



Natural Resources Canada

Performance Report

For the
period ending
March 31, 1996

Improved Reporting to Parliament –
Pilot Document

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Foreword

This document was prepared as phase two of the Improved Reporting to Parliament Project which has been established within the Treasury Board Secretariat to improve the Expenditure Management information provided to Parliament, and to update the processes used to prepare this information. This is part of a broader initiative known as “Getting Government Right” to increase the results orientation and increase the transparency of information provided to Parliament.

During the period from August 1995 to June 1996, extensive consultations were held with Members of Parliament and other key stakeholders to examine options to improve the information provided to Parliament. A clear requirement was identified to provide a focus on departmental performance and actual results achieved.

In June, 1996 the House of Commons gave its concurrence to tabling, on a pilot basis, separate performance reports from sixteen departments and agencies. These pilot documents will be evaluated, and if Parliament and others endorse the approach, Parliament will be asked to formally approve the introduction of separate performance reports for all departments and agencies beginning in the fall of 1997.

These documents are also available electronically from the Treasury Board Secretariat Internet site: <http://www.tbs-sct.gc.ca/tb/key.html>

Comments or questions about this document, or the Improved Reporting to Parliament Project, can be directed to the TBS Internet site, or to:

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Natural Resources Canada

Performance Report for the Period to March 31, 1996

A. Anne McLellan

Minister of Natural Resources Canada



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Natural Resources Canada

Who We Are

Natural Resources Canada is a federal government department that specializes in the areas of energy, minerals and metals, forests, and earth sciences. We bring a national and international perspective, as well as scientific and policy expertise, to bear on natural resources issues of importance to Canada.

Our Vision

We will provide the leading-edge science, knowledge, and expertise to position Canada as a world leader in the sustainable development of its land, energy, and forest and mineral resources, and as a quality producer of resource-related products, technologies, research and services.

What We Do

Natural Resources Canada provides four main services to Canadians. We:

- Ensure that **federal policies and regulations** in areas such as the environment, trade, the economy, science and technology, Aboriginal matters, and federal lands will foster resource-based contributions to Canada's economy, while protecting the environment and the health and safety of Canadians;
- Promote Canada's **international interests**, in cooperation with international agencies and other nations, in order to meet Canada's international commitments regarding natural resources, and to maintain access to global markets for Canadian products, technologies, research, and services;
- Conduct leading-edge **science** to generate and transfer the ideas, knowledge, and technologies that Canada needs to use its resources wisely and efficiently, reduce costs, protect the environment, and help Canadians create new products and services; and
- Build a national **knowledge infrastructure** on Canada's land and resources, providing Canadians with easy access to the latest economic, environmental, and scientific information from a variety of sources.

How We Work

Our management philosophy commits us to:

- Maintain **integrity** in the conduct of our work;
- Provide **dedicated** and **efficient** service to Canadians;
- Ensure our programs and priorities respond to the needs of our **clients**;
- Build **partnerships** with provincial, territorial, and federal government agencies, industry, First Nations, universities, environmental organizations, and other countries; and
- Recognize and support the development of our **employees**.

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1.0 Minister's Introduction

Canada's natural resources are central to the country's economy and crucial to its future prosperity. They are also an integral part of our national heritage. My commitment, as Minister of Natural Resources, is to ensure that these riches are developed for the maximum benefit of Canadians and in ways that preserve and protect the environment.

Canada is an established leader in the sustainable development of its energy, forest, and mineral resources, and in the geographic and geoscientific knowledge of its landmass. Natural Resources Canada contributes to this leadership role. Its efforts to foster modern, high-technology resource industries that are environmentally sound and economically viable have helped Canada achieve a worldwide reputation for excellence in resource development.

The year 1995-96 was a significant one for Natural Resources Canada. It marked the culmination of two years of renewal, reorganization, and rethinking, and the beginning of new ways of doing business. As the year progressed, we increasingly saw the rewards of the government's ambitious agenda to cut spending and overhaul and streamline operations.

Following Program Review and other government-wide initiatives, Natural Resources Canada emerged in 1995-96 a stronger, leaner, more sharply focused department. Its work is streamlined into five sectors (down from seven). Its two primary functions – science and policy – are strongly integrated. It dropped funding of megaprojects, reduced endeavours in some fields, and now concentrates on key activities – areas where national effort and coordination are necessary and desired. With reduced dollars and fewer employees, the department has developed new ways of working with partners and increased cooperation, particularly with the provinces and territories, and most notably in the forestry, mining, and geoscience sectors. The result is a more efficient, effective, affordable, and responsive government.

Natural Resources Canada also made significant progress in 1995-96 in addressing the federal priorities of sustainable development, jobs and growth, and health and safety. For example, it developed strategies and policies for the sustainable development of energy, minerals and metals, and forests; it introduced the climate change Voluntary Challenge and Registry Program, and promoted energy efficiency through the Federal Buildings Initiative; it launched GeoExpress, a network for geographically referenced natural resources data; and it addressed international environmental and trade issues related to geomatics, geoscience, forests, and metals and minerals.

These and other important achievements combined to build a platform for the work that now must be accomplished. The department is well positioned to move ahead on its priorities of sustainable development (a prosperous economy, healthy environment, stable communities, and a sustainable future) and good governance (supporting the economic and social union). It has developed a business plan for 1996-99 that specifies nine key objectives and outlines strategies for achieving them. It has also produced this performance report, which reports its progress in meeting these objectives during 1995-96.

The department will fulfill its objectives through the performance of its four main business lines. Partnerships are central to this strategy. The department is working with other levels of government and industry to increase Canada's energy efficiency and reach the twin goals of jobs and growth, and environmental protection. Our researchers and scientists are committed to strong partnerships to develop and commercialize new industrial processes and technologies to boost Canada's competitiveness and maintain the natural resource sector's strong contribution to our annual trade surplus.

For example:

- At the CANMET Western Research Centre in Devon, Alberta, federal researchers are working with their provincial and industry counterparts to develop more efficient, environmentally sound processes to develop Canada's immense oil sands resource.
- At the Mining Laboratory in Val d'Or, Quebec, the department's experts work closely with the mining industry to develop and test the latest innovative technology that will maintain Canada's reputation as a world leader.
- The Geological Survey of Canada will continue to make maps that are among the best in the world – maps that target potential mineral deposits like Voisey's Bay and diamonds at Lac de Gras, reduce the risk of exploration, attract new investment, and help industry create jobs for Canadians in an environmentally sustainable manner.
- As typified by Canada's ten Model Forests and throughout research centres across the country, the department also helps the forest industry implement sustainable forest management practices and plays a key role in discussions with other forest nations to develop a consensus on criteria and indicators, and certification of forest products.

These and other achievements are outlined in this report. Performance reports are an important part of the government's commitment to transparency and accountability. My colleagues and I believe that Canadians have the right to know and to assess the government's plans, initiatives and commitments and its progress in achieving them. Performance reports help provide this information. They are also an excellent evaluation tool for the departments themselves in reviewing and assessing their accomplishments which, in turn, contributes to wise decision making. Natural Resources Canada enthusiastically joins 15 other departments in generating a 1995-96 performance report as a pilot project. Like the other departments, it will use feedback from this documents to continuously upgrade its reporting methodologies.

My department has a diverse set of responsibilities. I cannot overemphasize the complex and challenging nature of the work that stands behind the brief statements of our accomplishments for 1995-96. I am proud of the results my department has achieved and of the contributions of its staff. As Minister of Natural Resources, I am committed to enhancing our nation's role as a leader in wise resource management and land-mass knowledge. I look ahead to the remaining years of this decade with optimism for the country's natural resource sectors and with confidence that Natural Resources Canada will contribute to ensuring that these riches are sustainably developed for the maximum benefit of Canadians.

2.0 Departmental Overview

2.1 Mission Statement

Natural Resources Canada will provide leading-edge science, knowledge, and expertise to position Canada as a world leader in the sustainable development of its land, energy, and forest and mineral resources, and as a quality producer of resource-related products, technologies, research, and services.

2.2 Natural Resources Canada's Business

Our job is to bring our strengths in policy and science to bear on the sustainable development of Canada's natural resources. We are committed to good governance, to the delivery of high-quality products and services, to partnerships with other private- and public-sector organizations, and to protecting the health and safety of Canadians.

The federal government is responsible for such matters as international trade and investment, science and technology, Aboriginal affairs, federal lands, national statistics, and environmental issues. NRCan carries out these responsibilities in the area of natural resources. It also has statutory responsibility for regulating all legal survey work on federal lands, including territories affected by Aboriginal land claims.

Our operations involve four main business lines:

- developing federal policy and regulations;
- promoting Canada's international interests;
- conducting scientific and technical research in the area of natural resources; and
- building Canada's knowledge infrastructure on land and resources.

In addition, the department has two special-purpose business lines. These are:

- sunset/special programs; and
- corporate management and administration.

Policy and Regulations

Our work in policy and regulations depends on close cooperation with all stakeholders and with other government departments with related mandates. The aim of our work is to increase the contribution of natural resource industries to Canada's economy while protecting the environment and the health and safety of Canadians.

Some examples:

- NRCan develops natural resource policies and strategic frameworks such as a new federal Minerals and Metals Policy, the National Forest Strategy, a framework for the management of radioactive waste, and the Science and Technology Management Framework.
- We are working closely with Environment Canada to revise the *Canadian Environmental Protection Act* (CEPA) and with the Canadian Environmental Assessment Agency on further developments of the *Canadian Environmental Assessment Act* (CEAA).
- We advise the Department of Indian Affairs and Northern Development on northern resource and Aboriginal matters, including land claims issues.
- We are a major contributor to the federal science and technology strategy led by Industry Canada.
- We advise the Department of Finance, Revenue Canada, and the Department of Justice on resource-related tax policy and administration issues, such as the review of the Northwest Territories mining royalty regime.

Promoting Canada's International Interests and Influencing the Global Agenda

NRCan promotes Canada's international interests through participation in international agencies. Our goal is to meet Canada's international commitments and to give our products, technologies, and services access to the global market. Our participation is vital, since this market is becoming steadily more competitive and because environmental issues increasingly influence natural resource policies and access to markets.

Some examples of our activities:

- NRCan helped to shape the terms and implementation of the Framework Convention on Climate Change and the Global Convention on Biodiversity.
- We are a major contributor to international work towards a global forest agreement.
- We are closely engaged in work on waste and recycling issues, both domestically and internationally – for example, in relation to the Basel Convention.
- We have been instrumental in establishing and defending Canada's position on the United Nations Convention on the Law of the Sea.
- We have supported the Canadian geomatics industry in securing major international projects, resulting in contracts in excess of \$20 million in 1995-96.

Science and Technology

Science and technology are essential if Canada's resource-based industries are to compete in a world market that is increasingly competitive and sensitive to environmental issues. NRCan both participates actively in scientific and technological research and disseminates information, transferring its own and others' knowledge to the private sector. Discoveries and new technologies will help Canadians create new products and services. Our goal is to contribute to the wise and efficient use of our resources, to cut costs, and to protect the environment.

Some achievements:

- NRCan developed integrated pest-management strategies for forestry, including the biological control of insect pests and competing vegetation.
- Our Mine Environment Neutral Drainage (MEND) Program has brought a number of stakeholders together to develop technologies to control acidic drainage from mines. These and other methods for mine operation and decommissioning will provide significant environmental and economic benefits.
- Working with the Canadian Space Agency, we develop and transfer technology for the acquisition, manipulation, and storage of remote-sensed data, such as the information collected by Canada's RADARSAT program.
- With three other federal departments (Agriculture and Agri-Food Canada, Fisheries and Oceans Canada, Environment Canada), NRCan has signed a Memorandum of Understanding (1995) to coordinate science and technology for sustainable development. This will help ensure that our respective research programs will be better coordinated, more efficient, and more cost effective.
- Working with 12 other departments and Crown corporations, NRCan implements the federal Program of Energy Research and Development (PERD), which supports the development of science and technology to enable Canada to produce and utilize its energy resources in an environmentally responsible and cost-effective fashion. Many of the S&T accomplishments mentioned in Section 3 of this report used PERD funds.
- An Intergovernmental Geoscience Accord was developed for signature by federal, provincial, and territorial ministers at the 1996 Mines Ministers Conference. The outcome will be an improved collaboration in the geosciences across Canada.

Knowledge Infrastructure

In partnership with provincial governments, universities, and the private sector, NRCan continues to build a national knowledge infrastructure for Canada – a rich database of technical, scientific, and economic information that the public can access. To make informed decisions, Canadians need data on our land, the networks that connect us, and the resources available for our use. This infrastructure is just as important as the physical infrastructure of road, rail, and air carriers. Knowledge is key to any nation's economic progress. Our goal is to build a natural resource knowledge infrastructure in Canada to improve our prospects for economic and social growth.

Our initiatives include the following:

- The Exploration Technology Program (EXTECH) develops new ideas and technologies to replenish Canada's base metal reserves.
- The National Geoscience Mapping Program (NATMAP) is a multi-disciplinary and multi-agency program to improve our geological database, both for resource industries and for environmental concerns.
- The National Atlas Information Services (NAIS) provides on-line access to information about Canada's landmass. It was one of three pioneer information technology initiatives discussed at the 1995 G7 Summit in Halifax.
- The National Forestry Database compiles national forestry statistics, with the cooperation of provincial and territorial forestry agencies.
- The National Energy Use Database collects and analyzes national data on energy conservation at the end-use level, on the characteristics of buildings and energy-using equipment, on the attitude and behaviour of Canadian consumers towards energy use, and on the adoption of energy-efficient technologies.

Sunset/Special Programs

This business line groups support programs such as megaprojects, mineral development agreements, and forest research and development agreements, all of which are being phased out as a result of government decisions, as well as boundary surveys for comprehensive land claims which have a definite end date.

Corporate Management and Administration

This business line represents the corporate management that administers the department's internal functions. It provides: coordination and managerial direction; administration of environmental activities; communications; Cabinet and Parliamentary liaison; financial, human resources, administrative, internal audit, and program evaluation services; and information management/information technology and other support services to departmental operations.

3.0 Performance Information by Objective

Objective: To integrate economic, environmental, and social factors into Canadians' decisions regarding natural resources.

Objective: To expand the potential for economic growth and job creation based on the sustainable development of Canada's natural resources.

Objective: To encourage efficient resource development and use, and minimize the environmental impacts.

Objective: To work with Canadians to achieve our international climate change commitments.

Objective: To maintain and expand access to foreign markets for resource-based products, technologies, and services.

3.1 Departmental Objectives

Sustainable development is based on integrating economic development and environmental protection with human well-being and quality of life. In *Creating Opportunity*, the government committed itself to promoting sustainable development, and stressed the need for federal departments to adopt environmental and economic agendas that converge.

Natural resources are critical to achieving the government's commitment to promote sustainable development. Much of Canada's wealth is based on its rich endowment of natural resources. More than 500 communities and 1.75 million Canadians depend on a productive resource base for their livelihood. But Canada's natural resources are equally important environmental assets. Canada's landmass harbours 20 per cent of the world's fresh water, 10 per cent of the world's forests, and an estimated 300,000 species of wildlife.

NRCan believes in developing Canada's resources in a way that will provide long-term economic and social benefits to Canadians while protecting a healthy environment. For example, through the **National Forest Strategy**, the **Whitehorse Mining Initiative** and the **National Action Program on Climate Change**, NRCan is working with a broad base of stakeholders. Our joint goal in these programs is to identify the challenges we face in moving towards sustainable development and to find ways of meeting them. NRCan provides the science, technology, and policies needed to make the best of our natural gifts. We are committed to continuously finding, developing, and using resources more efficiently. We must generate new, environmentally sound products and processes. And, finally, we must minimize all impacts on the environment.

Based on this commitment to sustainable resource development, NRCan works to create a climate that will attract investment to resource industries and ensure access to international markets for natural resource products, services, and technologies.

NRCan also carries out a number of activities in support of the government's commitment to good governance. This includes our continuing contribution to the health and safety issues within our mandate, to creating and maintaining a knowledge infrastructure as a basis for economic and social development, and to collaborating with the provinces in areas of common interest. NRCan also supports good governance through its commitment to providing Canadians with products and services of the highest quality.

These objectives are in response to the challenges of implementing our key priorities of sustainable development and ensuring good governance. They form the basis for reporting on our annual performance. Key commitments and accomplishments, with performance indicators where available, are listed under each objective by business lines. These accomplishments, in fact, often contribute to meeting more than one objective. This section attempts to take the key accomplishments from the 1996-97 Part III Expenditure Plan document Supplementary Information and match these accomplishments to business lines and departmental objectives. As considerable time has gone by since the Expenditure Plan was tabled in Parliament, this report should be considered to more accurately reflect the department's results for 1995-96.

Natural Resources Canada is in transition as it changes over to a results-based management culture. The department is at the beginning of a long-term process, and therefore it is not in a position to compare planned commitments and outcomes with actual results and outcomes to the extent it would like. As the department improves its capability to plan and track its activities within the new results-based culture, the quality of performance reporting to Parliament will improve significantly.

Objective: To deliver federal responsibilities in partnership with provincial and territorial governments, and stakeholders.

Objective: To help Aboriginal communities manage their natural resources.

Objective: To protect the health and safety of Canadians.

Objective: To provide the information on Canadian land and resources needed for informed decision making.

3.2 1995-96 Accomplishments against Commitments

Objective 1

To integrate economic, environmental, and social factors into Canadians' decisions regarding natural resources

Sustainable development involves making better decisions – decisions that integrate the economic, environmental, and social dimensions of resource development. The federal government, through its regulatory responsibilities, and environmental and economic policies, can have a significant impact upon resource development.

NRCan works with other departments to ensure that federal policies, programs, and regulations, including those of NRCan itself, integrate economic, social, and environmental values and support sustainable development. NRCan also develops the information and technology to give Canadians user-friendly access to the latest scientific, economic, and social information, integrating data from a variety of sources.

Strategy

NRCan's strategy to achieve this objective is to:

- build an understanding of sustainable development principles and approaches;
- seek consensus on goals and action plans in specific areas;
- develop policy frameworks to support sustainable development;
- measure progress towards the sustainable development of natural resources; and
- create an easily accessible knowledge base on economic, environmental, and social factors to support decisions.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Policy and Regulations</i>	
Participate in the environmental assessment and review of new uranium projects in Saskatchewan	As requested by the Environmental Assessment and Review Panel, successfully presented the federal position on the uranium export policy, and the global supply and demand situation.
Develop federal-provincial environmental assessment agreements for the Terra Nova and Sable Island offshore projects	Established teams of regulators and federal/provincial government representatives to negotiate relevant agreements. As of March 31, 1996, these agreements were in the final draft stage.
Make public a federal policy framework for sustainable development of minerals and metals	In September 1995, released an issues paper and held follow-up consultations with other departments, provincial mines ministries, and non-governmental organizations. These consultations have focused on the elements of a new federal policy.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Policy and Regulations (continued)***

Through fact finding, focus groups and consultation with stakeholders, made progress on issues raised under the Building a More Innovative Economy (BMIE) initiative. Particular progress was made on the following:

- Preparing a draft Canada-British Columbia agreement for environmental assessments by an appropriate single agency.
- Developing new guidelines under the *Fisheries Act* on what constitutes harmful alteration of fish habitat and a new directive on the application of the fish habitat policy.
- Finalizing terms of reference for mineral and energy resource assessments of proposed national parks in the North.
- Providing expertise for the development of the Federal Toxic Substances Management Policy tabled by Environment Canada.

In October 1995, organized a seminar on regulatory reform which helped focus future efforts related to fish habitat management, environmental assessment, and land use.

Business Line: Promoting Canada's International Interests

Participate in the negotiation of a protocol to the Framework Convention on Climate Change

Worked with Foreign Affairs and International Trade Canada and Environment Canada to ensure that the international mandate reflected Canada's interests.

Assist the Organization for Economic Cooperation and Development (OECD) in the formation of its risk-reduction programs for lead, cadmium, and mercury

In conjunction with Environment Canada, negotiated an OECD Ministerial Declaration that recognizes that lead can be used safely when properly managed; developed criteria for the selection of future candidate substances for the risk-reduction program.

Participate in international/domestic protocol meetings and initiatives related to atmospheric emissions

Convinced other countries participating in the Protocol on Heavy Metals to focus on three metals – lead, mercury, and cadmium – and to include science-based provisions for adding additional metals at a later stage.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Science and Technology

Provide advice and expertise in the field of environmental geochemistry to address a number of domestic and international initiatives related to toxic substances in the environment

Began cooperative studies under a three-year Memorandum of Understanding, signed in January 1996 by NRCan, Environment Canada, Agriculture and Agri-Food Canada, and Fisheries and Oceans Canada, on S&T for sustainable development. These will lead to a better understanding of the contributions from natural and industrial sources of metal loadings in the environment.

Participated in the development of the guidance document that will be used in the risk assessment of the second list of priority substances under the *Canadian Environmental Protection Act*.

Completed and delivered to the UN Committee on Environment and Development a report on natural sources of metals.

Provide advice and expertise in the field of metals recycling to the OECD and Basel Convention to support the principles of safe use of metals and sustainable development

Attended the Basel Technical Working Groups, visited selected countries with significant recycling industries and interests, and coordinated and assisted in the evaluation of submissions to the OECD review mechanism.

Provide technical, policy, and economic advice to the Strategic Option Process (SOP) for Steel, Metal Finishing and Base Metal Smelting to support science-based regulatory and voluntary initiatives

Participated in all SOP meetings for these sectors. For the Base Metal Smelting SOP, NRCan is helping to direct the contractor who is supplying background information.

Establish Metals and the Environment Program to support development of environmental policies and regulations based on sound science

Established this program.

In September 1995, played a leading role in a successful OECD workshop on cadmium in Sweden that reduced the likelihood of restrictive trade barriers against Canadian exports containing cadmium.

Played a leading role in the organization and delivery of two successful workshops on aquatic toxicity, bioaccumulation, and biopersistence for sparingly soluble metals and mineral compounds. The OECD is using the workshop findings to develop criteria to determine whether such substances are hazardous and, if so, to what degree.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Science and Technology (continued)***

Implement the CFS's (1994) Strategic Plan for Science and Technology 1995-2000, "Towards a New Era in Sustainable Forestry"

In collaboration with clients and stakeholders, established 10 national research networks designed to integrate the key objectives of the strategic plan. Network staff conduct research and develop technologies in the areas of Forest Health, Climate Change, Biodiversity, Forest Ecosystem Processes, Forestry Practices, Advanced Genetics and Tree Biotechnology, Landscape Management, Pest Management Strategies and Methods, Fire Management, and Socio-economic Research.

Business Line: Knowledge Infrastructure

Coordinate Arctic logistics support to a variety of geological mapping programs in aid of mineral exploration in the Northwest Territories and to a wide range of related environmental impact studies

Provided support to 179 Arctic programs, including a variety of federal and territorial geological mapping and mineral assessment projects. Also supported research into indicators and impacts of global climate change and into the impact of economic development on northern renewable resources.

Provide ongoing support for Canada's Model Forest Program under the Partners in Sustainable Development of Forests initiative

In 1995-96, supported 10 model forests across Canada that managed an estimated 300 projects, ranging from socio-economic analyses to wildlife research, and testing and demonstrating alternative forest management practices.

An evaluation of the program indicated that important progress has been made in furthering sustainable forest management, such as establishing partnerships among diverse groups and developing tools for sustainable forest management. The study was overseen by a national advisory evaluation committee, which recommended that the program be modified and extended for five additional years.

Objective 2

To expand the potential for economic growth and job creation based on the sustainable development of Canada's natural resources

Natural resource industries employ almost 750,000 Canadians and indirectly support jobs for more than one million other workers. A substantial proportion of resource employment is in highly skilled, high-wage jobs.

Canadian resource firms are part of highly competitive global industries. Their success will depend on their ability to market their products and services, and attract investment funds. Globalization will increase competitive pressures on both investment and market access into the next century.

The economic benefits from mining, forestry, and energy activities are of particular importance to rural Canada. Natural resources are the backbone of rural economic development in Canada, with more than 500 predominantly rural communities largely or solely dependent on mining, forestry, and energy. A significant portion of NRCan's work contributes directly or indirectly to rural communities, attracting more investment in resource development and stabilizing communities that depend on natural resource industries.

Strategy

NRCan's strategy to achieve this objective is to:

- develop policy and regulatory frameworks that support industry competitiveness and attract investment in natural resource industries;
- contribute to the development of an efficient fiscal regime for Canada's natural resources through work with the Department of Finance;
- enhance economic development opportunities for rural Canada;
- use S&T to increase productivity in resource industries and to develop new products and processes;
- support the development of "green" technologies; and
- provide the knowledge and information necessary to encourage resource development.

1995-96 Commitments	1995-96 Accomplishments
<i>Business Line: Policy and Regulations</i>	
Continue to monitor the federal government's interest in the Hibernia project and implement new procedures for monitoring the Lloydminster Bi-provincial Upgrader, the Newgrade Upgrader, and the Vancouver Island Pipeline	Successfully monitored all projects in accordance with project agreements. Developed and implemented new procedures for monitoring the Lloydminster, Newgrade and Vancouver Island Pipeline projects. Delivered contributions, loans, and loan guarantees to projects in accordance with terms of agreements.
Continue to actively serve as a focal point for discussion of bilateral issues involving transmission access and electricity export regulation. Continue to support the federal negotiator in internal trade negotiations	Developed federal policy options on transmission access and electricity export regulation. Provided support for the work of the round table on electricity and for the federal negotiator in the internal trade negotiations.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Policy and Regulations (continued)</i>	
<p>Launch a new program to help federal institutions meet the government objective of a 30 per cent reduction in greenhouse gas emissions from vehicles by the year 2000</p>	<p>Launched the FleetWise program to increase energy efficiency and the use of alternative fuels in the 25,000 motor vehicles in the federal fleet.</p>
<p>For the explosives industry, extend innovative initiatives, including multi-year licensing, and an Internet web site which provides permit and licensing information for clients.</p>	<p>Completed the preparatory work for a six-month pilot test, scheduled for the summer of 1996, of multi-year licensing.</p> <p>On January 30, 1996, established a World Wide Web site, making explosives information and client services available electronically. Clients are now accessing information on licensing, regulations, and symposia via the new web site.</p> <p>Multi-year licensing and Internet access will reduce costs and paperwork, and will increase efficiency for NRCan and its clients.</p>
<i>Business Line: Promoting Canada's International Interests</i>	
<p>Develop, in collaboration with federal and provincial governments and private industry, the geomatics component of a 1996-97 Canadian International Business Strategy</p>	<p>In cooperation with more than 50 other contributors, completed strategy on geomatics. This strategy resulted in an estimated 15 per cent increase in private-sector geomatics exports, and contributed to the development of international joint ventures and partnerships.</p>
<p>Secure funding for international bidding opportunities in geomatics</p>	<p>Received Treasury Board permanent approval for Geomatic Canada's revolving fund. International contracts in excess of \$20 million were awarded to Canadian industry as a result of having this financial flexibility to secure bids and strengthen our relationships on the international market.</p>
<p>Continue to advise on the competitiveness of Canada's mineral industry by monitoring and analyzing ongoing changes in the investment climates of mineral-producing jurisdictions throughout the world</p>	<p>Led and provided expert market intelligence and advice to Canadian delegations on metals, industrial minerals, and coal, thereby improving Canadian industry's position in international negotiations affecting our exports of minerals and metals.</p> <p>Completed a study on Canada's international competitiveness in iron ore that has improved the forecasting of prices and markets for Canadian iron ore. This information is already being used by clients, such as the Labrador West Chamber of Commerce.</p>

1995–96 Commitments

1995-96 Accomplishments

Business Line: Promoting Canada's International Interests (continued)

Organized seminars internationally to promote increased investment in Canada, using a "Team Canada" approach and working with provinces and industry. Such seminars have fostered the investment of \$200 million in Canadian mining over the past three years. Received positive feedback from the provinces and industry.

Advised Canadian trade negotiators on general trade policy liberalization commitments and on the tariff and non-tariff concessions that Canada should seek on country accessions to the World Trade Organization (WTO) and in ongoing bilateral trade negotiations with Chile.

Ensured that Canadian positions at the WTO's Trade and Environment Committee reflected Canada's natural resource interests.

Follow up the work of the Interdepartmental Task Force on Mineral and Metal Exports from the former Soviet Union

Led a successful industry, provincial, and federal government mission to mines and processing facilities in the Commonwealth of Independent States, and conducted meetings with counterparts to evaluate competitiveness and find areas for cooperation.

Business Line: Science and Technology

Continue to provide technical support for the metallurgical fuel and steel industry

Through the CANMET Energy Technology Centre, undertook more than 30 projects on behalf of industry, contributing to increased exports of Canadian metallurgical coals despite a shrinking market. Modelling and pilot plant testing also contributed to increasing the use of natural gas in the manufacture of steel by a major Canadian producer.

Conduct research and development to support industrial growth in all stages of the mineral and metal industry

Joined the Mine Automation Program, a major international partnership to develop technology for automation of underground equipment.

Developed skills and techniques for forming high-performance materials. Funded research to produce consistent and reliable galvanized steel products. Began discussions on the industrial scale-up of the process. This project has generated \$400,000 over four years.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Science and Technology (continued)***

	<p>In mid-1995, launched the Mobile Foundry Laboratory (MFL), which had visited 14 sites in five provinces by year end. MFL identified ways to reduce costs, recycle and use wastes, increase productivity, improve casting quality and performance, and help ensure processes and products meet current and future sustainable development criteria. For example, one energy recommendation helped save 100 jobs as a result of a 66 per cent reduction in energy used in melt operations.</p> <p>Set up experimental facilities for metal powder injection molding.</p> <p>Improved gold processing performance through research on better operating practices.</p>
<p>Provide backfill research through the Sudbury Laboratory pilot plant</p>	<p>Developed improved technologies for mine backfill operation, resulting in lower costs, faster completion of backfill operations, and more stable closure of mines. The technology, which has resulted in eight new patents in the last two years, is presently undergoing trials on an industrial scale in a commercial mine. It is also being licensed to a Canadian engineering firm.</p>
<p>Conduct an evaluation of the Industrial Partners Program</p>	<p>Found that the program enabled most partners to conduct R&D work that would not otherwise have been done. Participation of the Geological Survey of Canada (GSC) was critical to the success of the project. The economic impacts to date total \$3 million, with \$144 million anticipated over the next five years from an investment of \$4 million shared equally between GSC and its partners.</p>
<p>Conduct forest protection research in the control of those insects which threaten Canada's forests and the development/implementation of environmentally safe products and methods</p>	<p>Refined products and techniques to control defoliating insects such as the eastern spruce budworm. Continued to refine the virus to control the gypsy moth.</p> <p>Acquired temporary registration for a biological pest control agent for use against the eastern spruce budworm. Full registration is expected in 1997-98 following a review by Health Canada's Pest Management Control Agency.</p>

1995–96 Commitments

1995–96 Accomplishments

Business Line: Science and Technology (continued)

Conduct forest production research with emphasis on the development and implementation of decision support systems to give forest managers the technical capability of reviewing sustainable forest options and increasing their ability in selecting the most appropriate option

Some 55 million hectares of forest were infested with the spruce budworm in 1974. This was reduced by 91 per cent, to 5.12 million hectares by 1994, through the use of this biological control agent, combined with the natural life cycle of insects.

Developed a national automated system to help researchers predict the environmental impact of forest pests such as jack-pine budworm and bark beetles.

Advancement of fire management techniques with emphasis on providing national fire behaviour maps and six-day forecasting to the national fire information system

Completed the national fire behaviour maps; added fire activity statistics to the Internet; and added three-day forecasting to the national fire behaviour system. Linked Canada's fire management activities with G-7's initiative of developing a Global Emergency Management Information Network.

Advancement of biological techniques to encourage the development of genetically superior trees for difficult to grow and/or environmentally sensitive seeds and seedlings

Through a research process called "somatic embryogenesis", continued to refine techniques for the rapid regeneration of larch, spruce, and pine trees. This process allows for the multiplication of a single seed into hundreds of plants, allowing rapid establishment of new forests.

Provide funding support to Forintek Canada Corporation and the Forest Engineering Research Institute of Canada (FERIC) for use in operational research

Helped Forintek develop the ATHENA software program, designed to help architects determine the environmental suitability of combining various construction materials for use in buildings. The program was presented to scientific communities in North America and Europe, and a plan was developed to help secure funding for the continued development of the ATHENA prototype.

FERIC optimized its harvesting and silvicultural systems to assist forest users in establishing economical and environmentally sound alternatives to traditional clear-cut systems.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Knowledge Infrastructure</i>	
Commence, under partnership arrangements, the Geographic Information Systems (GIS) Development Program designed to strengthen the competitiveness of the Canadian geomatics industry by supporting GIS applications development and technology transfer	Selected eight companies for the program. Total funding (matched by client funding) was \$150,000. The work completed by Canadian industry resulted in technological advancement that can be marketed by companies. Jobs were created as a result of participation in the program, and several companies gained national and international business opportunities, resulting in economic growth and generating up to \$1 million in revenue.
Contract out the addition of 850 new topographic digital files	Completed contracting out of 850 files. Completed 778 new National Topographic Database files.
Complete the National Topographic Database (NTDB) at a scale of 1:250,000	On January 8, 1996, completed full 1:250,000 coverage of Canada.
<i>Business Line: Sunset/Special Programs</i>	
In collaboration with appropriate provinces and territories, design and implement a geoscience program and/or federal exploration stimulation program, a technology program, an economic development program, and a public information program	Successfully completed a five-year program on mineral development in all Atlantic and western provinces. The Ontario and Quebec programs are continuing. Expended \$13.1 million in 1995-96.
Finish Mineral Development Agreement projects with British Columbia, Manitoba, and Saskatchewan	Developed a cooperative mining program for the B.C. Institute of Technology; participated with the Prospectors and Developers Association of Canada in the development of "Mining Matters" (a teaching kit for grades 6 and 7 that was tested in Ottawa and Toronto with good results); and developed curriculums for education about mining for schools in Manitoba, Saskatchewan, and Ontario.
Administer the final pay-out provisions of the Forest Resource Development Agreements (FRDAs) remaining in effect with Quebec, British Columbia, and the two territories	Administered federal FRDA expenditures totalling \$53.6 million for projects in forest science R&D, technology transfer, communications and public awareness, and silvicultural treatment.

Objective 3

To encourage efficient resource development and use, and minimize the environmental impacts

Sustainable development can be advanced through policies, programs, and technologies. These should encourage efficient resource extraction, processing and use; support re-use and recycling; and develop environmentally sound alternatives. We need to develop and promote new processes, practices, materials, products, and energy sources that generate fewer pollutants and waste products, and present fewer risks to human health and the environment.

These measures can not only reduce environmental risks and conserve resources, but also have real economic benefits, by reducing costs and creating new business opportunities in the marketing of “green” technologies, services, and products, and contributing to the creation of new jobs.

Strategy

NRCan’s strategy to achieve this objective is to develop and implement policies, programs and regulations, and to develop technologies that:

- increase efficient use and recycling of resources;
- minimize the impacts of resource development and use on the environment; and
- develop and promote renewable energy sources.

1995–96 Commitments	1995–96 Accomplishments
Business Line: Policy and Regulations	
Publish for comment the second regulation under the <i>Energy Efficiency Act</i> , establishing and increasing energy efficiency performance levels	Implemented an amendment to the Energy Efficiency Regulations that establishes energy performance levels for fluorescent and incandescent reflector lamps.
Facilitate comprehensive energy efficiency upgrades and building retrofits in federal government departments, agencies, and Crown corporations through the Federal Buildings Initiative (FBI)	Encouraged the private sector to commit, by March 1996, to investing \$120 million in energy efficiency retrofits, which will yield an estimated \$17 million in energy savings per year.
Business Line: Promoting Canada’s International Interests	
Fulfill Canada’s commitment made at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 (i.e., Earth Summit) for supporting the development of a first international model forest in Malaysia, a second in Russia, and a third in Mexico	Provided professional and technical support to Malaysia, Russia, and Mexico, which assisted in the creation or consideration of these international model forests. The International Model Forest Secretariat (IMFS) was transferred from the CFS to the International Development Research Centre on September 1, 1995.
	An International Steering Committee and a Technical Advisory Committee were established to provide guidance to the international model forest network.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Promoting Canada's International Interests (continued)***

Address international issues and concerns relating to the forest sector

Provided advisory and technical support in the Pinewood Nematode dispute with the European Union and the Softwood Lumber Trade dispute with the United States.

Business Line: Science and Technology

Provide technical and financial support for the construction of approximately five new commercial buildings (some high-rise residential and some office buildings) under the C-2000 Program. These buildings will set a new standard for energy efficiency, quality and occupant comfort, and will better respond to other environmental concerns

Under the C-2000 Program, provided technical advice and financial support for the construction of one commercial building and one residential building that consume half the energy and one-quarter the water of conventionally built buildings. In addition, provided technical advice and financial support for the design of three other buildings.

Conduct evaluation studies of the R-2000 and Advanced Houses programs

Found that R-2000 Program met its objective to generate savings and to reduce greenhouse gas emissions. More than 25 per cent of the energy savings achieved through improvements to conventional housing from 1981 to 1995 can be attributed to the R-2000 Program. It has provided a measure of stability for the building community, and its training and certification component has become a mark of distinction for high-quality, innovative builders. It has had a strong, long-term influence on the development of more energy-efficient building codes, technologies, and practices used in conventional houses.

The Advanced Houses Program's contributions of \$2 million for projects leveraged about \$6 million in funding from partners and suppliers. It raised NRCan's profile in the residential construction sector, fostered Canada's international reputation as a leader in residential housing, created new alliances and partnerships, and fast-tracked many innovative technologies.

Apply CANMET hydrotreating technology in an industrial demonstration biofuel plant to be built and commissioned in Prince George, B.C. The plant will convert a by-product of kraft pulping into a booster used for cleaner diesel fuel combustion, creating a value-added product, increasing pulp mill productivity, and resolving an environmental disposal problem for pulp mills

Successfully demonstrated hydrotreating of the pulping by-product (tall oil) in the department's pilot plant facilities and in field tests in fleet vehicles in a number of Canadian cities. The product may be used as a cetane enhancer for cleaner diesel fuel. Two companies based in B.C. are developing a business plan for the demonstration plant.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Science and Technology (continued)</i>	
Assist in developing new home appliances that will exceed by 15 per cent the energy efficiency standards coming into force in North America	Through the CANMET Energy Diversification Research Laboratory, helped a major Canadian manufacturer develop cost-effective means to improve by 15 per cent the energy efficiency of clothes dryers. This will allow the manufacturer to double its manufacturing volume, maintain 600 jobs and create 200 new ones.
Develop and apply, in conjunction with Canadian industry, computer simulation and expert systems to combustion applications in order to improve system operability, thereby improving efficiency and reducing emissions	Through the CANMET Energy Technology Centre, initiated, on behalf of a private-sector client, an expert system to predict emissions of nitrogen oxides (NO _x). Deployment of the system will save the client between \$5 and \$10 million and will reduce pollutant emissions.
As part of the Hydrogeology Program: Map the Oak Ridges Moraine to aid in the search for new water supplies and safe areas for landfill operations in the Greater Toronto area. Research methodologies developed here will be applied to this problem elsewhere in Canada	Completed 1:20,000 mapping for the Oak Ridges Moraine and tested new research technologies. Research data indicate that the groundwater potential of the Moraine is significantly greater than previously considered. This may have major cost savings for the Greater Toronto area.
Develop models of groundwater flow and aquifer productivity in the lower Fraser Valley	Developed new models resulting in improved understanding of the hydrogeologic condition in this area. These models attracted substantial interest and support from municipal and provincial governments, and the private sector.
Exploration Technology Program (EXTECH)	Initiated new five-year project in Bathurst mining district. Major airborne geological surveys completed.
Undertake airborne geophysical surveys in the second EXTECH project in Bathurst, N.B., mining district	<p>Surveys undertaken.</p> <p>Industry attended a workshop to interpret survey data.</p> <p>Major claim staking took place in anticipation of release of survey data, resulting in revenue for the province.</p> <p>Data released – some clients have pre-paid for data products.</p> <p>The ability of industry to use the data will result in NRCan revenues from the sale of conventional and digital products.</p>

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Science and Technology (continued)</i>	
<p>Conduct environmental research with emphasis on understanding forest ecosystem functions, biodiversity, and the role of forests in global climate change</p>	<p>Worked with Environment Canada to release Canada's biodiversity strategy in the fall of 1995. This strategy encourages biodiversity research and monitoring, education and awareness, conservation incentives and legislation, information sharing, and international cooperation.</p>
<p>Under the Aquatic Effects Technology Evaluation Program, conduct a pilot project to develop cost-effective field methods for monitoring biological impacts, and impacts on water and sediment chemistry</p>	<p>Completed work to identify suitable techniques for field investigations in assessing the quality of waters in which mine waters are disposed. This ongoing program is in partnership with an industry association and other federal and provincial government departments.</p>
<p>Mine Environmental Neutral Drainage (MEND) program and the Mine and Mill Effluents Program will conduct research directed at reducing mine close-out liabilities associated with acid mine drainage</p>	<p>Conducted ongoing research on reducing the potential for, and the negative impacts of, acidic drainage from mine wastes. The principal strategy for the prevention of acid mine drainage (AMD) is the use of water covers or underwater disposal. Started a large field and laboratory study to confirm the use of a water barrier as an effective means of preventing sulphide oxidation.</p> <p>CANMET developed a new technology which may prevent AMD. The use of specific inhibitors to prevent bacterial oxidation (which may cause AMD) has been patented.</p>
<i>Business Line: Sunset/Special Programs</i>	
<p>Implement the program commitments under the Green Plan initiative; integrate aspects of the Green Plan's research component into the CFS's S&T program; and phase out Tree Plan commitments by 1997-98</p>	<p>Completed research activities under the Green Plan; transferred research results and new technologies to forest managers and integrated aspects of the Plan's R&D activities into the CFS's S&T program.</p> <p>Coordinated and supported 69 organizations and associations in the planting of 16 million trees; supported 90 municipalities and communities (through Green Street Canada) in the planting of 300,000 trees; and secured \$4 million from 16 corporate sponsors to support community tree planting programs and advertising activities across Canada.</p> <p>1995-96 marked the fourth year of the Tree Plan program. Since its inception, 1,200 tree-planting projects were conducted, resulting in the planting of 29 million trees across Canada.</p>

Objective 4

To work with Canadians to achieve our international climate change commitments

Climate change is an important issue for NRCan. An estimated 87 per cent of Canada's greenhouse gases are energy related. Forests play a crucial role in climate stability, removing carbon dioxide from the air and storing it in vegetation and soils.

Canada, along with 150 other nations, is a signatory to the international Framework Convention on Climate Change. The convention commits Canada and other developed nations to work towards the stabilization of their emissions of greenhouse gases (such as carbon dioxide) at 1990 levels by the year 2000. Current estimates indicate that Canada's emissions levels will be approximately 13 per cent above 1990 levels by the year 2000.

Canada must actively work with other nations to develop coordinated international responses to global climate change issues. International negotiations are under way to amend the convention to include possible further commitments for beyond the year 2000.

Within Canada, action on climate change requires the cooperation of federal, provincial, and local governments, as well as industry, environmental groups, and the general public. Canada's response is coordinated through the federal, provincial, and territorial ministers of energy and environment. Working in partnership, Canada has developed the National Action Program on Climate Change that will help reduce emissions of greenhouse gases.

Strategy

Working in partnership with Environment Canada, NRCan's strategy to achieve this objective is to:

- monitor progress towards objectives;
- encourage action by individuals and firms;
- conduct research to increase the understanding of climate change and its potential impacts and to develop cost-effective mitigation options;
- develop technologies to reduce greenhouse gas emissions; and
- build international consensus for cooperation and action.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Policy and Regulations

Further develop the National Action Program on Climate Change (NAPCC), including a wide-ranging voluntary program for limitation of greenhouse gas emissions

Worked with other departments and provinces to develop the NAPCC. It was finalized, signed off by ministers and tabled in Berlin. Launched the climate change Voluntary Challenge and Registry (VCR) Program. Significant emitters in all sectors have signed onto this program.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Science and Technology</i>	
Encourage the development of technology that facilitates the capture of carbon dioxide (CO ₂) from combustion systems	A consortium consisting of Canadian utilities, Environment Canada, Alberta, and the U.S. Department of Energy was established to investigate means of capturing CO ₂ in combustion systems through the use of a unique pilot plant facility at CANMET Energy Technology Centre (CETC).
Provide technical assistance to developing nations to improve the efficiency with which energy is produced and used	Through CETC, helped a Canadian company to expand its international operations, by conducting combustion modelling for coal-fired boilers in China and training Chinese nationals in modelling techniques.
Provide technical assistance to communities regarding district energy systems	Provided technical assistance through CETC to enable the Windsor Utilities Commission to finalize contracts on a 19 MW th heating system and a 19 MW th cooling system, to be commissioned in September 1997.
Contribute to climate change science to increase our understanding of climate, develop mitigative measures, and assess impacts of possible future changes on the climate	<p>Through the Canadian Forest Service (CFS), pursued the development of a carbon budget model of Canada's forests that assesses the effects of climate change.</p> <p>The CFS continued to develop a national system for use in forecasting fire weather under changed climatic conditions.</p>
<i>Business Line: Knowledge Infrastructure</i>	
As part of the BOREAS project, analyze researchers' data, from below the soil surface to the top of the Earth's atmosphere, and provide the results needed to predict the interaction between climate change and the boreal forest	<p>Developed improved remote sensing processing techniques for atmospheric correction, land-cover classification, retrieval of leaf area index, and canopy-absorbed photosynthetically active radiation.</p> <p>Established and published cross-Canada vegetation and global radiation products on the Geomatics Canada World Wide Web site.</p>

Objective 5

To maintain and expand access to foreign markets for resource-based products, technologies, and services

Canada's natural resource industries are strongly oriented to international markets, and market access is therefore crucial. These industries have benefitted from the freer trade that has been established with many of Canada's trading partners. Maintaining international agreements and trading rules will help to preserve this market access.

NRCan is also working through international agencies, including international commodity organizations, to ensure that trade in natural resource products is not unnecessarily restricted on the basis of environmental considerations. NRCan's expertise helps assess the scientific basis of proposed trade restrictions or develops alternative processes acceptable to our trading partners.

International consumers are demanding assurance that the products they buy do not compromise the quality of the environment. NRCan is working with industry, and the provinces and territories to demonstrate that the development and management of our natural resources are based on the principles of sustainable development.

Strategy

NRCan's strategy to achieve this objective is to:

- support rules-based trading;
- produce the expertise and information necessary to ensure that rules of trade are based on sound science;
- develop internationally accepted standards and criteria for sustainably developed products and services; and
- promote the export of Canadian natural resource related products, services, and technologies through the Canadian International Business Strategy and in cooperation with industry.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Promoting Canada's International Interests

Monitor bilateral natural gas trade issues and growing export sales to the U.S. market, focusing primarily on the development of legislation and regulations that impact on the Canadian natural gas export industry

Held bilateral meetings with U.S. and Mexican officials to remove or prevent trade barriers and enhance market access for Canadian natural gas exporters.

Provide support to Canadian industry through the international marketing of Canadian geomatics capabilities and the initiation of partnerships and cooperative ventures

Through Geomatics Canada's promotional efforts, Canadian companies were awarded nearly \$20 million in contracts in 1995-96, with major contracts in Russia, Indonesia, Malaysia, Saudi Arabia, and the Caribbean.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Promoting Canada's International Interests (continued)***

With the participation of industry, completed:

- incoming/outgoing missions (Asia, Russia, Mexico, and Africa);
- the implementation of an agricultural productivity monitoring system in Poland (CIDA funding);
- geomatics technology for a land reform program in Russia (CIDA funding);
- satellite image-mapping of Qatar; and
- a demonstration project in Angola for the United Nations.

Developed and published promotional material on GIS and Global Positioning Systems (GPS).

Continue to provide support internationally for Canada's minerals and metals industry

Undertook a mission to seven countries in Asia to assess markets and their national policies with respect to the regulation of recycled metals. This enabled officials in those countries to better appreciate Canada's position in negotiations on the Basel Convention on hazardous wastes.

At the request of the Canadian Association of Mining Equipment and Services for Export, prepared and carried out an export promotion mission to Mexico, which resulted in over 100 contacts with Mexican representatives engaged in the sale of products and services to the Mexican mining equipment and services market.

Wrote the "Minerals and Metals" chapter of Canada's International Trade Business Plan, and ensured that opportunities for the mining equipment and services sector were properly reflected in this publication.

In December 1995, organized a successful Canada-European Union technical workshop in Brussels on biodegradation and bioaccumulation of metals and metal compounds, which examined these criteria in relation to hazard identification and risk assessment of metal and metal compounds.

Work with the international forest community to lead the way in further defining criteria and indicators for sustainable forest management in temperate and boreal forests

In 1995, participated in the first international meeting of ministers responsible for forests hosted by the Food and Agriculture Organization (FAO). Joined nine other countries in endorsing the Santiago Declaration, which consists of a set of scientifically based criteria and indicators of sustainable forest management.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Promoting Canada's International Interests (continued)

Manage the International Forestry Partnership Program (IFPP) on behalf of the Canadian Council of Forest Ministers (CCFM) and its delivery by Foreign Affairs and International Trade Canada. The IFPP provides foreign consumers with accurate information about Canada's forests and management practices.

Through the IFPP, continued to raise awareness of Canadian forestry practices among targeted European countries and the United States and to respond to the concerns of environmentalists. Most IFPP activities were aimed at disseminating forest information and building closer links with decision-makers.

Through the IFPP, enabled Canadian ambassadors in Europe to better respond to concerns over the Nuxalk protest against International Forest Products logging in Bella Coola. It also developed a network of forestry experts and journalists supportive of Canadian forest policies and practices.

Provide technical expertise to industry and other stakeholders by developing a national certification system for forest products that originate from sustainably managed forests

Industry adopted voluntary standards for sustainable forest certification.

Business Line: Science and Technology

Maintain and extend links with foreign mining ministries, particularly in Central and South America, to facilitate the export of Canadian products and consulting expertise

In Brazil, provided training and gave seminars on technologies related to acid mine drainage. In Argentina, co-hosted a seminar on environmental issues in the minerals sector. Substantially increased project activity in South America, which was endorsed by Canadian mining companies.

Continued discussions on possible joint ventures with foreign countries on the control and use of explosives, for example with the Philippines (on training) and Malaysia (on modernizing regulations).

Objective 6

To deliver federal responsibilities in partnership with provincial and territorial governments, and stakeholders

NRCan has a strong record as a partner in providing natural resource related programs, economic and scientific information, and services to Canadians. With its provincial and territorial partners, NRCan has learned that cooperation between governments and with other stakeholders is the best way of identifying and addressing natural resource issues and opportunities. NRCan is committed to working with its partners to coordinate policy and planning in areas of shared interest and to identify issues for joint resolution.

Within this partnership, NRCan will provide leadership and coordination in addressing natural resource issues of a national or international nature.

Strategy

NRCan's strategy is to:

- establish frameworks for common action with its partners, including other federal government departments;
- develop cooperative mechanisms to address high-priority issues; and
- take a "Team Canada" approach to national and international opportunities.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Policy and Regulations

Act as a focal point for development of a federal implementation plan to address issues within federal jurisdiction identified in the Whitehorse Mining Initiative (WMI) as affecting the future of mining in Canada

In November 1995, organized a meeting of WMI stakeholders to discuss progress and future actions, which provided an effective and low-cost means of obtaining reports on progress made in meeting WMI goals and objectives in the areas of influence/jurisdiction of the various stakeholders.

Provided advice to companies experiencing pre-production permitting problems, thus reducing the costs to the proponents and the government in the N.W.T. Diamonds, Cheviot Coal, Hucklebury and South Kemess projects.

Continue to improve client service by extending user-friendly electronic access to statistical information systems

Followed up on the introduction of Factsline in 1994-95 by increasing the service. The *Canadian Minerals Yearbook* and other articles were made available. The service was advertised in the *Northern Miner* and promoted by commodity specialists. About 300 to 400 people use the service each month, which adds up to more than 4,000 clients per year.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Policy and Regulations (continued)***

Coordinate the federal response to the National Forest Strategy, "Sustainable Forests: A Canadian Commitment", based on the results of the strategy's mid-term evaluation. This involves planning, implementation, and the production of progress reports by the CFS and other federal bodies, the Canadian Council of Forest Ministers, and the National Forest Strategy Coalition to meet commitments under the strategy and the Canada Forest Accord.

Coordinated a review of priority commitments for the remaining two years of the strategy's five-year term. As a result, federal departments have updated their action plans for fulfilling 14 specific commitments over the next two years.

Deliver federal responsibilities related to the Cape Breton Development Corporation (CBDC)

Expedited the consideration and subsequent approval by Treasury Board of CBDC's five-year corporate plan.

Continue to lead the Canadian forest community in implementing the results of the United Nations Conference on Environment and Development (UNCED)

Co-hosted, with the B.C. Ministry of Forests, an international seminar in Prince George (September 1995) on "Exploring Multiple Use and Ecosystem Management: From Policy to Operational Practices". Attended by more than 200 delegates from 32 countries, the seminar called for an international, non-binding set of guidelines for codes on forestry practices. An international team was established to draft these guidelines by 1997.

Coordinate programs with the provinces and territories

Developed Canada-wide support for National Mining Week, obtained Cabinet approval, and launched the week.

Business Line: Promoting Canada's International Interests

Coordinate, with provinces and the private sector, international business development in geomatics

Cooperated on international technical missions in Korea, Vietnam, and Indonesia. Sales of \$2 million in radar imaging resulted from the mission to Indonesia. Briefings were held with agencies in Quebec, Ontario, and Alberta.

Advance the international forest dialogue by participating in global discussions, such as those of the UN Commission on Sustainable Development (UNCSD) in April 1995

Participated in the UNCSD's third session in April 1995. At this session, the Intergovernmental Panel on Forests was established to develop recommendations on 11 key forest issues for review by the UNCSD in 1997.

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Science and Technology***

Plan to complete the transfer (started in 1994-95) of the upgrading and enhanced oil recovery programs from Ottawa to Devon, Alberta, and establish, jointly with industry, a laboratory and pilot plant scale bitumen froth treatment facility and collaborative R&D program

Successfully completed the transfer of the upgrading and enhanced oil recovery programs without disruption in performance. Twenty-two projects were undertaken at the National Centre for Upgrading Technology (NCUT) on behalf of 10 companies, and the Alberta Research Council (ARC) was successfully integrated into the operation.

A consortium of private-sector companies was established, and a froth treatment facility was designed and constructed with funding and direct assistance from consortium members.

Draft an intergovernmental geoscience accord to ensure effective delivery of geoscience programming across Canada

Developed the Intergovernmental Geoscience Accord for signature by federal, provincial, and territorial ministers at the 1996 Mines Ministers Conference. This will result in improved collaboration in the geosciences across Canada.

Business Line: Knowledge Infrastructure

Continue to work with the provinces and territories to improve the National Forestry Database (NFD) Program

Under the direction of the CCFM, continued to develop, manage, and maintain Canada's NFD program. The program is being expanded to incorporate "non-timber" data.

The NFD program produces an annual report entitled *Compendium of Canadian Forestry Statistics*, which is distributed nationally and internationally.

In collaboration with the provinces, maintain the Canadian Spatial Reference System as the standard geodetic reference for spatial information

Refocused geodetic activities with input from stakeholders, to support positioning from space. Established cooperation with provinces for programs related to Global Positioning Systems (GPS), including the Canadian Active Control System and the Canadian Base Network. Three provincial agreements were signed on the Active Control System. Integrated Gravity and Geodetic programs, providing cost efficiencies and better access to data.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Sunset/Special Programs</i>	
Co-manage the Quebec Mineral Development Agreement (MDA), which expires March 31, 1998, and the Eastern Quebec Prospectors' Program, which expired December 31, 1995	Administered the Quebec MDA and closed out the Eastern Quebec Prospectors' Program upon expiry.
Wrap up MDAs with other provinces	Wrapped up the MDA activities, including audits and evaluations, with Manitoba, Newfoundland, Nova Scotia, New Brunswick, Saskatchewan, Alberta, and British Columbia. Final MDA evaluation reports provide details on the impacts of these federal-provincial agreements.
Finish Mineral Development Agreement Program with Ontario	Initiated an Abandoned Mines Database for Ontario.

Objective 7

To help Aboriginal communities manage their natural resources

Aboriginal communities are increasingly involved in the management and development of their natural resources. NRCan is working in partnership with Aboriginal groups on issues related to resource development, and providing skills, expertise, and training that Aboriginal peoples need to manage their lands and resources.

Strategy

NRCan's strategy to achieve this objective is to:

- work with other government departments to develop policy and governance frameworks dealing with Aboriginal involvement in the management of natural resources;
- provide Aboriginal communities with the skills and training they need to manage their lands and natural resources; and
- transfer to Aboriginal communities technologies related to resource management that respond to their specific needs.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Science and Technology

Provide technical assistance to Aboriginal communities on the use of local resources to meet their energy needs

Through the CANMET Energy Technology Centre, assisted Grassy Narrows in the development of a 3 MW_{th} district energy system valued at \$4 million.

Installed a district energy system for the Quebec Cree Nation of Oujé-Bougoumou, which has led to the creation of two permanent jobs and short-term construction jobs, annual heating cost savings of \$500 for each of the 125 families, and a 75 per cent reduction in electrical consumption, while also meeting environmental standards and reducing emissions associated with the burning of fossil fuels.

Through the CANMET Energy Diversification Research Laboratory, installed a photovoltaic system in Iqaluit, Baffin Island, leading to the creation of jobs and training in photovoltaics.

Business Line: Knowledge Infrastructure

Fulfill the federal government's survey-related responsibilities to Canada's Aboriginal peoples by managing survey programs and contracting surveys to the private sector (\$6.3 million for comprehensive land claims and \$2.3 million for other surveys in 1995-96)

Managed survey programs and contracts to the private sector, and monitored their quality (actual expenditures in 1995-96 were \$5.3 million for comprehensive land claims, \$2.1 million for specific land claims, and \$2.8 million for other surveys).

1995–96 Commitments

1995–96 Accomplishments

Business Line: Sunset/Special Programs

Achieve goals and honour commitments, established under the (former) Indian Lands Forestry Program, to develop sustainable forest management skills; and create jobs and business opportunities while phasing down the program due to the non-renewal of six Forest Resource Development Agreements

Completed the Aboriginal Forest Guidelines, a tool to support Aboriginal peoples in their efforts to improve forest management practices. These guidelines were made available to Aboriginal groups in June 1995.

Note: A new five-year First Nation Forestry Program (1996-2001) was announced in April 1996, signifying the government's renewed commitment to providing forestry assistance to Canada's First Nations

Generated 5,995 work weeks in 1995-96, employing 1,321 Aboriginal people.

Prepared sites and planted 3.3 million trees on about 1,500 hectares of land.

Carried out silviculture treatments on approximately 3,416 hectares of forest.

Built 65 kilometres of roads (the 1995-96 budget was \$6.6 million, including a \$2 million transfer from Indian and Northern Affairs Canada).

Participate in the Aboriginal Summer Student Program, intended to provide Aboriginal students with practical and meaningful summer employment, and to expose them to the work environment of a scientific department

In 1995-96, hired 28 students in the National Capital Region and in regional offices. The total program cost was \$132,877, of which NRCan and the Public Service Commission each covered one-half.

Objective 8

To protect the health and safety of Canadians

NRCan programs and expertise involve a wide range of public health and safety issues. For example, our knowledge of Canada's landmass includes an understanding of such natural hazards as earthquake zones, unstable soils, and possible volcanic activity. These things pose potential problems both for public health and safety and for sustainable development. While natural disasters cannot be prevented, we can do our best to minimize such public health concerns as dangerous mining conditions (for example, rockbursts) if we work with a good underlying understanding of the geosciences.

The department's programs also address some aspects of health and safety that are not specifically or uniquely related to resource development. For example, NRCan administers the *Explosives Act*. It is a principal player in the international detection and reporting of nuclear weapons tests. In addition, the department's national aeronautical charting program is critical to the safety of navigation for both civil and military aviation.

Strategy

NRCan's strategy to achieve its objectives in the area of health and safety is to:

- provide information on dynamic natural events such as earthquakes and landslides, and an understanding of the processes that cause them;
- contribute knowledge on the hazards of resource development, such as rockbursts in mines and melting permafrost around northern installations such as pipelines;
- administer the *Explosives Act*;
- play a principal international role in the detection and reporting of nuclear weapons tests;
- ensure the safety of navigation for both civil and military aviation through its national aeronautical charting program; and
- provide information and a forecasting service on geomagnetic storms, which can have serious indirect health and safety effects through the disruption of communications channels and navigation, and through their effect on electrical power grids.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Policy and Regulations</i>	
Develop plain language regulations to support the <i>Explosives Act</i> , for easy comprehension by industry and the general public	Developed the majority of the regulations. At the request of the Department of Justice, initiated development on the associated documents (to be incorporated into the regulations).
<i>Business Line: Science and Technology</i>	
Make available to mining and geotechnical industries a manual on time domain reflectometry (TDR) to protect the health and safety of both the public and workers	Delayed the publication of the TDR manual because of Program Review I budget reductions. Data continues to be collected from several sites in Ontario, Nova Scotia, and British Columbia.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Science and Technology (continued)

Complete the stress-corrosion crack testing of three representative sections of pipe supplied by Canadian companies that transport natural gas through the pipeline system. The results will be evaluated for their significance in ensuring the safety of pipeline now in the field.

Helped industry to identify the causes of pipeline failures and to build up a predictive capacity so that failures can be prevented in the future. Members of the stress-corrosion cracking consortium received a draft final report in June 1996. This research will enable companies to plan inspection intervals to minimize the risk of pipeline failure without incurring unnecessary costs.

Provide technical research and development support to the operations of underground coal mines in Canada, principally to the Cape Breton Development Corporation

Provided strategies for improving the control of methane in high-production sections in the Sydney coal field.

Provide rock mechanics and rockburst seismic services through the Quebec Rockburst Research Program

Continued monitoring, modelling and data analysis of rock mechanics and rock dynamics for the Quebec mining industry. Four mines with specific rockburst problems have benefitted directly.

Business Line: Knowledge Infrastructure

Provide up-to-date official Government of Canada aeronautical charts and related publications to contribute to the safety and efficiency of aviation in Canada

Completed ongoing aeronautical charting and publication requirements, meeting the non-discretionary production schedule of a turnaround every 56 days.

Automate 70 per cent of the aeronautical charts

Automated 50 per cent of the charts. Twenty per cent were not converted as a result of the re-assessment of client requirements.

Objective 9

To provide the information on Canadian land and resources needed for informed decision making

Canada's landmass has an area of almost 10 million square kilometres, and its offshore claims add half as much to the country's territory. Canada has some of the world's oldest rocks and some of the youngest. We have barren Arctic tundra and some of the world's richest farmland. We have 10 per cent of the world's forests and 20 per cent of its fresh water.

We are highly urbanized, yet rural Canada is a critically important component of our social and economic fabric, particularly when it comes to agriculture and natural resources. We also have remote Aboriginal communities with widely different cultures and needs.

This richness and diversity creates a real challenge for government at all levels. Managing the sustainable development of our natural resources, planning land use, exercising good stewardship over our natural environment – these activities will require reliable, timely, and accessible information on a wide range of issues.

Strategy

NRCan's strategy to achieve this objective is to:

- develop and maintain a national knowledge infrastructure for natural resources, including geoscience, geodetics, forestry, remotely sensed (satellite) information, and economic and statistical data;
- ensure that the department's information, knowledge, and expertise are easily accessible;
- link the department's databases to relevant databases maintained by other agencies to the maximum extent possible;
- maintain a reliable survey system for Canada Lands;
- maintain an effective boundary line between Canada and the United States; and
- strengthen cooperation with other government departments, both federal and provincial/territorial, to ensure that there is no duplication among different agencies, and that there are no gaps in the provision of information.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Policy and Regulations</i>	
To provide selected economic, financial, tax, and statistical information on the Canadian mineral industry to clients around the world through the use of Internet World Wide Web (WWW) sites	<p>Developed a publicly available WWW site on Canadian mineral and metal production, exploration, consumption, and trade statistics, as well as on tax and business climate news.</p> <p>The mining taxation web site is considered to be the premier site of its kind in the world.</p>

1995–96 Commitments**1995–96 Accomplishments*****Business Line: Knowledge Infrastructure***

Complete two National Geoscience Mapping Program (NATMAP) projects and continue four others, in areas of economic importance for mineral and energy resources

Completed two maps, of the Flin Flon-Snow Lake area of Manitoba and of the Slave Geological Province of the Canadian Shield in the N.W.T. The information provided is essential to promote and stimulate future base metal exploration activity.

Earth Science Information: create a national electronic network to integrate geographically referenced data on natural resources from various agencies and sources by the end of the century

Initiated the development of a Canada Spatial Data Infrastructure (to give clients access to a wide range of geographical information).

Put in place a contract for the Canadian Earth Observation Network System (CEONET) version I. Developed user interface.

Made a wide range of geomatics and geological information accessible through the Internet. Examples are: Canadian Geodetic Bulletin Board Service (offered on a successful subscription basis); geographic names index; 12 new fifth-edition Atlas maps; and a National Pollutant Release Inventory (NPRI) Interactive Database (in partnership with Environment Canada). These and a number of other on-line services provide landmass information to a wide range of users.

The National Atlas Information Service was presented with a Federal Government Excellence Award for developing the SchoolNet site, which has been accessed by a vast number of interest groups.

Access geoscience information on-line (e.g., on earthquakes, gravity, aeromagnetic survey), including the procurement of products

Established an on-line geoscience information service at the library of the Manitoba Department of Energy and Mines. This will serve the Manitoba-based mining industry.

Provide a reliable survey system on Canada Lands to support the 23 Property Rights systems operated by the federal and territorial governments

Ongoing program. Ensured that the standards and quality of survey work were maintained. This work is essential for guaranteeing the validity and reliability of the Canada Lands Surveys System.

Implement efficiency and product improvement measures at the Canada Centre for Geomatics by obtaining ISO certification for topographical mapping production processes

Completed the documenting of topographic-map production processes according to ISO 9001 standards. Accreditation to be completed in 1996. This certification will encourage the adoption of ISO standards in the Canadian Geomatics Industry.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Knowledge Infrastructure (continued)</i>	
Maintain an effective boundary between Canada and the United States of America in partnership with the U.S. International Boundary Commission	Jointly carried out a maintenance program of monument restoration and vista clearing in accordance with the annual plan; regulated all works and structures within the vista; and submitted an annual report to both governments.
Continue to provide world leadership in exploiting the capabilities of remote sensing to meet Canadian and international needs	<p>Launched RADARSAT on November 4, 1995. Also developed the ground segment for data reception, archiving, and calibration in support of RADARSAT, including the completion of an image map.</p> <p>Developed procedures for agricultural, hydrological, and land-use applications, and for the specification of future radar satellites, including RADARSAT III.</p> <p>Conducted research and extracted data on ice, ocean, and wind, for use at Environment Canada's Ice Centre. Geology studies focused on applications of SAR images, integrated with other data, for geological mapping, exploration, and hazard studies.</p>
Coordinate a federal government study on mapping activities, as mandated in the April 1995 budget, to look at integrating or sharing mapping activities to increase efficiency, minimize duplication, and reduce costs	<p>Completed an independent study. The Deputy Minister's Steering Committee of participating departments agreed on an action plan in late 1995-96 involving closer collaboration on printing, warehousing, and distribution of maps and charts.</p> <p>Led the project. Participating departments were: Agriculture and Agri-food Canada, Elections Canada, Fisheries and Oceans Canada, Heritage Canada, Indian and Northern Affairs Canada, the National Capital Commission, the Department of National Defence, Public Works and Government Services Canada, Statistics Canada, and Transport Canada.</p>
Table the fifth report to Parliament, entitled <i>The State of Canada's Forests, 1994</i>	Tabled a report entitled <i>The State of Canada's Forests (1994): A Balancing Act</i> . Twenty thousand copies were distributed worldwide.
Familiarize Canadians, from professional foresters to amateur naturalists, with the trees around them	Published <i>Trees in Canada</i> , a comprehensive guide describing the tree species (over 300), both native and introduced, found in Canada and the northern United States.

1995–96 Commitments

1995–96 Accomplishments

Business Line: Knowledge Infrastructure (continued)

Maintain and monitor an ecological land classification system in support of the forest industry and a national network to predict changes in forest health

Collected data on environmental changes in national parks and model forests, which helped support the development of forest biodiversity plots in Nova Scotia, Ontario, and British Columbia.

Through work in ecological land classification, contributed to the publication of five new field guides classifying forest ecosystems in Alberta, Saskatchewan, and Manitoba.

Develop criteria and indicators for sustainable forest management to define the key values of importance to Canadians, and indicators to measure progress and trends

Under the leadership of the Canadian Council of Forest Ministers (CCFM), and in consultation with forest stakeholders, developed a framework consisting of six criteria and 83 indicators of sustainable forest management in Canada. The framework defines the key elements of forest ecosystems, as well as the social and economic values Canadians consider important.

In 1995, obtain endorsement of the criteria and indicators of the sustainable forest management program and initiate implementation of the initiative

Defining Sustainable Forest Management: A Canadian Approach was endorsed by the CCFM in October 1995. This marked the end of the development phase and the beginning of the implementation phase.

3.3 Management Challenges

NRCan is committed to the good governance of Canada's natural resources. To achieve this, flexibility has to be an integral part of our corporate culture and structures. The continual change being experienced today gives rise to management and organizational challenges, which need to be identified and properly managed. Flexibility also requires a sound management and employee culture. The way the department deals with its employees, its accountability, and its own performance must all evolve to meet the challenges that present themselves. The actions the department has taken to address these challenges and the key 1995-96 accomplishments are outlined below.

1995-96 Commitments

1995-96 Accomplishments

Business Line: Corporate Management and Administration

Implement the first year of a two-year quality service action plan (1995-97) focusing on 15 key areas, linked to quality, that managers and employees felt should be acted upon

Some achievements to date:

- streamlined processes to reduce costs and enhance client satisfaction;
- placed a greater focus on client needs and the measurement of client satisfaction;
- developed a Training and Development Framework;
- used in-house facilitators to make meetings and conferences more productive;
- developed a management profile;
- developed a model for succession planning;
- developed alternative work arrangements; and
- shared departmental successes and expertise through participation in Quality Month events and in the Interdepartmental Quality Network, and through direct consultations with other government departments.

Provide comprehensive workforce adjustment activities to respond to the impact of Program Review reductions

Became a recognized leader in workforce adjustment (WFA). This has been recognized by the Canadian Centre for Management Development in its compendium on Public Service Best Practices, according to which NRCan is the benchmark in this field. Some achievements in 1995-96:

- put in place a comprehensive infrastructure, as well as products and services to support employees and managers;
- developed and implemented a departmental strategy on the management of labour, unpaid surplus status, and layoff situations;

1995–96 Commitments

1995–96 Accomplishments

Business Line: Corporate Management and Administration (continued)

Increase functionality and provide economies through informatics integration, standardized and unified electronic communications and office technologies, and electronic document management

- implemented initiatives to help employees find work outside the public service, to assist managers in better managing WFA situations, and to enhance the effectiveness of management-union consultations on WFA matters; and
- initiated a policy and process to facilitate “switches” between affected and alternate employees, and to effectively manage alternate situations on a business case basis.

Established system-user requirements and incorporated them into the integration of the new Human Resources Information System (PeopleSoft). Conducted system testing to determine end-user satisfaction and incorporated the results into the development. This system has already resulted in improved economies through joint interdepartmental procurement, development, and support of the system.

With both NCR and regional participation, conducted a pilot of the two largest modules, Personnel Administration and Position Management.

Improved the reliability of electronic communications by procuring a standard-compliant, integrated E-mail infrastructure and installing it throughout the department. This has significantly improved internal communications.

Implemented an electronic document management system using 80 users in the Corporate Services Sector for a pilot project. This project is intended to improve the management of record keeping in the department.

Re-engineer the financial processes

Simplified the departmental payment processes through the use of credit cards (MasterCard) for low-dollar purchases, electronic data interchange (EDI) and electronic funds transfer (EFT) for the payment of accounts. This was a “quick win” scenario for the department.

Through this initiative, realized \$1.5 million in process cost savings in 1995-96.

1995–96 Commitments	1995–96 Accomplishments
<i>Business Line: Corporate Management and Administration (continued)</i>	
Re-engineering of classification process	<p>Completed the business case for, and started the design of, an Integrated Procurement and Payment System to re-engineer the procurement and payment processes. The payback period for this investment is expected to be less than 24 months, and costs will be reduced by up to 70 per cent.</p> <p>Commenced the re-engineering of the human resources services, starting with the classification process.</p> <p>Conducted a current profile assessment of HR Services, developed a new vision for the classification process and produced a business case. Four separate reports were delivered.</p> <p>Savings in the order of 60 per cent are expected to be realized as a result of this initiative.</p>
Assess the effective implementation of major corporate systems	<p>The project was approved and funded at a cost of \$1.76 M. A detailed implementation plan for the project was developed.</p> <p>Conducted reviews of the systems for PeopleSoft, People services, credit card acquisitions and electronic payments. Recommendations arising from the assessment of the risks and the adequacy of controls were incorporated into the design and implementation of the projects.</p>
Implement policy and procedures relative to the <i>Canadian Environmental Assessment Act</i> and the <i>Canadian Environmental Protection Act</i>	<p>Developed departmental environmental assessment and environmental protection policies to improve the department's Environmental Management System.</p>
Complete eight environmental audits of NRCan facilities to ensure sustainable use of natural resources, goods, and practices within the department	<p>Completed Phase I of the department's environmental audit program by conducting 10 audits, which covered 21 facilities across the country.</p>
Undertake work under the Federal Buildings initiative to ensure the efficient energy management of all NRCan custodial facilities	<p>Completed a feasibility study, in October 1995, showing potential energy savings totalling \$600,000 annually in 14 major NRCan facilities. Completed the engineering and design documents outlining the changes required to achieve these savings.</p>

4.0 Major Project Report

4.1 Natural Resources Canada S&T Management Framework

An NRCan S&T Management Framework was developed in 1995 with the endorsement of PCO and Treasury Board Secretariat. The S&T Management Framework addresses a key NRCan commitment contained in the recently released federal S&T strategy. Given the integrated nature of NRCan's activities (i.e., S&T, policy, programs, and central services) and the department's substantial involvement in S&T (approximately 75 per cent of NRCan's activities are S&T related), the importance of implementing this framework is clear. The framework will strengthen NRCan's management of S&T through increased client focus, more effective and responsive accountability, and investment in employees.

An implementation plan, adopting a two-track approach with departmental and sectoral levels, has been developed and is currently being carried out.

4.2 The Federal Program of Energy Research and Development (PERD)

The federal Program of Energy Research and Development (PERD) is managed by a 24-member interdepartmental panel whose overall objective is to develop the science and technology necessary for Canada to produce and utilize its energy resources in an environmentally responsible and cost-effective fashion. PERD is organized into seven broad technology areas: energy efficiency; coal; fusion; renewable energy and generic environment; alternative transportation fuels; frontier oil, gas, and electricity; and international participation and coordination. PERD membership includes representatives from Agriculture and Agri-Food Canada, Atomic Energy of Canada Ltd., the Canada Mortgage and Housing Corporation, the Department of National Defence, Environment Canada, Fisheries and Oceans Canada, Public Works and Government Services Canada, Health Canada, Indian and Northern Affairs Canada, the National Energy Board, the National Research Council, Natural Resources Canada, and Transport Canada.

PERD brings together experts from key federal energy research and development (R&D) departments and agencies to develop common approaches to shared energy R&D problems. In so doing, it has developed a cooperative network that builds on the expertise and synergies within these departments and agencies, and eliminates duplication of energy R&D efforts. This interdepartmental approach ensures that PERD responds to federal policy objectives, particularly in the energy, economic, and environmental areas. Natural Resources Canada administers this program on behalf of the participating departments and agencies.

In 1995-96, \$83.3 million were allocated to the participants in the program. The following are some of the key activities and accomplishments (in addition to those already mentioned in this report):

- Completed an impact study of the public good and wealth-generation benefits derived from PERD. The report found that PERD invested \$142.4 million in 234 projects, and its partners invested \$377.6 million, for a total of \$520 million. Aggregate benefits realized to date from PERD and partner R&D amount to \$1.9 billion (a threefold gain). Projects generating wealth contributed to the creation or maintenance of some 4,500 jobs in each of the last eight years. Future sales of goods and services could result in the creation or maintenance of 11,800 jobs per year.

- Hosted a Strategic Planning Workshop involving industry, the provinces and federal representatives, which resulted in a proposal for reorienting PERD to place greater emphasis on energy efficiency, renewable energy, and energy-related issues of climate change and limitation of greenhouse gas emissions. The proposal would reduce the emphasis on the supply aspects of conventional fossil fuels, while focusing on the health and safety and environmental issues of energy production, and on oil sands and heavy oils. The proposal was submitted and the Coordinating Committee of Program Review II Ministers reconfirmed PERD as an interdepartmental activity. A portfolio of R&D activities for the new PERD Energy and Climate Change Task has been established and work has been identified.
- Investigated the use of solar energy for aquaculture applications, in cooperation with provincial governments, Environment Canada, and Fisheries and Oceans Canada. Pilot trials for two aquaculture applications are now at the implementation stage to verify computer models and the effects of elevated and fluctuating temperatures on fish growth.
- Initiated the development of an innovative gas-fired grain disinfection technology that will eliminate the use of undesirable chemical products and increase energy efficiency.
- With Environment Canada, completed a collection of high-frequency solar irradiance observations for 145 Canadian locations. This information is essential to the design of photovoltaic solar collectors and to the implementation of solar- and building-energy systems.
- Mounted a major ocean expedition as part of the Canadian contribution to the international Joint Global Ocean Flux Study. The work resulted in revisions to ocean-scale estimates of primary production (carbon uptake) for the North Atlantic and in the first contemporary estimate of the global primary productivity based on satellite ocean-colour data.
- Managed a study at Environment Canada under the National Incinerator Testing and Evaluation Program aimed at identifying and reducing the environmental and health concerns associated with the combustion of municipal wastes. The Life Cycle Analysis study identified contaminant/production combinations that can present health and environmental concerns when combusted and helped identify technologies to eliminate these pollutants from the waste stream.
- Managed a field investigation at the Canada Mortgage and Housing Corporation of the airtightness, energy performance, and indoor air quality of new housing in Canada. Work will serve as input to a study assessing the impact of construction practices and building code requirements.

5.0 Program Review Summary

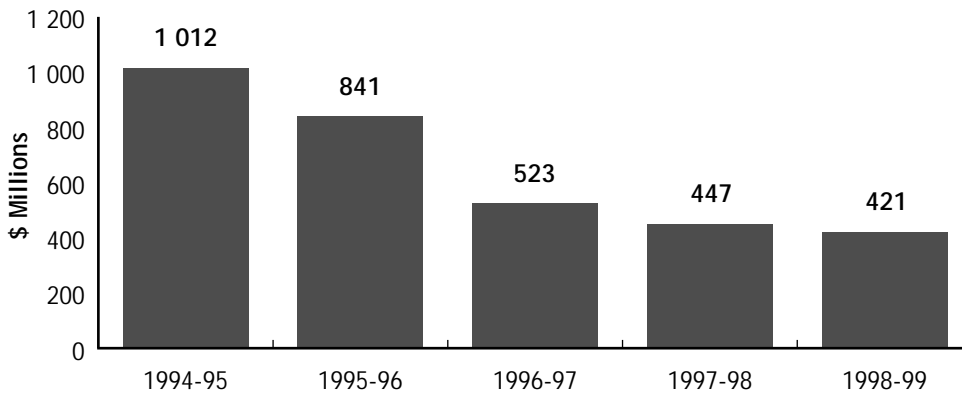
5.1 The Program Review Decisions

The results of Program Review I were announced as part of the February 1995 Budget. Program Review confirmed the department's role in energy, minerals and metals, forestry, and earth sciences. Within these areas, the department will focus on federal responsibilities related to trade, science, and technology; federal regulatory responsibilities; Aboriginal issues; the environment; national data and statistics; and the management of lands and offshore areas under federal control.

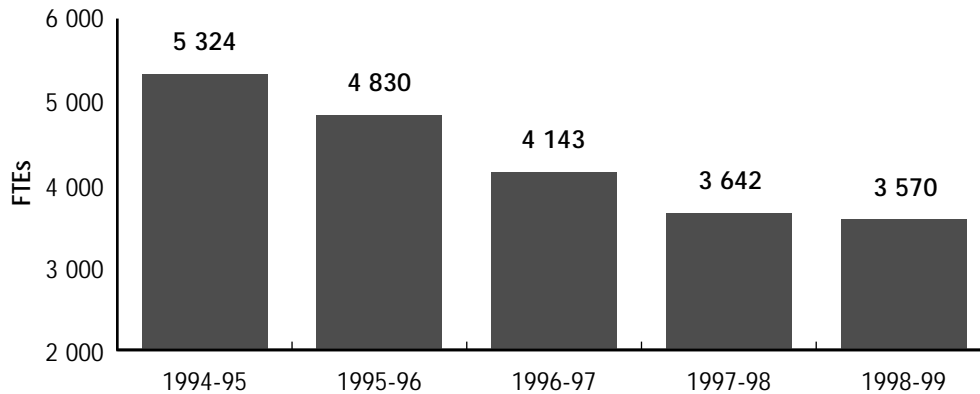
Program Reviews I and II also confirmed NRCan's two primary functions – science and policy. NRCan is committed to ensuring that its policies are based on sound science and that its science is directed by policy priorities.

Before Program Review, NRCan's budget was \$1,012 million, and it had 5,324 full-time equivalents (FTEs). By 1998-99 the budget will have been reduced to \$421 million, about 60 per cent below the 1994-95 level. Similarly, the number of FTEs will drop by 33 per cent to 3,570.

NRCan Departmental Resource Allocations (\$ Millions)



NRCan Departmental Resource Changes – Full-Time Equivalents



5.2 Progress on Implementation

In August 1995, the department reorganized, going from seven sectors to five. Four sectors (Earth Sciences, Canadian Forest Service, Minerals and Metals, and Energy) integrate science and policy activities and are responsible for the delivery of the department's programs and services within their areas of specialty. The remaining sector, Corporate Services, provides central financial, administrative, information management and human resource services, and the Strategic Planning and Coordination Branch assists the departmental executive and managers of other sectors of the department with overall direction.

In 1995-96, management moved from planning to implementing the reductions. NRCan was confirmed as a Most Affected Department early in 1995, so it was able to offer early departure incentives and early retirement incentives to employees affected by Program Review. The number of employees was reduced by 823, mainly through departure incentive programs (748 employees). By not renewing term positions, and by deleting funded vacant positions, other reductions were achieved. NRCan is well on its way to meeting its Program Review staff reduction targets. To date, the department has used \$7.3 million of the funds allocated by the Treasury Board Secretariat to cover the cost associated with the workforce adjustment measures.

The implementation of the decisions of the Program Review resulted in the following changes to NRCan programs and activities in 1995-96:

- forestry's allocation was reduced by 19 per cent, from \$219 million (1994-95) to \$178 million (1995-96);
- eleven regional forestry facilities were closed, and four of the remaining five were downsized;
- regionally based forest S&T programs were refocused from regionally based activities in favour of 10 new national science networks led from the five regional centres;
- the minerals and metals allocation was reduced by 11.3 per cent, from \$79 million (1994-95) to \$70 million (1995-96);
- all MDAs have expired (except the one with Quebec, which expires on March 31, 1998); and
- the energy S&T activities of CANMET were merged with the Energy Sector, and greater emphasis was placed on energy efficiency and renewable energy. Including decreases in funding for megaprojects, the energy allocation was reduced from \$423 million in 1994-95 to \$333 million in 1995-96.

The reduction or termination of these programs has proceeded in an orderly manner. Consultation has taken place with clients, and employees have been dealt with in a sensitive manner. The department has developed a management framework to deal with employees who will be leaving its service and to deal with the effects of downsizing on those who stay. The expanded Workforce Adjustment Unit has greatly aided this process.

As part of the Program Review exercise, the Communications Branch coordinated a major communications effort to keep employees and external stakeholders informed as changes were implemented. A part of this effort was the creation of an S&T Management Framework document explaining the department's new approach to managing S&T.

The changes in programs and staff levels have resulted in the revision of the department's Strategic Accommodation Plan. This plan reflects the intention to close, consolidate, or reduce the space requirements to accommodate the department's remaining staff. NRCan's revised plan calls for the closure of 25 buildings and two complexes, and a reduction in space requirements of 70,000 m², from 373,000 m² to 303,000 m². The department has already closed 10 buildings. The department intends to seek Treasury Board's approval to use the proceeds from the sale of these facilities to partially finance the implementation of the Strategic Accommodation Plan.

The department is implementing the decisions of Program Review on time and on budget.

6.0 Supplementary Information

Figure 1: Authorities for 1995-96 – Part II of the Estimates

Vote (thousands of dollars)	1996-97 Main Estimates	1995-96 Main Estimates
1 Operating expenditures	400,570	430,466
5 Capital expenditures	19,992	59,426
10 Grants and contributions	51,537	270,593
(S) Minister of Natural Resources – salary and motor car allowance	49	49
(S) Contributions to employee benefit plans	30,968	33,265
(S) Payments to Interprovincial Pipe Line Incorporated in respect of deficiencies related to the Montreal extension	2,000	26,000
(S) Canada – Nova Scotia Development Fund	6,000	5,400
(S) Canada – Newfoundland Development Fund	6,500	8,250
(S) Canada – Newfoundland Offshore Petroleum Board	1,657	1,950
(S) Canada – Nova Scotia Offshore Petroleum Board	680	722
(S) Payments to the Nova Scotia Offshore Revenue Account	2,500	4,950
(S) Payments to the Newfoundland Offshore Petroleum Resource Revenue Fund	5	–
(S) Geomatics Canada Revolving Fund	512	402
Total Budgetary	522,970	841,473
L15 Loans pursuant to Hibernia development project	66,000	66,000
Total Department	588,970	907,473

Figure 2: 1995-96 Resource Requirements by Sector and Business Line/Activity

Sector (thousands of dollars)	Business Line/Activity						Total
	Science and Technology	Knowledge Infrastructure	Policy and Regulations	Promoting Canada's Interests	Sunset/ Special Programs	Corporate Management & Administration	
Earth	50,721	130,702	11,705	1,951			195,079
Sciences	49,131	126,607	11,338	1,890			188,966
Forest	113,554	1,624	6,957	2,477	69,668		194,280
	110,607	1,721	6,069	2,605	68,295		189,297
Minerals and Metals	40,456	7,634	9,924	3,817	14,504		76,335
	39,774	7,569	10,035	3,810	13,841		75,029
Energy	69,939	2,977	46,437	2,019	219,074		340,446
	68,621	2,746	44,503	2,000	176,128		293,998
Corporate Services	15,033	9,828	2,023	578	1,445	42,221	71,128
	11,898	7,779	1,602	458	1,143	41,408	64,288
Direction & Coordination						15,150	15,150
						12,572	12,572
Total	289,703	152,765	77,046	10,842	304,691	57,371	892,418
	280,031	146,422	73,547	10,763	259,407	53,980	824,150

NOTE: Unshaded numbers are the "Total authorities available for use" and the shaded numbers are the "Authorities used". Amounts shown are those reflected in Public Accounts Plates as submitted for tabling in August 1996. The distribution of resources against the new business lines is an approximation based on the actual expenditures by the department in 1995-96.

Figure 3: Revenue by Class

Revenue received is deposited in the Consolidated Revenue Fund and, with the exception of the Geomatics Canada Revolving Fund, is not available to finance activity expenditures. However, revenue credited to the vote is available to offset expenditures for support of the Forest Activity, up to 125 per cent of the amount of revenue printed in the Main Estimates. Revenue is shown by class in Figure 3.

(thousands of dollars)	1994-95	1995-96	1995-96
Class	Actual Revenues	Estimates	Actual Revenues
Privileges, licenses, and permits	11,763	16,189	14,478
Return on investments	2,311	2,134	3,205
Proceeds from sales	2,283	841	1,594
Services and service fees	10,974	12,600	10,956
Refunds of previous years' expenditures	1,855	–	3,164
Adjustments to payables at year end	1,671	–	2,805
Provision of departmental services to the Geomatics Canada Revolving Fund*	754	2,582	700
Miscellaneous	4,006	15	4,124
Revenue credited to the vote			
– Forest	426	617	166
Revenue credited to Geomatics Canada Revolving Fund**	11,837	17,707	13,107
Total revenue	47,880	52,685	54,299
Less available for respending:			
Revenue credited to the vote			
– Forest	426	617	166
– Geomatics Canada Revolving Fund	11,837	17,707	13,107
Revenue Credited to the Consolidated Revenue Fund	35,617	34,361	41,026

* The 1995-96 Estimates amount is taken from the Pro-Forma Statements presented in the Geomatics Canada Transitional Business Plan and, in error, included depreciation charges and PWGSC revenues

** This amount represents the actual cash received by the revolving fund and consequently does not take into account the receivables.

Figure 4: Details of Major Capital Projects

Capital expenditures represented 5.0% of the total budgetary expenditures in 1995-96.

Figure 4 identifies each capital construction or acquisition project for which the estimated total cost equals or exceeds \$3 million (major capital projects) and includes previously identified major capital projects until completion. NOTE: the department has authority to approve major capital projects up to a value of \$5 million. The major capital projects pertain to more than one business line, therefore they have only been listed by province.

(thousands of dollars)	Previously Estimated Total Cost	Currently Estimated Total Cost	Actual expenditures to March 31, 1996*	Estimates 1995-96
Quebec				
Mining Research Lab (EPA)**	6,000	3,731	–	250
Varennnes Energy Diversification Research Laboratory Phase I (EPA)	10,954	10,954	–	–
Varennnes Energy Diversification Research Laboratory Phase II (I) ***	7,186	2,995	–	1,818
Ontario				
Strategic Accommodation Plan 555 – 601 – 615 Booth (I – PPA) ****	14,319	18,230	–	2,000
Alberta				
ISPG Expansion – Calgary (D – PPA)	4,375	4,375	–	350
Total projects over \$3 million	42,834	40,285	–	4,418
Total capital projects				59,426

* There have not been any expenditures as these projects have been postponed due to Program Review.

** Effective Project Approval (EPA) – This is Treasury Board's approval of the objectives (project baseline), including the Cost Objective of the project implementation phase, and provides the necessary authority to proceed with implementation. Sponsoring departments submit for EPA when the scope of the overall project has been defined and when the estimates have been refined to the substantive level.

*** Indicative Estimate (I) – This is a low-quality, order-of-magnitude estimate that is not sufficiently accurate to warrant Treasury Board approval as a Cost Objective. It replaces the classes of estimates formerly referred to as Class C or D.

**** Preliminary Project Approval (PPA) – This is Treasury Board's authority to initiate a project in terms of its intended operational requirement, including approval of, and expenditure authorization for, the objectives of the project definition phase. Sponsoring departments submit for PPA when the project's complete scope has been examined and costed, normally to the indicated level, and when the cost of the project definition phase has been estimated to the substantive level.

Figure 5: Transfer Payments by Business Line

Grants and contributions made up 33.8% of the budgetary expenditures of the department in 1995-96.

(dollars)	1994-95 Actual Expenditures	1995-96 Estimates	1995-96 Actual Expenditures
GRANTS			
Science and Technology			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	59,824	51,500	39,000
Grants for forestry research and development	9,277	12,506	10,000
Grant to the Quebec Council on Forestry Research	21,750	25,000	23,000
Grants to universities for specific forestry research projects	30,000	39,006	–
Knowledge Infrastructure			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	161,979	231,500	120,460
Policy and Regulations			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	10,127	122,500	73,753
University of Calgary for the Canadian Energy Research Institute	205,000	205,000	130,000
Corporate Management and Administration			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	12,500	–	36,000
Total Grants	510,457	687,012	432,213

Figure 5: Transfer Payments by Business Line *continued*

(dollars)	1994-95 Actual Expenditures	1995-96 Estimates	1995-96 Actual Expenditures
CONTRIBUTIONS			
Science and Technology			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	163,188	200,000	199,500
Federal share of the Canadian Electrical Association Research and Development Program	1,827,000	967,000	1,325,000
In support of the energy efficiency and alternative energy programs	2,021,115	2,958,000	1,676,528
In support of the energy efficiency and alternative energy programs under the Green Plan initiatives	2,120,642	2,181,000	1,939,589
In support of industrial energy research and development programs to effect research and to increase the efficiency of the use of energy	4,050,572	4,665,000	4,250,317
Contribution to the International Energy Agency	807,547	679,000	860,785
Contributions for forestry research and development	142,608	20,800	464,016
Canadian Forestry Association	80,000	80,000	60,000
Forest Engineering Research Institute of Canada	2,052,000	2,038,434	2,038,434
Contribution to the International Energy Agency/ Forest Energy Agreement	110,295	110,295	110,433
Contribution to Forintek Canada Corporation	7,908,250	4,968,684	5,004,643
Contribution to the Canadian Inter-Agency Forest Fire Centre	82,358	47,025	91,349
Contribution to the University of Moncton	320,000	300,800	301,600
Contribution to the University of British Columbia	175,000	175,000	100,000
Class contribution for partners in sustainable development in forestry	12,773,330	13,475,536	13,174,569
<i>Item not required for 1995-96:</i>			
Alberta Oil Sands Technology and Research Authority and Alberta Research Council	420,000	-	-

Figure 5: Transfer Payments by Business Line *continued*

(dollars)	1994-95 Actual Expenditures	1995-96 Estimates	1995-96 Actual Expenditures
CONTRIBUTIONS – continued			
Knowledge Infrastructure			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	263,735	188,600	280,661
In support of the energy efficiency and alternative energy programs under the Green Plan initiatives	280,119	430,000	428,980
Ocean Drilling Program	533,385	500,000	686,773
<i>Items not required for 1995-96:</i>			
Association of Canada Lands Surveyors	110,000	–	–
In support of the energy efficiency and alternative energy programs	50,000	–	–
Policy and Regulations			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	191,987	224,000	153,000
In support of Laval University for a scholarship program	175,000	190,000	190,000
To assist in making economic investments to reduce energy costs under the Federal Buildings Initiative Program	109,734	250,000	197,665
In support of the energy efficiency and alternative energy programs	757,296	1,150,000	702,467
In support of the energy efficiency and alternative energy programs under the Green Plan initiatives	3,887,116	5,505,000	4,042,220
In support of the activities of the Canadian Council of Ministers of the Environment	53,058	125,000	79,016
Queen's University – Centre for Resource Studies	196,000	196,000	196,000

Figure 5: Transfer Payments by Business Line *continued*

(dollars)	1994-95 Actual Expenditures	1995-96 Estimates	1995-96 Actual Expenditures
CONTRIBUTIONS – Policy and Regulations <i>continued</i>			
(S) Contribution to the Canada-Newfoundland Offshore Petroleum Board	1,950,000	1,950,000	1,840,800
(S) Contribution to the Canada-Nova Scotia Offshore Petroleum Board	750,338	722,000	759,217
<i>Items not required for 1995-96:</i>			
Canada-Prince Edward Island Co-operative Agreement on alternative energy development and energy efficiency	34,038	–	–
Prosperity Initiatives	114,950	–	–
Sunset/Special Programs			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	57,891	61,000	107,624
In support of the Hibernia Development Project	329,852,085	171,574,000	131,154,097
Contribution to industry under the Mineral Development Agreements:			
Nova Scotia III	165,414	237,000	243,621
Quebec	7,063,925	6,452,000	8,998,568
Newfoundland Mineral Development Agreement Extension	50,000	–	179,038
Eastern Quebec Prospecting Program	695,310	789,000	334,016
Chapais-Chibougamau Mineral Agreement	1,970,074	–	394,377
Newfoundland III	204,776	200,000	–
Contributions under the Eastern Quebec Plan and under Subsidiary Agreements made pursuant to the Economic and Regional Development Agreements for the purpose of economic and socio-economic development adjustment	65,651,668	40,967,914	44,324,005
Contribution to the National Community Tree Foundation	7,600,000	8,000,000	6,750,000

Figure 5: Transfer Payments by Business Line *continued*

(dollars)	1994-95 Actual Expenditures	1995-96 Estimates	1995-96 Actual Expenditures
CONTRIBUTIONS – Sunset/Special Programs <i>continued</i>			
(S) Payments to Interprovincial Pipe Line Incorporated in respect of deficiencies incurred by the Company in connection with the construction and operation of the Montreal extension of the Interprovincial pipe line System	5,738,854	26,000,000	6,000,000
(S) In support of infrastructural costs directly or indirectly relating to the exploration, development, production, or transportation of oil and gas in the offshore area of Nova Scotia	–	5,400,000	5,075,920
(S) In support of infrastructural costs directly or indirectly relating to the exploration, development, production, or transportation of oil and gas in the offshore area of Newfoundland	17,592,073	8,250,000	5,229,989
(S) Payments to the Nova Scotia Offshore revenues account	4,921,828	4,950,000	4,715,051
(S) Payments to the Newfoundland Offshore Petroleum Resource Reserve Fund	–	–	23,952,547
<i>Items not required for 1995-96:</i>			
Contribution to the financial restructuring in respect of the NewGrade Heavy Oil Upgrader	125,000,000	–	–
Contribution to Indian Lands Forestry Program	1,302,330	–	–
Corporate Management and Administration			
In support of organizations associated with the research, development, management, and promotion of activities that contribute to departmental objectives	–	–	5,000
<i>Item not required for 1995-96:</i>			
Canadian Institute for Advanced Research	50,000	–	–
Total Contributions	612,426,889	317,178,088	278,617,415
Total Grants and Contributions	612,937,346	317,865,100	279,049,628

Figure 6: New Loans and Investments

(thousands of dollars)	1995-96 Estimates	1995-96 Actual Expenditures
Loans		
Loans to facilitate the implementation of the Hibernia Development Project	66,000	66,000

Figure 7: Outstanding Loans

(thousands of dollars)	Balance April 1, 1995	Receipts and Other Credits	Payments and Other Charges	Balance March 31, 1996
Regional Electrical Interconnections				
New Brunswick Electric Power Commission	4,083	120	–	3,963
Hydro-Quebec Research Institute	5,214	5,214	–	–
Atomic Energy of Canada Ltd.				
Housing	888	288	–	600
Gentilly II Nuclear Power Station	13,500	1,000	–	12,500

Figure 8: Geomatics Canada Revolving Fund Financial Summary

This Fund was established under Appropriation Act No 3 in 1993-94 for the purpose of carrying out the operation of the revenue generating activities of Geomatics Canada. At the same time, the Fund received a continuing non-lapsing authority from Parliament to make payment out of the Consolidated Revenue Fund, not to exceed \$8 million at any time.

The Fund's revenue-generating activities can be broken down into three elements: products, services, and consulting. They provide to various clients an increasing volume of products and services suitable for industry distribution, as well as value-added services and help to strengthen the geomatics industry on the international market. They also contribute to the achievement of NRCan objectives and support the newly developed Business Lines.

The following financial table provides highlights of the Fund's operations for the last two fiscal years:

- In terms of revenue, the Fund has increased its revenues in each of the elements from its 1994-95 operations for a total increase of \$2.9 million, or 23%. The expenditures have also increased by \$2 million, or 15%. This has resulted in a profit of \$298,000 in 1995-96, an increase of 151% over 1994-95. This performance resulted from a significant increase in sales of products and consulting services and the improvement in the management of expenditures, by providing more training to managers and improving their understanding and consciousness about cost and revenue decisions.
- The table also identifies areas for improvement such as working capital. This significant variance is due to a large increase in accounts receivable from other government departments and outside parties, while at the same time there was a significant decrease in accounts payable. This situation has raised concerns, to the management team, which will be addressed in 1996-97 in order to improve cash management.

The Geomatics Canada Management Team is committed to provide quality products and services to the Canadian geomatics industry and all other clients while respecting government rules and directives concerning the management of the revolving fund. The Fund is entering its third year of operation and the team has great expectations for the future of the Fund and appreciates the flexibility it provides.

Figure 8: Geomatics Canada Revolving Fund Financial Summary *continued*

(thousands of dollars)	1994-95 Financial Statement	1995-96 Financial Statement
Revenues		
Products	7,926	9,430
Services	3,996	4,191
Consulting	648	1,911
Total revenues	12,570	15,532
Expenditures (includes cost of goods sold)	13,152	15,234
Profit (Loss)	(582)	298
Changes in Working Capital	1,031	(4,234)
Capital acquisitions	(204)	(293)
Other items	142	193
Cash requirements	387	(4,036)
Cash at April 1	–	387
Cash at March 31	387	(3,649)
Year end adjustments	(1,734)	307
Cumulative Net Authority Used*	(1,347)	(3,342)

* The net authority used represents the cash situation of the fund at the end of the government accounting year which is different from that of the Geomatics Canada Revolving Fund.