

**THE RIO EARTH SUMMIT:
SUMMARY OF THE UNITED NATIONS CONFERENCE
ON ENVIRONMENT AND DEVELOPMENT**

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We do not inherit the earth from our fathers, we borrow it from our children. (Inuit saying)

We cannot betray future generations. They will judge us harshly if we fail at this critical moment. (Gro Harlem Brundtland, Prime Minister of Norway, UNCED 1992)

....we can waste the planets resources for a few decades more...we must realize that one day the storm will break on the heads of future generations. For them it will be too late. (UN Secretary General Boutros-Ghali, UNCED 1992)

Every bit of evidence I've seen persuades me we are on a course leading to tragedy. I don't agree with those who say the status quo is the answer. (UNCED Secretary General Maurice F. Strong, UNCED 1992)

INTRODUCTION

From 3-14 June 1992, Rio de Janeiro hosted the United Nations Conference on Environment and Development (UNCED). The focus of this conference was the state of the global environment and the relationship between economics, science and the environment in a political context. The conference concluded with the Earth Summit, at which leaders of 105 nations gathered to demonstrate their commitment to sustainable development. This paper will summarize the goals of the Conference, what was accomplished, and what it all means to Canadians.

A. History of the Summit

In 1972, Stockholm, Sweden, hosted the first United Nations Conference on the Human Environment, which was attended by 113 delegates and two heads of state (Olaf Palme of Sweden and Indira Gandhi of India). This conference raised a generation's awareness of an issue hitherto little talked about, the global environment. The Stockholm conference secured a permanent place for the environment on the world's agenda and led to the establishment of the United Nations Environment Program (UNEP). The conference and its aftermath made known the international nature of the environment and introduced the idea of the relationship between development and the environment. It has been said that the only way to unite the countries of the world is for them to face a common enemy; perhaps environmental degradation will be that enemy.

Since the 1972 conference there have been many international environmental agreements, a number of which have been ratified by Canada. These include the 1978 Great Lakes Water Quality Agreement; the 1979 Geneva Convention on Long-range Transboundary Air Pollution; the 1985 Helsinki Agreement (a 21-nation commitment to reduce sulphur dioxide emissions); the 1988 Montreal Protocol on Substances That Deplete the Ozone Layer; and the 1989 Basel Convention on Transboundary Movements of Hazardous Wastes (see Appendix 1).⁽¹⁾ It was this kind of international cooperation that the 1992 Rio conference sought, but on a larger scale.

In 1983 the UN General Assembly set up the World Commission on Environment and Development, known as the Brundtland Commission after its chairperson, Norwegian Prime Minister Gro Harlem Brundtland. Its aim was to link environmental issues to the findings of the 1980 Brandt report on North-South relations. The Brundtland report, published in 1987 as *Our Common Future*, declared that the time had come for a marriage between the environment and the economy and used the term "sustainable development" as the way to ensure that economic development would not endanger the ability of future generations to enjoy the fruits of the earth.⁽²⁾

On the twentieth anniversary of the Stockholm Conference on the Human Environment, representatives from 178 nations, non-governmental agencies (NGOs) and other interested parties (approximately 30,000 in total including members of the media), met in Rio de Janeiro to discuss global environmental issues that would become central to policy implementation. The conference sought agreement on concrete measures to reconcile economic

(1) Environment Canada, "Canada and the Earth Summit: Green Plan Goes Global," 1991.

(2) Fred Pearce, "Last Chance to Save the Planet," *New Scientist*, 30 May 1992, p. 24-28.

activities with protection of the planet to ensure a sustainable future for all people.⁽³⁾ This first UN Conference on Environment and Development -- UNCED for short, but better known as the "Earth Summit" after its final three days -- was the culmination of two and one half years of world-wide consultation that demonstrates the best intentions of the human race to live responsibly.⁽⁴⁾

B. Canada Prepares for the Summit

Canada's preparations for the Earth Summit were coordinated by Environment Canada's National Secretariat in cooperation with External Affairs and International Trade Canada (EAITC) and the Canadian International Development Agency (CIDA). The preparations also received input from a large number of interest groups connected to the environment, development, business, industry, labour, the churches, universities, women, natives, and youth, as well as all levels of government.⁽⁵⁾

An interdepartmental committee on UNCED was established and co-chaired by Environment Canada and EAITC with representation from 20 federal departments and agencies. This group was responsible for coordinating the federal government's preparations for both UNCED and the International Preparatory Committee Meetings (PrepComs). Under the heading Agenda 21, groups were organized to address each of 21 issues, synthesizing departmental interests into drafts of the Canadian positions and identifying desirable outcomes from UNCED.

C. Pre Rio Ambitions

UNCED addressed environmental issues, such as the protection of air, land and water; conservation of biological diversity, forests, and natural resources; and sound management of wastes and technology. It was a unique opportunity for world leaders to curtail the human activities that are threatening our planet and bringing about pollution of land, ocean and atmosphere, drought, desertification through land degradation, thinning of the ozone layer, global warming and the threat of rising sea levels, and the extinction of plant and animal species.⁽⁶⁾

(3) "In Our Hands," Earth Summit, U.N. Publication DPI/111 8-40437-May 1991-50M.

(4) Paul Hanley, "Brazilian City of Curitiba Model of Local Action for Global Survival," *The Star Phoenix*, 22 June 1992.

(5) Environment Canada, "Canada and the Earth Summit, Green Plan Goes Global," 1991.

(6) "A Greener Commonwealth: Special Earth Summit Edition," *Commonwealth Currents*, June/July 1992, p. 3.

Also included were the concerns that have led to serious differences between countries of the North and South: patterns of development that cause stress to the environment, poverty in developing countries, economic growth, unsustainable patterns of consumption, and demographic pressures and their impact on the international economy.

WHAT HAPPENED AT RIO?

At UNCED more than 130 nations signed a Convention on Climate Change and a Convention on Biodiversity. The delegates also reached agreement on Agenda 21, an action plan for developing the planet sustainably through the twenty-first century, and on a broad statement of principles for protecting forests.⁽⁷⁾ All nations present accepted without change the Rio Declaration, a non-binding statement of broad principles for environmental policy (see p. 19). New international networks, both formal and informal, were set up to carry out and oversee implementation of the agreements.⁽⁸⁾

In the end, the UNCED negotiations came down to a matter of money. The industrialized nations have it and the developing nations want it. If the industrialized nations want environmental protection, they must be prepared to pay for it. The tensions between rich and poor and the financial conflicts that underlie them were at the heart of every major negotiation.⁽⁹⁾

Before the summit, Mr. Strong, UNCED Secretary General, had defined success as a minimum of an extra \$10 billion a year of "new money" from Western countries to finance summit commitments in the Third World.⁽¹⁰⁾ The \$6-\$7 billion pledged at the conference, implies a good start. This figure is based on the supposition that Japan will increase its aid budget by 50% over the next five years, to a total of \$5 billion.

(7) Bette Hileman, "Earth Summit Concludes with Agenda for Action, but Little Funding," *Chemical and Engineering News*, 6 July 1992, p. 7-17.

(8) *Ibid.*

(9) Carla Flamer and Michael Meager, "Post-Earth Summit Analysis: UNCED Implementation, Follow-up Measures Proposed," *Eco Log*, 7 August 1992, p. 2-3.

(10) Fred Pearce, "Earth at the Mercy of National Interests," *New Scientist*, 20 June 1992, p. 4.

A. United Nations Framework Convention on Climate Change

1. A Review of the Convention

The ultimate objective of this convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant position provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.⁽¹¹⁾

The main principles of this convention state that the developed world must take the lead in combatting climate change and its adverse effects. Canada could be a leader in achieving the commitments of the convention by reducing greenhouse gas emissions to the 1990 level by the year 2000. It should be noted that the convention principles state that "any policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost."⁽¹²⁾

The UN Intergovernmental Panel on Climate Change predicts that if present emission trends for greenhouse gases continue, the average global temperature will increase by 1.5-4.5° C by the middle of next century. Some scientists claim the global warming threat is exaggerated since the predictions are based on computer modelling and theoretical models of the atmosphere so complex that even those strongly convinced that global warming will take place feel the analyses are oversimplified.

The discussions on climate change took place from February 1991 to May 1992 and concluded with a framework convention agreed to by more than 130 countries. The key elements of the convention are: new and additional financial resources to meet convention goals; promotion of transfer of technology to developing countries; and an institutional mechanism to enable the international community to manage the climate change problem over the long term, working with the Intergovernmental Panel on Climate Change.

(11) Framework Convention on Climate Change, United Nations, A/AC.237/18 (PartII)/Add.1, 15 May 1992.

(12) *Ibid.*

There were disappointments. The Convention on Climate Change lacked the targets and timetables for stabilizing emissions of carbon dioxide (CO₂) that had been desired by most industrial nations. It contains only guidelines and the target dates are "as soon as possible." The United States pushed for a delay in setting actual dates or levels, arguing that the countries supporting the timetables did not have credible plans for stabilizing emissions. The U.S. also stated it had already committed itself to an action plan to reduce greenhouse gas emissions by 7-10% from what they would otherwise have been in the year 2000; it felt it would be unwise to support environmental programs at the expense of the domestic economy.

The U.S. and President Bush were severely criticized for not taking a lead role in controlling global warming caused by the greenhouse effect. According to some reports, the U.S. stand on the causes of global warming is still uncertain. One U.S. writer has said, "The jury is still out on the effects on atmospheric temperature of carbon dioxide, chlorofluorocarbons, and emissions of other gases, mainly from the burning of fossil fuels."⁽¹³⁾

There was strong opposition to the reduction of fossil fuel use from Saudi Arabia and other oil-producing nations, which gave notice that they would fight hard to maintain oil's place as the world's primary source of energy. These countries were able to moderate all references to fuel efficiency, alternative sources of energy, and curbs on cars, in the section on the atmosphere in Agenda 21.

2. The Convention on Climate Change: What Happens Now?

The Convention on Climate Change has been signed and will become legally binding when ratified by 30 states. The Munich Summit committed all members of the G-7 to ratify by the end of 1993. The Convention will then take on a life of its own, with regular meetings of governments party to it. At annual meetings of the signatory governments, it will in principle be possible for the signatories to adopt protocols that put the stuffing into the framework. The Convention on Climate Change will eventually have a permanent secretariat, as well as two technical bodies responsible for collecting data on climate change and for monitoring and assessing various countries' plans for abating emissions. Some fear that the climate convention will become a mere form for assigning allowable emission quotas to its members while neglecting the real task of abating greenhouse gases at the least cost.

(13) "On Global Warming, Let the Coolest Heads Prevail," *Business Week*, 20 July 1992, p. 16.

3. The Convention on Climate Change and Canada

Climate change poses a major threat to Canadians and the Canadian economy. It could affect agriculture, forestry, navigation, infrastructure, fishing and tourism. At the same time, because our industry, transportation and energy-related activities produce considerable amounts of carbon dioxide, any international agreement to cut down on greenhouse gases could also have economic impacts. Canadian governments must address global warming taking into consideration our long-term economic and environmental interests.⁽¹⁴⁾

Canada was a key player in the development of this Convention, and in the Intergovernmental Panel on Climate Change established under the auspices of the World Meteorological Organization and UNEP. Its report, released in 1990 and updated in 1992, provided the framework for negotiating the convention.

Throughout the negotiations Canada pursued two main objectives: to conclude a framework convention as a tool for concrete, cooperative international action agreed on by the maximum number of countries, equitable to all parties, and achievable in a cost effective manner; and to launch follow-up on implementation, which should begin as soon as possible.⁽¹⁵⁾ Canada also wished to preserve Canada's competitiveness, to provide opportunities for Canadian business and to involve as many countries as possible, using a common approach that would allow countries to act in different ways.⁽¹⁶⁾

The Convention on Climate Change is consistent with Canada's commitment in the Green Plan to reduce carbon dioxide and other greenhouse gas emissions to 1990 levels by the year 2000 and to eliminate CFCs by 1997. The Green Plan contains The National Action Strategy on Global Warming developed by the federal government in cooperation with the provinces. It provides a framework for addressing the global warming issue within Canada.

(14) Department of External Affairs, "Canada and the World Environment," 1991.

(15) United Nations Conference on Environment and Development (UNCED), *Canada and the Earth Summit*, 1992.

(16) *Ibid.*

B. The United Nations Convention on Biological Diversity

1. A Review of the Convention

Conserving biological diversity has become an urgent issue. It has gone beyond the laboratory, and as UNCED demonstrated, it has become a issue debated in political arenas.⁽¹⁷⁾

The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by the appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.⁽¹⁸⁾

Negotiating teams from 100 countries worked for one year to hammer out the international accord on biodiversity that was further debated and signed in Rio.

Conservation of biodiversity is more than an aesthetic or moral issue; it is integral to our health and economy. Species loss threatens the natural resources upon which sustainable development depends. Genetic material from plant and animal species (many still undiscovered) is the foundation for the agricultural, pharmaceutical and other biotechnology-based industries. It is estimated that one-quarter of all the pharmacological products used in North America contain ingredients derived from wild plants.⁽¹⁹⁾ Biodiversity is integral to the maintenance of the environment and supports water purification, soil production, carbon cycling and oxygen production.

The UNCED convention on biodiversity was a global attempt to address what should be done and at whose expense. Participants developed a global strategy with guidelines for action by international, national and local governments and institutions to save, understand, and use biodiversity sustainably and equitably.

Under the treaty, countries make a commitment to protect endangered species and their habitats. Measures include the compilation of inventories of vulnerable and threatened species

(17) Walter V. Reid, "Conserving Life's Diversity Can the Extinction Crisis be Stopped?" *Environmental, Science and Technology*, Vol. 26, No.6, p. 1090-1095.

(18) Convention on Biological Diversity, United Nations Environment Program, Na.92-7807, 5 June 1992.

(19) External Affairs, "Canada and the World Environment," 1991.

at two levels, global and national. The Convention sets rules for granting access to tropical plants and animals, many of which are essential to the genetic tailoring of ingredients for new drugs, pest-resistant crops, fast-growing trees and other products. The convention also calls for tropical countries to receive a share of profits from the development of such products and for financial assistance in meeting their obligations under the treaty.

The U.S. was the only attending country not to sign the biodiversity treaty. It feared that the treaty would: threaten control over developed nations' conservation dollars; hurt U.S. biotechnology industries' competitiveness by forcing companies to release confidential information and share property rights with other countries; and eventually lead to international regulation of the genetic-engineering industry, thus impeding progress and endangering U.S. leadership in the field. The U.S. claimed the convention would incur many costs without concrete benefits and had no firm requirements for saving species. Although the U.S. did not sign the treaty, it does support the preservation of biodiversity.

2. The Convention on Biological Diversity: What Happens Now?

The Convention on Biological Diversity will become legally binding when ratified by the 30 states who are signatories; however, the Munich Summit did not make a deadline for ratification. The Convention on Biological Diversity will not be as straight-forward as the Convention on Climate Change, as the issues are not as well defined. Some feel that the value of biodiversity itself has to be better defined as a function of place and character. Moreover, issues and questions arising from the term "biodiversity" may not only be technical but also political, social, economic and legal. The Biodiversity Treaty is a framework from which more comprehensive agreements might be reached.

3. The Convention on Biological Diversity and Canada

Canada maintains that the preservation of species and ecosystems is of vital importance to both the environment and the economy. Biodiversity sustains life and produces the environmental wealth upon which our economy depends. In Canada alone, 230 animal and plant species, as well as valuable natural spaces, including old growth forests and wetlands, are known to be at risk. Canada took the position that action at home, as well as international cooperation, was required to ensure the protection of shared migratory species and ecosystems, to control the

introduction of potentially harmful species, and to ensure the conservation of resources beyond national jurisdictions.⁽²⁰⁾ Canada played a key role during the negotiations at the PrepCom meetings and was the first nation to sign the Convention in Rio. During negotiations Canada strove to ensure that biodiversity was consistently recognized for its contribution to the maintenance of life on the planet and the resources it can provide for human benefit.⁽²¹⁾ Canada commented that the Biodiversity Convention required urgent follow-up action and the Prime Minister committed Canada to ratify the agreement before the end of 1992.

Canada believes it has a role as a leader in the issues raised at UNCED. Effecting the proposed measures requires a solid commitment to the implementation of the Conventions statements. Canada pressed for early entry into force of the Convention on Biodiversity, promoting the development of national strategies for biodiversity conservation and strongly encouraging cooperation amongst all signatory countries.

Canada has a strong basis on which to meet the objectives of this Convention. It is party to the Convention on International Trade in Endangered Species (CITES), which controls the trade of some 48,000 species of plants and animals and the products derived from them, and has signed a number of international agreements to protect habitat, the key to maintaining biodiversity. These agreements include: the Convention concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention), by which natural and historical areas are permanently protected; the United Nations Biosphere Reserves Initiative, which preserves examples of all the earth's major ecological systems; the Convention on Wetlands of International Importance (Ramsar Convention); the International Tropical Timber Agreement, which provides a framework for regulation in trade in tropical timber; the Tropical Forest Action Program, which encourages sustainable forestry practices in tropical countries; and the International Tropical Timber Organization, which promotes sustainable use and conservation of tropical forests and their genetic resources.

The Canadian National Wildlife Policy, adopted by the Wildlife Ministers' Council of Canada in 1990, seeks to maintain and enhance the diversity of Canada's wildlife in fulfilment of

(20) UNCED Secretariat, Environment Canada, Summary Notes, Agenda 21, 1992.

(21) *Ibid.*

our responsibility to the rest of the world and to future generations of Canadians. Other important instruments are the: *Canada Wildlife Act* (1985), *Game Export Act* (1984), Migratory Birds Regulations (1991) and Wildlife Area Regulations (1990).

C. AGENDA 21

1. An Overview of Agenda 21

Agenda 21 is an environmental action plan for the next century. It is not legally binding but forms the basis for a new international partnership for sustainable development and environmental protection worldwide.

Agenda 21 was the major overall document coming out of Rio and was devised to deal with some of the fundamental problems of resource degradation and aid to the developing world. It addresses many issues with respect to global sustainability and includes core chapters related to financing, the implementation of technology transfer and institutional follow-up to UNCED.⁽²²⁾ The primary goal of Agenda 21 is to ensure that development proceeds in a sustainable manner: "the system of incentives and penalties which motivate economic behaviour must be reoriented to become a strong force for sustainability."⁽²³⁾ Another goal is ultimately to eliminate poverty throughout the world through better management of energy and natural resources and improvement of the quality of life by ensuring access to shelter and clean water, sewage and solid waste treatment. Agenda 21 also attempts to achieve the sustainable use of global and regional resources such as atmosphere, oceans, seas and freshwater, and marine organisms. The final goal is for improved management of chemicals and wastes. It is estimated that one third of the deaths in the third world are caused by food and water contaminated with human or industrial waste.

Agenda 21 addresses all those groups and professions involved in the achievement of its goals. This will lead to an increase in the transfer of environmental technologies and highlights the need for financing from the industrialized world to the developing world.

A number of contentious Agenda 21 issues were not agreed upon prior to the conference, including forest protection, desertification, financing, and who would oversee implementation of Agenda 21. The developing countries suspect that the preservation of their

(22) *Eco Log*, 7 August 1992.

(23) The United Nations Conference on Environment and Development, "Agenda 21," 1992.

forests is advocated only so that these can act as a sink for the carbon dioxide produced in the West. The North-South standoff on this point was resolved by changing the language to read, "the parties will consider calling for a treaty on forest issues."

Desertification affects one quarter of the earth's landmass and is a particular problem in Africa. Over 100 countries and some 800 million people are affected by it, with Australia, the U.S. and the Commonwealth of Independent States heading the list of industrialized countries. It can be combated by reforestation, afforestation and soil conservation. The wording describing the issue of desertification raised opposition from the South, which wanted a firm commitment to negotiate a treaty, whereas the U.S. recommended attacking the causes of desertification. The final outcome was a call for the adoption of an international convention on this subject.

The final major area of contention concerned who would oversee the implementation and finances of Agenda 21. Most countries wanted the establishment of a new UN monitoring agency to be called the Commission for Sustainable Development. This was finally agreed to but the details of implementation have not yet been determined. A recommendation that funding be handled by the Global Environmental Facility (GEF) met with opposition from the Third World, whose concerns were based on the GEF's connection to the World Bank and thus the industrialized world. The World Bank's environmental record has been poor and the Third World has had little influence over it in the past. In the compromise agreed to the funds will be directed through a variety of entities including the GEF, regional banks and bilateral aid.

It is believed that the minimum amount of funding needed to implement Agenda 21 was not committed. The current total for development assistance from the industrialized world is \$55 billion annually. It was hoped that the average assistance would amount to 0.7% of each industrial country's gross national product (GNP) to total U.S. \$625 billion, the estimated annual cost of implementing the 115 projects of Agenda 21.⁽²⁴⁾ The figure of 0.7% was originally suggested at the 1972 Conference in Stockholm. Only Norway, Sweden, Denmark and the Netherlands have reached that goal.

In funding calculations, environmentalism is often perceived as costly and involving expensive technologies and measures. Those opposed to increasing funding do not take into account the longer term benefits that would accrue or the economic opportunities in environmental

(24) Stanton Miller, "The Road From Rio," *Environment, Science and Technology*, Vol.26, No.9, 1992, p. 710-1713.

fields; they do not encourage the adoption of more environmentally friendly economic development in Western countries.⁽²⁵⁾

Governments agreed that durable solutions must be found to the debt problems of low and middle income nations. Creditors were requested to provide debt relief to the poorest heavily indebted countries that are pursuing structural adjustment.⁽²⁶⁾

Delegates largely avoided the population issue and its relation to poverty and development.⁽²⁷⁾ Dr. George Carey, the Archbishop of Canterbury, had hoped that his statements on Rome's doctrinal opposition to artificial birth control would help put the issue on to the agenda at the Earth Summit, in spite of the Vatican's efforts to keep it off.⁽²⁸⁾ The argument that the population increase in the Third World is no more damaging than that in the developed world has some merit; a child in the west will consume 18 times more than a child in the developing world. On the other hand, it is naive to believe that the population crisis is not a large problem and the cause of much environmental degradation. The developing world must slow its population growth and the developed world must use fewer resources per person. Both approaches are important.

Lastly, the use of environmental destruction as a weapon of war was not examined, nor was the need for more open trade and its environmental and developmental impacts.

2. Canada's Financial Commitment to Agenda 21

In his address at the Earth Summit on 12 June 1992, Prime Minister Brian Mulroney pledged Canada's full support for the funding of international action to fulfil the environmental Conventions agreed to in Rio. The amount of new money from Canada, over last year's \$2.7 billion in development assistance, is not yet known.

Canada provided the Global Environmental Facility with a total of \$25 million and pledged itself to maintain its responsibility. Canada's funding to the World Bank International Development Association (IDA) to date amounts to \$830 million. Canada agreed to consider an increase of new money to this fund to support environmental projects in the developing world. Mr.

(25) Fred Pearce, "Last Chance to Save the Planet," *New Scientist*, 30 May 1992, p. 24-28.

(26) *Eco Log*, 7 August 1992.

(27) Margaret Duggan, "Dr. Carey's Words May Put Birth Control on Earth Summit Agenda," *Church Times*, 22 May 1992, p. 10.

(28) *Ibid.*

Mulroney said the national objective was to raise the level of Canada's official annual foreign aid from 0.45% of our GNP to 0.7% as soon as possible.

Other aid packages were announced at the summit. Canada pledged \$50 million in special humanitarian assistance to the victims of the drought in Southern Africa. This amounted to a \$20 million increase in the commitment made a month before the Summit. Further, Canada is prepared to write off \$145 million owed by 10 Latin American countries in an arrangement which would see the released funds used for environmental projects.

D. Statement of Land Resources: Deforestation

1. An Overview

The state of the world's forests calls for action; as a result of exploitation, fire, acid rain and alternative land use, they may not be sustainable. Deforestation is fast becoming one of the most pressing environmental issues. It contributes to global warming, loss of biodiversity, soil erosion, desertification and flooding, as well as depletion of an otherwise sustainable resource. Deforestation is a global phenomenon that is most prevalent in the tropics, where demographic pressures convert forests into other land uses.⁽²⁹⁾ In 1980, 0.58% of tropical forests were being lost annually, according to the latest UN Food and Agricultural Organization (FAO) estimates. This had increased to 1.0% annual loss by 1990, a total of 17 million hectares a year. The developing countries are losing their forests to agricultural clearing, settlement, fuel, building materials and export. Although these are all valuable for mankind, trees and forests provide other essential services by modulating climate, acting as carbon sinks, moderating the water cycle and supporting biodiversity. This loss is not restricted to the tropics. A recent study by a researcher from the International Institute of Applied Systems Analysis indicates that by the year 2010 Europe could be losing more than \$29 billion a year from forestry revenues because of forest loss due to atmospheric depositions (acid rain).⁽³⁰⁾

The Earth Summit did not produce the convention on world forest management sought by Canada and several other countries. It did agree on a declaration of principles for future progress, as a result of the efforts of the G-7 group of industrialized nations. Though it was originally intended to be a legally binding forest convention, some environmentalists believe it was

(29) Environment Canada, "UNCED Canada and the Earth Summit," Green Plan Publication, 1991.

(30) Bernardo Zentilli, "Forest, Trees and People," *Environmental, Science and Technology*, Vol. 26, No. 6, 1992, p. 1096-1099.

so watered down that it is less stringent than the World Bank standards already in place. Efforts by the Western governments to persuade tropical countries to accept international supervision of their rainforests ended in failure. India, China and Malaysia were the most vocal opponents to any suggestion that their natural resources should be "internationalized."⁽³¹⁾ Some developing countries felt a legally binding convention would infringe on their sovereign right to exploit their resources; they wanted any legally binding document to cover all nations and forest resources equally.⁽³²⁾

All that survived was a general statement about balancing forest exploitation with conservation and a basic commitment to keep "forest principles under assessment of their adequacy with regard to further international cooperation on forest principles." Among the principles articulated were the recognition of the right of states to develop their forests to meet their socio-economic needs, promotion of the transfer of technology to developing countries to help them manage their forests sustainably, and the need for all countries to make efforts to "green the world" through reforestation and forest development.⁽³³⁾ Although it sets no rules for forest management, the declaration endorses the formulation of "internationally agreed methodologies and criteria" on which future guidelines for sustainable management may be based.

The document is a non-legally-binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests. The estimated cost of international funding for implementing this program is more than \$6 billion a year. The five program areas are as follows:

- securing multiple roles for trees, forest and forest lands;
- protecting forests and promoting afforestation and reforestation;
- promoting better utilization and value of trees, forests and forest lands;
- assessment and monitoring of forest-related programs and processes;
- and
- international and regional cooperation.

(31) Fred Pearce, "Third World Fends Off Control on Forests," *New Scientist*, 20 June 1992, p. 5.

(32) *Eco Log*, 7 August 1992.

(33) *Ibid.*

2. Statement of Land Resources and Canada

Canada promoted the development of a convention on forests at the 1990 G-7 Houston Economic Summit. Subsequently, Canada played a leading role in building consensus on this topic with the developing countries during the PrepCom meetings. Canada's objectives for the statement were to:

establish general management principles for multiple use of forests;

strengthen national and international institutions dealing with forest management and conservation;

guide international aid flows to the forest sectors;

secure the long term future of international trade in forest products.⁽³⁴⁾

Forestry is vital to the Canadian economy. Canadian forests make up 10% of global forest assets and the export value of Canadian forest products is higher than that of any other country. Forestry generates \$44.3 billion in economic activity and accounts for one in every 15 Canadian jobs.⁽³⁵⁾

Canada's commitment to global reforestation is channelled through four international organizations: CIDA, The Tropical Forestry Action Program, the World Bank and the International Tropical Timber Organization.

Canada announced three projects aimed at promoting sustainable management of forests.

- Canada pledged \$10 million to establish "model forest" projects in three countries to showcase sustainable forest management practices. They are to demonstrate how forests can and should be managed and will help to build the partnerships between government, industry and communities that this effort requires.
- Through CIDA, Canada will contribute \$16.6 million to the Rain Forest Pilot Project launched by the G-7 nations and Brazil to protect the Amazon rain forest. This includes a \$10-million project in the State of Acre, the conversion of \$4.6 million of Brazilian indebtedness, and a \$2 million grant to the project core fund.

(34) Environment Canada, "UNCED Canada and the Earth Summit," Green Plan Publication, 1991.

(35) External Affairs, "Canada and the World Environment," 1991.

- Canada will spend \$8 million over the next five years to support the work of the ASEAN (Association of Southeast Asian Nations) Institute of Forest Management in promoting sustainable forest management in Southeast Asia.

These contributions are in addition to the existing Canadian commitments of \$115 million in assistance to forest management in developing countries. Canada is acting nationally with the many Green Plan forestry incentives. "Canada's goal is to shift the management of our forests from sustained yield to sustainable development."⁽³⁶⁾ The Canadian federal and provincial governments are forging partnerships with industry to manage Canadian forest resources so as to maintain their future productivity and capacity for regeneration. The Green Plan promotes environmental harmony and pledges research dollars for environmentally acceptable solutions for insect and disease control and forest practices. Programs to maintain the genetic stock of Canadian forest ecosystems are planned to conserve Canada's forest diversity.⁽³⁷⁾

E. The Rio Declaration

It had been hoped that the Earth Charter drafted five years ago as a moral framework for environmental development would be adopted as a legally binding document at the Conference. It affirmed the rights of all citizens to a clean environment and the rights of developing countries to pursue sustainable development. Instead, the Earth Charter was replaced by a 27-clause statement of principles called the Rio Declaration.

The Canadian position put forward by Mr. Mulroney was to continue to urge the international community to adopt a true Earth Charter of environmental rights and responsibilities with 1995, the 50th anniversary of the founding of the United Nations, as the target completion date. Canada hopes that the Charter will be used to set up some soft law principles to provide international benchmarks for appropriate sustainable development.

F. The Ocean Resources Meeting

1. General

Oceans cover over 70% of the earth's surface and play a critical role in maintaining life and the support systems of the biosphere. All the countries attending the conference passed a resolution committing themselves to the "conservation and sustainable use of marine living

(36) Environment Canada, Canada's Green Plan, 1990.

(37) *Ibid.*

resources on the high seas." A follow-up conference is to be held in St. John's, Newfoundland, in 1993. The summit set the oceans as the target for environmental protection in the 1990s. Agenda 21 commits nations to long-term cooperative research to improve the quality of the information on the oceans and thus improve their effective management. The relevant document in Agenda 21 is entitled "Protection of Oceans, All Kinds of Seas Including Enclosed and Semi-Enclosed, Coastal Areas and the Protection, Rationale Use and Development of Their Living Resources." A central proposal in Agenda 21 is a Global Ocean Observation System which would study the role of the oceans as the sink for pollution and for 50% of the carbon dioxide put into the atmosphere, a key factor in the role of the oceans in climate change.

2. The Oceans Resources Meeting and Canada

Canada has the longest coastline in the world, providing more than 140,000 jobs and \$8 billion worth of economic activity per year. The health of the oceans directly affects Canada in many ways. The oceans cannot support human exploitation unless it is carried out in a sustainable manner. This has recently been brought home to Canadians through the economic and social implications of the cod moratorium and the subsequent impact on an entire region and industry.

Canada had drafted the Federal Marine Environmental Quality framework (included in the Green Plan initiatives) prior to the convention. This document supported all the issues at stake in Rio. This country also promoted a number of issues at the preparatory meetings and at the final negotiations in Rio, including a comprehensive approach to coastal-zone management (CZM) without compromising national sovereignty over living marine resources. Canada also suggested a global strategy for the prevention, reduction and control of degradation of the marine environment from land-based activities and an institutional framework within the UN for regular consideration of ocean issues.⁽³⁸⁾ UNCED participants endorsed the convening of an Intergovernmental Meeting to develop such a strategy, which would include:

- Support and a call for moving forward the timetable for ratification and implementation of the London Dumping and MARPOL Concentrations Agreement;
- Consideration of and support for an International Convention on Offshore Oil and Gas Activities. This would promote an improved system of integration of data and information and improve the ability to monitor the marine environment;

(38) U.N. Document A/Conf. 15/PC/WC. II/L.25/REV./1.

- The expeditious implementation of the Global Ocean Observing System (GOOS);
- Involvement of all facets of Canadian society in the process.

Canada felt the issues had been watered down and were not as strong as had initially been pressed for at the preparatory meetings.⁽³⁹⁾

Agenda 21 firmly commits nations to new goals and objectives for CZM and control of marine pollution. Three supplementary conferences were suggested in addition to the regular monitoring of oceans issues through the UN General Assembly. These conferences would be on CZM, degradation of the marine environment from land-based activities, and sustainable development in small island states.

MONITORING AND IMPLEMENTATION OF THE UNCED COMMITMENTS

A. Agencies

How will all these promises, ideas and commitments made at Rio be implemented? The Earth Council and the International Sustainable Development Commission were suggested at the conference as possible overseeing agencies.

The Earth Council is to be an independent watchdog operating outside the UN system. It will examine the legal and institutional framework of the International Agreements and instruments, and set a charter of the rights and obligations for the players in the environment and development process at the international, national and regional levels.⁽⁴⁰⁾

The International Sustainable Development Commission would most likely emerge as a permanent organization like the Brundtland Commission in Geneva. It would be modelled on the 53-country UN Human Rights Commission and would report to the United Nations Economic and Social Council. It would use moral pressure and public opinion to persuade countries to follow the policies outlined at the Rio Conference and would rely on information and evidence supplied by non-government, government, inter-developmental organizations and environmental groups. Its duties would include monitoring, assessment and reporting on post-Rio progress.

(39) *Ibid.*

(40) Michael McCoy, "Trekking to the Summit. Now Comes the Hard Part," *Earth Summit in Focus*, No.2, August 1991.

Although the Commission would have no powers of enforcement, it would be expected to influence events through moral suasion. It would in essence act as a watchdog to ensure governments kept their pledges. It was further proposed that representation on the Commission be at the ministerial level, with its first meeting be held no later than 1993. In the meantime, reports on the Commission's structure, administration and staffing are to be prepared for the General Assembly, based on the preliminary work to be done by the UNCED secretariat.⁽⁴¹⁾

B. Countries

Though the negotiated positions of the 154 participating governments at UNCED are well documented in the five major agreements, the positions of individual governments are not. The five most influential countries at UNCED might summarize their attitudes as follows: Canada, "do it"; United States, "delay it"; Germany, "regulate it"; Japan, "solve it"; and India, "sell it."⁽⁴²⁾

Canada participated in all the discussions, promised to ratify the conventions quickly, and made a genuine effort to make the Earth Summit a success. In recent years Canada has implemented many initiatives in support of its commitment to the environment, for example the National Round Table on the Environment and Economy, the Environmental Choice Program and the National Packaging Protocol.⁽⁴³⁾ A major commitment is Canada's Green Plan, launched in 1990. Similar in spirit to Agenda 21, it details targets and schedules for a multitude of activities. Implementation of the Green Plan initiatives so far supports federal estimates that Canada will reach the Agenda 21 objectives by the year 2000.⁽⁴⁴⁾

In Rio the Prime Minister announced a five-point action plan for Canada to implement the UNCED agreements:

- As part of Canada's Green Plan, Canada will assist developing nations formulate national sustainability plans.
- Canada will ratify the Conventions on Climate Change and Biodiversity before the end of 1992.

(41) *Eco Log*, 7 August 1992.

(42) *Ibid.*

(43) *Ibid.*

(44) *Ibid.*

- Canada will take action on three related fronts -- aid, trade and debt -- by means of financial donations and funding.
- Canada will work to make multilateral institutions more supportive of the goals of sustainable development, including the newly created United Nations Commission on Sustainable Development and the expansion of the mandate of the IDRC.
- Canada proposed that countries cooperate to achieve an Earth Charter by 1995, the 50th anniversary of the founding of the United Nations.

The U.S. position at the conference was paradoxical; the President and his delegation were at odds with each other on many issues. They weakened the Climate Change Convention and delayed signing the Biodiversity Convention; yet the U.S. has been a world leader in the environment for the last 20 years, with steadily declining emissions of carbon monoxide, sulphur dioxide and suspended solids. These improvements will continue through such initiatives as the *Clean Air Act Amendments* of 1990, which use market-based mechanisms in environmental programs. In addition, the U.S. has invested \$2.6 billion in global climate change research and tougher pollution regulations and enforcement.⁽⁴⁵⁾

Germany faces interesting environmental problems, primarily in coping with the pollution-riddled former German Democratic Republic of East Germany (GDR) and because of its highly industrial economy. It has shown itself as a world leader in the field of environmental regulations based on precautionary action and polluter-pay programs. Japan will lead the way in environmental technologies and will be an important player in technology transfer. India, as the voice of the developing nations, assured the conference of their commitment to gaining funding for their natural resources and environmental protection.

To a large degree, the success of UNCED will depend on what happens next and on the machinery Rio has set in motion.⁽⁴⁶⁾

The Rio Conference has given prominence to environmental issues on the political agenda. It spelled out the questions, even if it did not have all the answers and informed a entire generation of policy makers, government officials, industry and the populace about the issues. In addition, it reiterated the call for international cooperation on environmental issues that was first heard in 1972.

(45) *Ibid.*

(46) "The Green Legacy," *The Economist*, 13 June 1992, p. 39.

I leave this conference believing we have a better chance of saving the world than we had when we came here. (John Adams of the National Resources Defence Council, UNCED 1992)

Law is a method of enforcement at the national level. At the international level, political commitment is the important thing because legal instruments flow from political commitment. (UNCED Secretary General Maurice F. Strong, UNCED 1992)

What remains is for governments to provide the leadership the world so desperately needs. Let us find that will and marshal that leadership to the task at hand on behalf of the five billion people we represent. Our children, the Rio generation will be our judges and our beneficiaries. (Prime Minister the Right Honourable Brian Mulroney, UNCED 1992).

SUPPLEMENTARY READING

Environment Canada. *The State of Canada's Environment*. 1992.

Government of Canada. *Canada's Green Plan*. 1990.

The Round Table on the Environment and Development. *Annual Report*. 1992.

United Nations Conference on Environment and Development. *Canada's National Report*. Brazil, June 1992.

World Commission on Environment and Development. *Our Common Future*. 1987.

APPENDIX

SELECTED ENVIRONMENTAL CHRONOLOGY

- 1909 International Joint Commission established
- 1919 Convention for the Protection of Migratory Birds
- 1971 Canada the second country to create a federal Department of the Environment
- 1972 United Nations Conference on the Human Environment, Stockholm, Sweden
- 1972 Establishment of United Nations Environment Program (UNEP)
- 1972 Great Lakes Water Quality Agreement (renegotiated 1978, 1987)
- 1979 Geneva Convention on Long Range Transboundary Air Pollution
- 1980 Brandt Report
- 1983 United Nations General Assembly set up world commission on Environment and Development (the Brundtland Commission)
- 1984 Senate Standing Committee Report: "Soil at Risk"
- 1985 The Macdonald Commission: "Report of the Royal Commission on the Economic Union and Development Prospect for Canada"
- 1985 The Vienna Convention for the Protection of the Ozone Layer
- 1985 The Helsinki Agreement
- 1985 Inquiry on Federal Water Policy: "Currents of Change"
- 1987 National Task Force on Environment and Economy Report
- 1987 The Brundtland Report: "Our Common Future"
- 1988 The Montreal Protocol on Substances that Deplete the Ozone Layer
- 1988 Toronto Conference on the Changing Atmosphere
- 1989 Toronto Economic Summit, Hague Declaration, Noordwijk Declaration, Paris Summit, Langkawi Declaration
- 1988 The Canadian *Environmental Protection Act*
- 1989 Basel Convention on the control of Transboundary Movement of Hazardous Waste
- 1989 *Forestry Act* established by Forestry Canada
- 1990 Houston Summit, Dakar Resolution on the Environment
- 1990 Establishment of the International Institute for Sustainable Development in Winnipeg, Manitoba
- 1990 House of Commons Standing Committee (HCSC) on the Environment Report: "Our Changing Atmosphere"
- 1990 G-7 Summit Houston, Texas. Mr. Mulroney calls for a instrument to promote sustainable development and conservation of forests
- 1990 Canada's Green Plan (11 December 1990)
- 1990 CCME (Canadian Council Of Ministers for the Environment): National Packaging Protocol and Phase 1 of the Management Plan for Nitrogen Oxide and Volatile Organic Compounds
- 1991 London Summit
- 1991 A Summary of Sustainable Fisheries Activities in Canada
- 1991 HCSC on the Environment Report: "Our Changing Atmosphere"
- 1991 Canada-United States Air Quality Accord
- 1992 Senate Approval of Bill C-78 (C-13) *Canadian Environmental Assessment Act*
- 1992 United Nations Conference on Environment and Development (UNCED): Convention on Climate Change, Convention on Biological Diversity, Agenda 21, Rio Declaration, Forestry Agreement, Ocean Conference