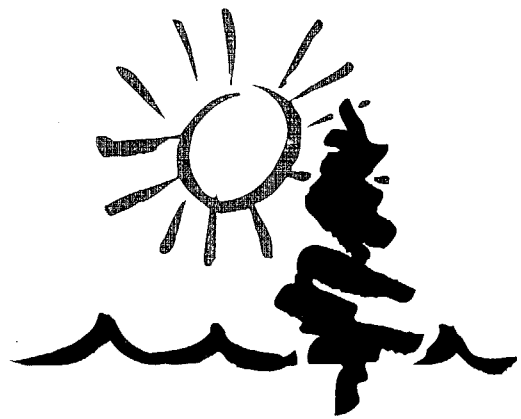


CANADA'S GREEN PLAN

THE SECOND YEAR

SUMMARY

Government of Canada / Gouvernement du Canada

CANADA'S GREEN PLAN
WORKING TOGETHER FOR A SUSTAINABLE FUTURE

Canada's Green Plan, our internationally acclaimed national strategy and action plan for sustainable development, is now entering its third year.

As this report shows, the Green Plan has accomplished much in cleaning up our environment and in making sustainable development a guiding principle linking economic development and environmental protection both at home and abroad. Clearly, much remains to be done and we all — government, industry, environmental groups and individuals — have a role to play.

Looking Back ...

From the Atlantic coast to the Fraser River Valley to the Arctic shores, Canadians are working together to meet the Green Plan's goals of a cleaner, safer and healthier environment.

As Canadians, we should all take pride in our efforts and applaud our accomplishments — they are tangible examples of the motto: Think Globally, Act Locally.

The Earth Summit was the key event on the 1992 sustainable development agenda. Because of the Green Plan, Canada went to the Earth Summit well prepared to contribute to global progress. At the same time, we went to Rio de Janeiro eager to learn.

The Rio gathering of world leaders reinforced the fact that environmental decision-making is changing. The key lesson from Rio is that we need to continue to improve the way we make decisions about the environment. They must be based on openness, accountability and inclusion.

We will only make progress if all sectors cooperate and all partners respect each other's interests. That is how the Green Plan was born; that is how we approached the Earth Summit.

... And Looking Ahead

The past two years have confirmed that the fundamentals of the Green Plan are as valid today as they were in 1990. The Green Plan, however, was conceived as a living plan. We need to ensure that it continues to respond to newly emerging needs, and that we profit from experience.

Our first priority should be better use of the full range of tools available for protecting the environment – through promoting voluntary compliance as the strategy of first resort; through harnessing market forces to influence the millions of collective and individual decisions; and through streamlining the activities of the different levels of government in Canada.

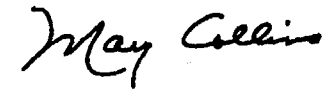
Our second priority relates to the economic side of the sustainable development equation. The business community is a key partner in the development of a new relationship between the environment and the economy in Canada. The Green Plan should support the development of an environmentally competitive private sector.

Our third priority involves broadening the focus of the Green Plan to address more fully the global aspects of sustainable development — building the environment into the multilateral trade equation, and assisting developing countries to make the transition to sustainable development.

The government firmly believes that the "Rio way" of openness, accountability and inclusion was the right way to participate in the Earth Summit. It will be an important element in the future development and implementation of sustainable development in Canada, and will be a hallmark of the evolution of the Green Plan.

Regular reporting on progress in meeting our Green Plan targets and schedules is a key element of this process. Canadians must be informed to be effective partners in its implementation and evolution. After all, the Green Plan belongs to the Canadian people. To ensure their lasting commitment to the vision and values of the Green Plan, Canadians must be involved in achieving its goals.

Jean Charest
Minister of the Environment



Mary Collins
Minister of State Environment

INTRODUCTION

Canada's Green Plan

Canada's Green Plan is the national strategy and action plan for sustainable development launched by the federal government on December 11, 1990. The Green Plan was developed through extensive consultations with Canadians from all sectors – government, business, interest groups and the public.

The Green Plan's goal is "to secure for current and future generations a safe and healthy environment, and a sound and prosperous economy." It represents a fundamental shift in the way the federal government views economic development and environmental protection: they are inextricably linked; both are critical to the health and well-being of Canadians.

Thus, while continuing action on a wide range of specific issues from depletion of the ozone layer to protected spaces, the Green Plan also addresses the fundamentals of sustainable development – the need to incorporate sustainability into all aspects of decision-making at all levels of society.

The Green Plan also establishes the basis for new and stronger partnerships for sustainable development. We all have a role to play in meeting our environmental challenges; we all have to work together to make sustainable development a reality.

Year Two in Perspective

Before the Green Plan, the environmental agenda was evolving so rapidly that the public policy challenge was one of simply trying to keep pace and to catch up:

- With a prolonged period of steady increase in the importance attached to environmental issues by Canadians and their expectations of government.
- With the stresses on the environment being more and more apparent.
- With an international agenda that was gathering tremendous momentum and accelerating.
- With a fiscal situation that limited room for manoeuvring by all governments and across all policy areas.
- With responsibility for environmental management shared broadly within and between governments, and across society as a whole.

Canada's Green Plan represents the federal government's response to that challenge. It has the following main features:

- The Green Plan is based on the concept of sustainable development, which means reconciling our demands on the economy with the ability of the environment to sustain us and future generations.
- It is a comprehensive plan – a coordinated package of actions across a broad range of environmental issues from climate change to parks and wildlife.
- It is a government-wide commitment. It recognizes that environmental issues transcend traditional ministerial boundaries, and that a concerted effort across government departments is essential if we are to meet our environmental challenges effectively.
- It contains a substantial commitment of new resources for the environment.
- It contains a wide range of specific targets and schedules. They are a key element of accountability.
- The Green Plan, in both approach and substance, reflected the input received from the consultations that were part of its development.

Launching a major new public policy initiative involves a series of challenges. The Green Plan is an umbrella document that deliberately left much of the detail to the implementation phase. When it was launched, the government indicated that it would undertake a final review of each program before the details and funding levels were completed.

That review is a necessary part of the public policy process. Its purpose is to ensure that programs are effective – that they will achieve

the objectives set out in the Green Plan – and that they are efficient, that is, objectives will be met at least cost to Canadians. A key result from the first year was that virtually all Green Plan programs went through that process, were approved, funded, announced, and began to be implemented. The focus was on laying the foundation for the delivery of more tangible and concrete results.

The fiscal situation has also influenced Green Plan program delivery. Like all other areas of expenditure, the Green Plan has been part of the government's overall fiscal restraint program. Restraint has reinforced efforts to make programs efficient, develop innovative delivery mechanisms, and reorient other activities to meet key Green Plan objectives.

Second Year Achievements

Despite these challenges, real progress has been made on implementing sustainable development in Canada. Substantial advances have been made on the Green Plan's short-term objectives, and on our longer term priorities.

There are a number of indicators that the Green Plan is making headway.

First, some 80 initiatives and programs are now under way that touch many aspects of the lives of nearly all Canadians, from the air we breathe, to the water we drink, to the food we eat. For example:

- To protect human health and the environment, 20 of 44 full assessments of priority toxic substances have been completed, including six that have been released.
- To reduce waste generation, voluntary action succeeded in contributing towards the 20% reduction in packaging waste target established under the National Packaging Protocol.
- To promote sustainable agriculture, federal-provincial agreements have been signed with Nova Scotia, PEI, Ontario, Alberta and Quebec, and are in advanced stages of development with other provinces and territories.
- To complete the national parks system, land has been set aside for a new national park on Baffin Island, an agreement signed to establish Aulavik National Park on Banks Island, and feasibility studies are under way for the Manitoba Lowland, northern Labrador, and Bluenose Lake and Wager Bay in the Northwest Territories.
- To preserve endangered species, the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* – to reduce poaching and smuggling – has been passed, and recovery plans for seven migratory birds were completed.
- To develop and commercialize new technologies for energy efficiency, the *Energy Efficiency Act* has been passed, R–2000 licensing expanded, and 10 model houses are being constructed.
- To lessen stress on the ozone layer, CFC consumption in Canada has declined by 58% since 1986, and new phase-out timetables were established domestically and internationally.
- To expand and better equip the next generation of environmental scientists, the first slate of 31 doctoral fellowships was awarded.
- To enhance enforcement of environmental regulations, the number of Environment Canada's full-time inspectors and investigators has increased from 49 to 70.
- To prevent marine spills, inspection of foreign vessels entering Canada's waters has increased from 8% in 1990 to 16% in 1991 to 38% in 1992. The internationally agreed minimum standard is 25%.

Second, people from across Canada have been working together to make the Green Plan a success. For example:

- In Atlantic Canada, 13 communities are developing "blueprints" for managing their coastal resources – each project is organized and run at the local level.
- In Quebec, the Centre inter-universitaire de recherche en toxicologie of the Université de Montréal and Université du Québec à Montréal is part of a national network examining the effects of toxic chemicals on living organisms.
- In Ontario, the automotive industry has agreed to establish a comprehensive pollution prevention project aimed at voluntary reduction in toxic substance use, generation and release.
- In the three Prairie provinces, working models of sustainable forestry are being developed in each province, involving partnerships between governments, industry, aboriginal groups, academia and others. Part of a national network, each site will create a new relationship between forestry and the environment.
- In British Columbia, a wide range of partners are working on the Fraser River

Sustainable Development Plan to clean contaminated sites, prevent further pollution, restore wildlife habitat and salmon populations, and enhance water quality.

- In the North, a 50 year legacy of hazardous and unsightly waste on the shores and islands of Great Slave Lake was cleaned up by a team of 50 students in a project launched by the NWT Métis Nation.

Third, the Green Plan provided the framework for Canada's participation in the Earth Summit, overall and on specific issues like climate change, biodiversity, fisheries and forestry. And through implementation of the Green Plan, Canada is providing a model for other countries to develop their own strategies and action plans to harmonize environmental protection and economic growth. On December 4, 1992, Canada ratified both the Climate Change and Biological Diversity conventions.

And fourth, advances are being made in improving decision-making, which goes to the heart of sustainable development. For example:

- The *Environmental Assessment Act* has received Royal Assent. This is a key element of the government's overall strategy to put the federal house in order.
- The government committed itself to, and has released, an environmental assessment of the North American Free Trade Agreement. NAFTA represents the first time that environmental considerations have been integrated into the development of a trade agreement.
- Pulp and paper regulations are now in force. They took years to develop and negotiate, and are based on sound science.
- A discussion paper on economic instruments was released. It is the first step towards harnessing market forces for environmental protection.
- The second national State of the Environment Report was issued, and 8,000 copies were sold in the first six months of publication. It provides accurate, timely and accessible information to help Canadians make informed decisions.
- And a Code of Environmental Stewardship for federal government operations has been adopted.

Government alone cannot solve all environmental problems. It is a shared responsibility. The continuing success of the Green Plan depends on cooperation and partnership, because ultimately, it is individual Canadians who will deliver on the Green Plan's potential.

MAKING PROGRESS ON OUR GOALS

The Green Plan established a series of national sustainable development goals for Canadians. These goals, listed below with highlights of progress to date, serve as benchmarks for measuring progress and to mobilize our collective efforts.

An encouraging feature of the progress we are making on our goals is the extent to which partnerships – with Canadian governments, industry, environmental groups and the international community – are playing a key role. Federal leadership is a critical catalyst in the successful implementation of the Green Plan.

As our environmental indicators and monitoring improve, future Green Plan reports will review progress on a more complete collection of targets. Other important information on the environment is available separately through State of the Environment reporting, the Environmental Citizenship Initiative's Learning Program and individual program reports.

Goal 1: Clean Air, Water and Land

Assurance that citizens today and tomorrow have the clean air, water and land essential to sustaining human and environmental health.

One of the most urgent environmental problems for aboriginal communities is the lack of safe water and sewage systems. It is a particularly pressing issue for many remote reserves. Many illnesses caused by poor health and living conditions can be prevented by providing adequate drinking water and sewage services.

One of the ways that Indian and Northern Affairs Canada meets the need for better health and safety is through its capital program to establish and improve water and sewer services on reserves. The Green Plan's Indian Health and Water Initiative, announced in March, 1991, is accelerating this work and expediting the program to meet the health and safety requirements needed to reduce the incidence of communicable diseases and infections.

The goal of the Indian Health and Water Initiative is to provide aboriginal communities with water and sewage services comparable to other communities in their area. Indian bands identify water and sewage needs and manage the planning, design and construction of projects.

By the end of 1992, through the Green Plan's acceleration of on-going water and sewage work, over 91% of existing homes on reserves had adequate potable water and 80% had proper sewage systems.

In addition to the capital work, the Assembly of First Nations and Health and Welfare Canada are working together to improve monitoring of contaminants in drinking water on reserves, and to develop a water treatment operators training program.

Canada-wide reduction of the concentration of ground-level ozone (smog) to below the threshold of health effects in the most susceptible segments of the population.

Ground-level ozone, a major component of smog, is a concern across Canada but particularly so during the summer for people living in British Columbia's Lower Fraser Valley, in the Windsor-Québec corridor, and in southern New Brunswick and Nova Scotia. In those areas, Canadians are sometimes exposed to ozone levels exceeding the acceptable level of 82 parts per billion which can harm human health, and significantly damage agricultural crops and other forms of vegetation.

Federal and provincial governments have recognized the problem, and are now undertaking initiatives, often in cooperation with industry, to reduce the causes of smog. The Green Plan provides the framework for federal efforts.

In 1992, Canada's auto makers recognized the contribution they could make to reduce smog by signing an agreement with the Minister of Transport to establish new, more stringent passenger car exhaust emission controls. Under the agreement, the auto industry will be phasing in these emission controls for the 1994 and 1995 model years, achieving full compliance in the 1996 model year.

In British Columbia's lower mainland, the Green Plan contribution to the province's extensive smog reduction program is being conducted on several fronts. One program will study the extent to which emissions from the 3,000 deep sea marine vessels using the port of Vancouver each year contribute to the smog problem. Environment Canada also spearheaded the voluntary implementation of gasoline vapour recovery in the Lower Fraser Valley. In

the past year, retail outlets completed the installation of vapour recovery piping at some 600 sites to complement the retro-fitting of tanker trucks and the installation of vapour recovery units at the refineries and bulk terminals.

A 50% reduction in Canada's generation of waste by the year 2000.

In April 1989, the Canadian Council of Ministers of the Environment (CCME) established the target of a 50% reduction in the generation of waste by the year 2000. Packaging – everything from cereal boxes to glass containers – was also targeted for waste reduction: 20% by the end of 1992, 35% by the end of 1996, and 50% less packaging waste by the year 2000.

Preliminary data suggest that the Protocol's voluntary approach is proceeding successfully. The 1990 results indicate a 14% decline in packaging waste disposal between 1988 and 1990. Results from the 1992 Packaging Survey will be available for analysis during the summer of 1993. The results will be used to determine whether the Protocol's interim target of 20% has been achieved, and will form the basis for recommendations to CCME concerning the need and timing of regulatory and other control mechanisms.

In November and December 1992, volunteers from provincial Ministries of the Environment, environmental groups and Environment Canada set up kiosks at shopping malls in 13 cities across Canada. Shoppers were able to obtain information about the problems of packaging waste, and were given tips on how they could change their practices and reduce packaging. Innovative alternative Christmas wrapping suggestions were also on display.

Many shoppers were pleased to fill out survey cards on product packaging. Every person who participated in the campaign received a reusable cloth shopping bag. More than 20,000 cloth bags were handed out, and nearly 8,000 survey cards were completed and forwarded to manufacturers after the relevant data was recorded by Environment Canada.

Goal 2: Sustainable Use of Renewable Resources

The shifting of forest management from sustained yield to sustainable development.

The federal government cannot act alone in making the transition from sustained yield to sustainable development. Eighty percent of forest land in Canada is under provincial jurisdiction, 11% under federal jurisdiction and 9% privately owned.

The *Department of Forestry Act* explicitly requires the Minister to promote sustainable development of Canadian forests. This act is the first piece of federal legislation that specifically refers to sustainable development.

The Canadian Council of Forest Ministers (CCFM) has agreed on the need for environmentally sound forest management to enhance Canada's competitiveness in the world market. In 1992, the CCFM developed the National Forest Strategy, which supports sustainable forest management and endorses Canada's Forest Accord. The Council, together with federal and provincial Environment, Parks and Wildlife ministers also endorsed the 12% protected space objective.

Some of the key challenges in making the transition from sustained yield to sustainable development are:

- Old-Growth Forests: The debate is primarily over what portion of forests should be left untouched and what portion should be available for other uses, including commercial harvesting. Sustainable development means striking a balance between ecological and commercial interests through sound ecosystem management.

  Canada will promote the conservation of representative and unique ecosystems, including old-growth forests, as part of its strategy for setting aside 12% of our territory as protected space.

- Harvesting Practices: As part of the National Forest Strategy, Canada is committed by 1995 to review and refine its harvesting practices guided by the principles of sustainable development and landscape conservation.

- Reforestation: Canada relies on natural regeneration in the renewal of more than half of its harvested land, which ensures a natural species succession. On the remainder, seeds and seedlings are planted from a wide variety of growing stock. In 1990, one billion trees were planted.

  The underlying principle of Canada's reforestation methods is to return to the forest as much or more than was taken out. Over the past 15 years, Canada has doubled its reforestation efforts and now plants nearly two trees for every one it cuts.

- Forest Pesticides: Every year, losses due to insects and diseases amount to nearly 55% of Canada's annual harvest. Consistent with environmentally sensitive pest management practices, the forest sector has significantly increased the use of biological rather than chemical agents.

The Green Plan provides two programs that are putting the principles of sustainable development into practice: The Partners in Sustainable

Development of Forests Initiative and the creation of Tree Plan Canada.

The creation of a network of Model Forests is the central element of the Partners in Sustainable Development of Forests initiative. Its aim is to develop more effective decision-making in forest management. The 10 Model Forest sites are: Long Beach Model Forest and McGregor Model Forest (British Columbia); Foothills Forest (Alberta); Prince Albert Model Forest (Saskatchewan); Manitou Abi Model Forest (Manitoba); Lake Abitibi Model Forest and Eastern Ontario Model Forest (Ontario); An Inhabited Forest (Quebec); Fundy Model Forest (New Brunswick); and Western Newfoundland Model Forest (Newfoundland). These model forest sites will be working models of sustainable development. The sites will be managed and funded through a partnership agreement between Forestry Canada and each Model Forest partnership group.

Another program is Tree Plan Canada, the community-industry-government partnership to plant 325 million trees in rural areas as well as in and around 6,000 cities, towns and communities across Canada. In the six months following its launch, five million trees were planted across Canada. Through the work of the National Community Tree Foundation (1-800-563-0202), a non-government organization, some 230 partners ranging from municipalities to community groups and volunteers, have developed tree planting and education projects. By the summer of 1993, approximately 11 million trees will have been planted nationwide. Thirteen corporate sponsors have been enlisted and more are expected.

Goal 3: Protection of Our Special Spaces and Species

The setting aside of 12% of the country as protected space.

During the century following the creation of Banff National Park, less than 5% of Canada's 10 million square kilometre area had been preserved as protected space. But over the last year, an additional 100,000 square kilometres were added in 47 new parks, wildlife areas and ecological reserves. Highlights include:

- an agreement for the establishment of Aulavik National Park on Banks Island – the first national park established since 1988 – and setting aside of lands for a national park on northern Baffin Island;
- creation of three migratory bird sanctuaries, and agreement to establish the Canadian Forces Base Suffield National Wildlife Area in Alberta;
- three new provincial parks, a joint aboriginal-provincial park and withdrawal of land in the Khutzeymateen Valley in British Columbia; and
- designation of 16 new protected sites in Prince Edward Island.

In addition, a number of provinces announced plans to significantly expand their protected areas network. For example, Quebec lifted its moratorium on the creation of provincial parks and identified 18 sites totalling 57,000 square kilometres, Ontario announced plans to represent five natural areas, and British Columbia plans to establish 23 new provincial parks, recreation areas and wilderness areas.

The first ever joint meeting of Canada's Parks, Wildlife and Environment Ministers was held in November 1992. During the meeting, discussions with representatives of Canada's national aboriginal organizations also took place. Ministers made a formal commitment to complete the country's networks of Protected Natural Areas, and launched Canada's follow-up action on the global Convention on Biological Diversity ratified by Canada on December 4, 1992.

Ministers endorsed a Statement of Commitment, which calls on provinces, territories and the federal government to make every effort to:

- work towards completion of networks of protected areas representative of Canada's land-based natural regions by the year 2000, and accelerate the protection of areas representing Canada's marine natural regions;
- accelerate the identification and protection of critical wildlife habitat;
- adopt strategies and timetables for the completion of the protected areas network;
- continue to cooperate in protecting ecosystems, landscapes, and wildlife habitat; and
- ensure that protected areas are integral components of all sustainable development strategies.

Goal 4: Preserving the Integrity of Our North

Preservation and enhancement of the integrity, health, biodiversity and productivity of Canada's Arctic ecosystems.

A key component of meeting the health, biodiversity and protection needs of northern Canadians is the Arctic Environmental Strategy that began in 1991 and builds on the ongoing work of governments, communities and individuals. Its four main components – waste clean-up, water quality, studies of contaminants, and integration of environmental and economic priorities throughout the Yukon and Northwest Territories – are producing results that benefit the North and all Canadians.

Since the Strategy was introduced, waste clean-up and assessment has been carried out in both territories at over 100 sites that are hazardous or unsightly. In the Yukon, clean-ups have taken place in Watson Lake, Teslin, Mayo, Whitehorse and Dawson. In the Northwest Territories, projects were undertaken in almost all communities, including Resolute, Ferguson River, Arctic Red River, Rankin Inlet, Clyde River, Baker Lake and Iqaluit.

Forty-five water quality stations have been activated across the North, 25 in the Yukon and 20 in the Northwest Territories. Nineteen water quantity stations were also established. Water is the North's most valuable renewable resource for food, transportation, sustainable economic development and cultural and spiritual well-being. Threats to water quality come from local sources and from industrial and agricultural sources outside the Arctic.

Over 50 research projects on contaminants in the Arctic environment have begun involving universities, government departments and aboriginal organizations. These scientific studies and related activities are determining where contaminants come from, how they affect the environment, wildlife and people of the North, and how to reduce or eliminate them. One project involves a comprehensive snow monitoring network of 10 new snow sampling stations in the Yukon. Because pollution knows no boundaries, much of this research work is being carried out in cooperation with Norway, Russia, the United States and other circumpolar countries. Two air monitoring stations have been established; one in the Yukon and one in the Northwest Territories.

To enhance integration of the environment and economy, over 50 environmental action projects and resource management plans were started in 1992. The action projects include recycling of paper, plastic and metals, the development of community nature trails, composting, and community clean-up. Community Resource Management Plans enable participating communities to protect their environments while developing their economies around local renewable resources. Examples include the Hook Lake Wood Bison Management Plan; the Fort Liard–Nahanni Butte Forest Resource Management Plan; the Isabella Bay Bowhead Whale Sanctuary; the Baffin Fisheries Workshop; and the Lancaster Sound Polar Bear Project.

Goal 5: Global Environmental Security

Phasing-out CFCs by 1997, and methyl chloroform and other major ozone-depleting substances by the year 2000.

The ozone layer, a thin gas covering, is located between 15 and 40 kilometres above the Earth in the stratosphere. This naturally produced chemical layer acts as a protective shield against the sun's ultraviolet radiation, which, in excess amounts, is harmful to the natural environment and to human health.

Emissions of human-made chlorofluorocarbons (CFCs) and other chemicals are depleting the ozone layer. Ozone loss of more than 50% has been observed over the Antarctic during the spring. The Arctic is now becoming the focus of increased attention. For example in 1992, at Resolute in the Canadian high Arctic, ozone values for the entire year were 6% below normal, with a measured peak reduction of 9.6% in the springtime.

The Montreal Protocol of 1987 and subsequent amendments have set timetables for phasing out the production of the major ozone-depleting substances. Eighty-six countries, including Canada and all major producers of those substances, had ratified the Montreal Protocol as of September 1992. At the end of 1990, countries that had ratified the Protocol accounted for about 93% of the world supply of CFCs and halons. Other countries, including China and India, have since ratified the Protocol.

Through the Green Plan and in cooperation with the provinces, the Canadian control program has been accelerated, and scientific programs that monitor the state of the ozone layer have been expanded.

The Canadian Council of Ministers of the Environment (CCME) agreed in March 1992 to new timetables for the elimination of ozone-depleting substances, including the phase-out of the production and import of CFCs no later than December 31, 1995. They also announced that all jurisdictions would begin implementing CFC recovery and recycling programs. Canada's phase-out strategy is working. According to a 1992 report, CFC consumption in Canada decreased by 58%, as of June 1992, from 1986 levels.

In November 1992, Canada and signatory countries to the Montreal Protocol met in Copenhagen and agreed to a new timetable and control measures for ozone-depleting substances consistent with Canada's national action plan. Those include accelerated phase-out dates for CFCs, carbon tetrachloride, methylchloroform (January 1, 1996) and halons (January 1, 1994); phase-out of HCFCs (99.5% reduction by 2020); the addition of methyl bromide as a controlled substance; and a commitment to recovery and recycling programs by the parties.

On the scientific front, Canada initiated The "Ozone Watch" and the UV (Ultra Violet) Advisory Programs – the first two continuous programs of this kind in the world. They were introduced to inform and warn the Canadian public about the state of the ozone layer over Canada, and the implications for the sun's radiation at ground level. For public safety reasons, these services were introduced a full year ahead of schedule in response to concerns and predictions that depletion over the Arctic would be severe during the spring of 1992.

A High Arctic Ozone Observatory, constructed at Eureka in the Northwest Territories, is hosting teams of Canadian and international scientists conducting studies and measurements of the ozone layer phenomenon. Canada has also expanded its network to 12 sites to monitor the state of the ozone layer. The stations use a Canadian-made, state-of-the-art technological device, the Brewer spectrophotometer, made in Saskatoon. This instrument is becoming an international standard. Nearly 100 models have been exported and are in operation in 25 countries around the world.

Canada is also participating in many international scientific efforts ranging from joint studies, to measurements from space shuttle flights to operating the World Ozone Data Centre for the World Meteorological Organization, a United Nations Agency.

As a cornerstone of Canada's foreign policy, acceleration of global cooperation, understanding and progress on environmental issues.

In June 1992, one of the largest international conferences ever held took place in Rio de Janeiro, Brazil. Attended by the heads of state from over 100 countries, the ambitious aim of the United Nations Conference on Environment and Development (UNCED) – the Earth Summit – was to try to reconcile the necessity for global environmental protection with the need for ongoing economic development.

At UNCED, countries reached consensus on a number of key areas:

- The Rio Declaration, outlining 27 fundamental principles of environment and development. The declaration is a first step towards an Earth Charter envisaged by Canada and others to integrate environmental and economic goals.
- A statement of Guiding Principles on Forests, the first international consensus ever negotiated outlining governments' responsibilities for the sustainable development of all types of forests.
- Agenda 21, a first ever, comprehensive global blueprint for sustainable development, covering 39 different economic, social and environmental issues, and representing input from all the nations of the world. It outlines an agenda for action on cross-cutting issues such as technology transfer, trade and aid, as well as more specific issues such as marine pollution and biodiversity.
- The Framework Convention on Climate Change, in which developed nations agree to limit emissions of greenhouse gases and to report publicly on the progress they are making. Developed countries also agree to provide developing countries with resources and technology to assist them in meeting their obligations under the Convention.
- The Convention on Biological Diversity, that provides a foundation for international co-operation to conserve species and habitats.
- A Fisheries Conference, to be held in 1993, to address the urgent problem of overfishing on the high seas.

In December, 1992, the federal government released *Canada's Green Plan and the Earth Summit*, which provides an overview of the results of UNCED, its immediate priorities and actions under way.

Following the Earth Summit, the development of implementation strategies began for both the Climate Change and Biodiversity Conventions. On December 4, 1992, Canada

became the first major industrialized nation to ratify both conventions.

Canada is also assisting developing countries to formulate their own sustainable development plans, such as the Green Plan, and promoting the work of the Commission on Sustainable Development, Canada's International Development Research Centre, and the United Nations Environment Program.

In January 1993, Canada hosted a meeting of like-minded states in St. John's, Newfoundland to consolidate and plan a collective strategy for the United Nations Conference on measures for ending high seas overfishing. That U.N. Conference will be held in New York in July 1993, and will provide a forum for Canadian policies on conservation and sustainable development principles for the fishery.

Canada involved all sectors in developing its program for the Earth Summit. That consultative practice is continuing now, under the auspices of the National Round Table on the Environment and the Economy, as Canadians work together to meet the commitments made at Rio and to set a common course of action.

Stabilizing national emissions of CO_2 and other greenhouse gases at 1990 levels by the year 2000.

Responding to the climate change challenge requires sound science and concerted action on the domestic and international fronts. The Framework Convention on Climate Change, a product of the United Nations Conference on Environment and Development (UNCED) held in Brazil in June 1992, is an important initial step in international efforts to deal with climate change. Throughout the Convention negotiations, Canada sought a firm commitment from all industrialized countries to stabilize emission of CO_2, and other greenhouse gases not controlled by the Montreal Protocol, at 1990 levels by the year 2000. While the Convention does not formally commit to this target and schedule, industrialized nations have agreed to establish actions aimed at achieving that goal.

On December 4, 1992, the Convention was officially ratified by Canada, under the Prime Minister's signature. An assessment of the progress Canada is making in stabilizing greenhouse gas emissions will be part of Canada's first National Report under the Climate Change Convention.

In 1992, Canada acted to ensure that the international momentum created during the Convention negotiations was maintained. The Convention enters into force when ratified by 50 countries.

Canada was instrumental in the November 1992 adoption by the Intergovernmental Panel on Climate Change (IPCC) of a workplan to meet the scientific needs of the Convention, including a new scientific assessment by 1995. At the same time, Canada became the Co-Chair of a new IPCC working group to address the economic aspects of climate change.

In October 1992, Canada sponsored a first meeting to ensure an effective linkage with the Global Environment Facility (GEF) so that the Convention successfully meets its objectives.

Canada is the only industrialized country to work bilaterally with China (Beijing Province) on identifying the challenges and opportunities in meeting the requirements of the Convention. Canada is also working with Mexico, Tanzania and Zimbabwe on country studies involving the development of emissions inventories and emissions-limitations options. In 1992 and 1993, Canada is contributing funds to the World Meteorological Organization for increasing the capability of developing countries to meet Convention requirements.

In order to reduce emissions of greenhouse gases in Canada, all levels of government, industry and individuals are working in partnership to improve energy efficiency across a broad spectrum of uses.

The new federal *Energy Efficiency Act* received Royal Assent on June 23, 1992. Under it, the federal government is developing regulations for energy-using equipment. Memoranda of Understanding are in place or being negotiated with utilities to assist federal departments to improve the energy efficiency of their facilities.

Licensing agreements with provincial home builders' associations for the use of the R-2000 logo and supporting materials and contribution agreements with five partners to market and promote the program have been reached. Ten model advanced houses are being constructed across Canada to develop and commercialize new technologies for energy-efficient homes and to test energy efficient appliances.

Twenty-seven corporations with national operations have committed to participate in the Energy Innovators Ventures Program, which encourages Canadian corporations, institutions and municipalities to adopt energy-efficient technologies as a profitable way of reducing or preventing pollution. The Advisory Council on Industrial Energy Efficiency is being established in conjunction with industrial sector task forces as the principal mechanism to effect energy efficiency in the goods-producing sector.

As part of the alternative fuels program, an agreement has been reached with Newfoundland to introduce automotive propane to that province, and agreements to demonstrate methanol flexible fuel vehicles have been reached with British Columbia, Alberta and Ontario.

In the agricultural sector, the feasibility of producing ethanol fuel is being investigated as are feed supplements to reduce methane emissions from cattle and manure, and technologies to reduce nitrous oxide emissions from fertilizer use.

Under Tree Plan Canada, 114 community-based projects have planted five million trees. Thirteen corporate sponsors are supporting the National Tree Planting Foundation and discussions are underway with 160 others.

Actions taken by an informed public in everyday activities are also important. Under the Environmental Citizenship Initiative, education efforts have been launched to help Canadians learn about global warming and participate in reducing greenhouse gas emissions.

To support effective policy, the government's science program is now determining the rate, extent and regional distribution of global warming and its impact on Canada. Canadian participation in a large-scale international experiment has been started to clarify the role of forests in climate change processes. A Canadian research consortium on climate change and ocean circulation is in place. Socio-economic impact studies of global warming on the Mackenzie Basin, Prairies and Great Lakes - St. Lawrence are under way. As well, the first report on the state of the climate was released.

Goal 6: Environmentally Responsible Decision-Making

Provision of timely, accurate and accessible information to enable Canadians to make environmentally sensitive decisions.

The Green Plan recognizes that environmentally responsible decision-making requires good, accessible and understandable environmental information on which governments, businesses and individuals can make environmentally sound decisions. That was the purpose behind the 700-page State of the Environment Report, one of the most comprehensive examinations of a nation's environment ever undertaken.

Factual reporting on the environment is also the purpose behind the Environmental Information Initiative. One component of that initiative is the release, on a regular basis, of a comprehensive set of environmental indicators. These are selected key statistics that represent or summarize some aspect of the state of the environment, natural resource assets and related human activities. They focus on trends in environmental change and convey how the environment is responding to both stresses and societal responses to these conditions.

The indicators will monitor the environment's vital signs, and provide a snapshot or profile of the state of Canada's environment in the same way that economic indicators, such as interest rates, unemployment rates and the Gross Domestic Product, are used to measure how well the economy is performing.

The first indicator bulletin on Stratospheric Ozone Depletion, released in November 1992, listed domestic supplies of ozone-depleting substances in Canada, the global atmospheric concentrations of CFCs, and the ozone levels over Toronto, Edmonton and Resolute. Bulletins on Stratospheric Ozone Depletion will be produced annually so that Canadians can measure their progress in eliminating CFCs and other ozone-depleting substances.

More indicator reports on toxic contaminants in the environment, climate change, energy, fisheries, outdoor urban air quality and urban consumption patterns are under development.

Canadians are particularly concerned about the effects of environmental pollution on their health and safety. We know that contaminants, such as toxic chemicals, can have serious health implications. We know that air-borne pollutants contribute to respiratory illnesses, and that the very old and the very young are more vulnerable to the effects of environmental pollution.

The Action Plan on Health and the Environment includes measures to provide individuals and groups with the scientific information they need for informed decision-making. In June 1992, the Minister of National Health and Welfare released *A Vital Link: Health and the Environment in Canada*, a thorough account of contemporary environmental health issues that describes the effect of environmental contaminants on human health; the results of scientific studies; and Health and Welfare Canada's role in protecting Canadians from health hazards.

Goal 7: Minimizing the Impact of Environmental Emergencies

Quick and effective response to threats posed by pollution emergencies due to human activity and naturally occurring environmental emergencies.

Canadians are familiar with the threats to the environment and to public health when there is an oil spill, a chemical spill, a fire in a building containing hazardous material, or a severe weather event such as flooding or a tornado.

The Green Plan responds to both types of emergencies: those created by human activity and those created by nature.

The Marine Spills Prevention and Response initiative has brought needed equipment and trained personnel to many areas of Canada vulnerable to oil and chemical spills. The Coast Guard has increased marine navigational support and aerial surveillance activity on the east and west coasts and the St. Lawrence River. As well, inspections of foreign vessels visiting Canada has risen to 38%, from 16% in 1991 and 8% in 1990, to ensure compliance with Canadian law. The international minimum standard is 25%.

National and regional contingency plans in the event of an oil spill are being developed. All Coast Guard icebreakers now carry spill response equipment. In the Arctic, pollution countermeasures equipment has been stationed at Iqaluit. Training of volunteers has also been increased under the Green Plan. Discussions are under way with Inuit groups on community involvement in responding to a spill. In Placentia Bay, Newfoundland, 70 fishermen have been trained to use the spill response equipment placed there.

Land-based spills have not been ignored. Research and training in prevention and response techniques has been increased. The Major Industrial Accidents Council of Canada (MIACC) is developing measures for spill prevention, emergency preparedness, public education, and contingency planning standards and guidelines. In the area of spill response, Environment Canada's Environmental Technology Centre in Ottawa purchased two truck chassis and converted them into specialized spill-response vehicles. As well, the Centre's prototype mobile analytical laboratory has been upgraded to allow analysis of a wider range of toxic compounds. This analytical equipment was used at the Oakville, Manitoba chemical train derailment to verify that homes, businesses and feed lots were safe before evacuees were permitted to return to the town.

In the field of prediction and early warning of severe weather, a satellite-based communications system is in place in seven regional offices to receive and process water and meteorological data related to flood forecasting. Weather offices are being modernized. A new supercomputer is operating at the Canadian Meteorological Centre in Montreal. It will improve weather forecasting, improve the information provided in cases of nuclear, volcanic and toxic gas releases and aid in climate change research. There is also a new information service called "Weathercopy" which uses state-of-the-art technology to provide up-to-date printed information on environmental and weather hazards.

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