KYOTO,POPS AND STRADDLING STOCKS: UNDERSTANDING ENVIRONMENTAL TREATIES

January 2003

Linda Nowlan and Chris Rolfe
with Yasmin Nizami, Ines Kwan and Carly Hyman

WEST COAST
environmental law

ACKNOWLEDGMENTS

The authors and West Coast Environmental Law Research Foundation would like to thank the following Advisory Committee members who made generous contributions of their time and knowledge to assist with the preparation of this Guide:

- Richard Ballhorn, Director General, International Environmental Affairs of the Canadian Department of Foreign Affairs and International Trade,
- Jutta Brunnee, Professor of international environmental law, at the University of Toronto, Faculty of Law,
- Christine Hogan, Director, International Policy and Co-operation Branch of Environment Canada, and
- Annie Rochette, Director of the Legal Research and Writing Programme of the UBC Faculty of Law.

Valuable research assistance was provided by Jen Metcalfe and Rodney Wilts.

Thanks also to Christopher Heald, Rodney Wilts, Ceciline Goh and Alexandra Melnyk for proofreading, layout, and general administrative assistance.

Special thanks to LEAD Canada for providing the idea and impetus for this report, and to all members of Cohort 7 for their valuable contributions. In addition, LEAD International offered expert assistance through its training programme and sponsorship of a secondment at the UK Foreign and Commonwealth Office (FCO). The entire staff of the FCO's Environment Policy Depratment also deserve credit and special thanks.

The authors, along with everyone at West Coast Environmental Law Research Foundation would like to thank the Canada Millennium Partnership Program and the International Development Research Centre for making this report possible through its generous grant support. The Law Foundation of BC provides core financial support for WCELRF, for which we are grateful.

The views expressed are those of the authors and the West Coast Environmental Law Research Foundation. Any errors and omissions are, of course, solely the responsibility of the authors.

National Library of Canada Cataloguing in Publication Data

Nowlan, Linda, 1958-
Kyoto, pops and straddling stocks : understanding environmental treaties / Linda Nowlan and Chris Rolfe, with Yasmin Nizami, Ines Kwan and Carly Hyman.

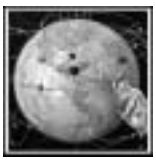
Includes bibliographical references.
ISBN 0-919365-22-1

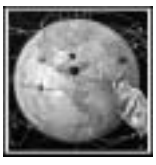
1. Environmental law, International. 2. Environmental law--Canada. I. Rolfe, Christopher, 1961- II. Nizami, Yasmin F. R. (Yasmin Farida Razia), 1968- III. West Coast Environmental Law Research Foundation. IV. Title.
K3585.N68 2003 341.7'62 C2003-910155-X

Printed using vegetable-based inks, on 100% recycled stock, processed chlorine-free. Cover stock is 50% post-consumer fibre; inside stock is 80% post-consumer fibre and 20% sustainable virgin fibre.

TABLE OF CONTENTS

LIST OF TREATIES





FOREWORD

Raising public awareness about the nature and extent of Canada's international environmental obligations is essential to making sure that they are honoured. The objective of this Guide is to increase the level of public understanding in Canada about environmental treaties, also known as multilateral environmental agreements (MEAs). The Guide shows how these treaties influence environmental protection in Canada and critically examines how Canada has implemented its MEA obligations.

The authors have tried to demystify the complex world of environmental treaties. The title shows how impenetrable these treaties can be. Kyoto is the name of the chief international agreement regulating climate change causing emissions; POPs is the acronym for persistent organic pollutants regulated by a 2001 Convention; and straddling stocks are fish stocks who migrate between differently regulated areas of the ocean, also the subject of a recent treaty.

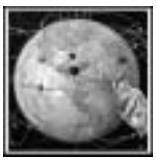
The Guide is intended primarily for non-lawyers, and is not a source of legal advice. Legal citations for treaties, international declarations and Canadian statutes are not footnoted in the text. An Appendix at the end of the Guide lists these citations. Internet addresses for each treaty are listed in the text.

Canadian examples are used where possible. As this Guide is written from a non-governmental organization (NGO) perspective, it emphasizes NGO sources of information and analysis. The Guide should be especially useful for those NGOs and individuals who track Canada's positions in the international environmental policy world. Canada often includes members of NGOs on its official delegations to international environmental treaty negotiations, which is an extremely useful way to promote understanding between government and civil society. Attending one of these meetings for the first time can be daunting. The procedure is difficult to follow, many acronyms are used, and no one has time to explain the process. This Guide should be helpful background reading for those outside government who attend these meetings, whether as part of an official delegation or as a representative of civil society.

Many treaties that are not primarily environmental in focus may significantly influence the environment but are not covered in detail in this Guide. Trade and agricultural treaties are examples. And though many institutions such as development banks, international financial institutions, United Nations agencies, and multinational corporations influence environmental policy, the inner workings of these bodies and their relationships to treaties is not covered in any detail in the Guide.

The Guide is a team effort from West Coast Environmental Law. Linda Nowlan, West Coast's Executive Director, is the principal author and editor. She wrote the Introduction and Chapters 1, 2, 3, 6, 8, 9 and 12; revised and updated Chapters 7, 10 and 11; and

edited the Guide. She co-wrote Chapter 4 with West Coast Staff Lawyer Chris Rolfe, who also wrote Chapter 5 and edited chapters 1, 2, and 3. Yasmin Nizami, a West Coast summer law student, wrote Chapter 7. Ines Kwan, a West Coast summer law student, wrote an early draft of Chapter 10. Carly Hyman, a West Coast co-op law student wrote an early draft of Chapter 11. The primary authors have personal experience in treaty and 'soft law' negotiations for the *United Nations Framework Convention on Climate Change* and *Biodiversity Convention*, and for the UN Commission on Sustainable Development and the 2002 World Summit on Sustainable Development.



INTRODUCTION

International environmental treaties — once a fringe area of environmental law — increasingly deal with issues that affect the lives of Canadians. Consider these examples:

- International emission reduction requirements under the *United Nations Framework Convention on Climate Change* (UNFCCC) are likely to eventually reshape the Canadian economy. The success of the UNFCCC is dependent on global emission reductions of over 50%, requiring the Canadian economy to make the transition from a fossil fuel dependent, material intensive economy to a cleaner, more efficient 21st Century economy. New jobs will be created in emerging industries, but other industries such as coal mining will decline.

- Levels of PCBs, one form of toxic persistent organic pollutants (POPs), are found in record levels in the breast milk of Inuit women, with still unknown impacts on children's' development. International restrictions on the production and use of these and other chemicals have recently occurred through the Stockholm *POPs Convention*.

- Controls on overfishing imposed by the *UN Fish Agreement* are supposed to speed the recovery of fragile groundfish stocks off the coast of Newfoundland, reviving the fisheries and reversing the economic downturn in that province.

- Medicines are primarily derived from nature. Cures for cancer have been found in recent years in species such as the Pacific yew tree and rosy periwinkle. Fewer than 1% of the world's 250,000 tropical plants have been screened for pharmaceutical applications.[1] Without international legal rules to protect biodiversity loss, new medicines may also be lost. The aim of the *Convention on Biological Diversity* is to protect nature in all its forms.

At a time when citizens take to the street to protest globalized trade rules, global environmental rules are a welcome antidote to the backlash against multilateralism. These rules are widely supported. They are often criticized because they don't go far enough and have not yet produced reverses in the most troubling global environmental trends. Many members of the public question why their governments willingly relinquish sovereignty in the name of the marketplace but are reluctant to make similar concessions for the environment.

---

[1] World Conservation Monitoring Centre, *World Atlas of Biodiversity: Earth's Living Resources for the 21st Century* (Cambridge: UNEP –WCMC, 2002).

GROWTH IN NUMBER AND COMPLEXITY OF MEAS

In the past 20 years, the number of environmental treaties, also known as multilateral environmental agreements or MEAs, has mushroomed. More than half of the over 500 existing global and regional MEAs have been adopted in the past 25 years. The range of issues that these treaties address has expanded significantly as well, from single issue treaties such as the 1909 *Boundary Waters Treaty*, to the comprehensive 1992 *Convention on Biological Diversity.*

While treaties are only one method used to solve environmental problems, they are the primary tool used by the international community to focus collective action on these issues. The Executive Director of UNEP calls MEAs "one of the most outstanding achievements of the global community in the environmental field to date."[2]

International environmental law, like other branches of international law, suffers from the absence of essential institutions common to domestic legal systems. No supreme legislative, judicial or executive body now exists internationally and none is likely to materialize in the near future. States are unwilling to cede sovereignty in this area so MEAs depend on states voluntarily committing to national action to achieve regional or global goals. Painstaking international negotiations must be undertaken to obtain global environmental commitments. The results are often critiqued for suiting the "lowest common denominator", or producing the least stringent protective measures.

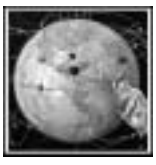
Yet the increasingly complex and substantive requirements of MEAs reveal a more complicated picture. Canadian government officials have described the negotiations regarding implementation of the Kyoto Protocol as the most complex international negotiation of any sort in which Canada has participated. The *Kyoto Protocol*, while admittedly a first step, will require a twenty seven percent reduction in Canada's "business as usual" emission trends.[3]

MEA requirements significantly influence national laws and policies as well. States are legally bound to pass domestic laws to implement most treaties or confirm that existing laws are sufficient to meet the treaty's obligations. The influence of MEAs on domestic laws increases as the number of MEAs grows. For instance, while the international community had no power to impose Kyoto targets on an unwilling Canada, it is also clear that Canada made deeper emissions reduction commitments than would have occurred in the absence of international pressure and international action.

---

[2] United Nations Environment Program, "International Environmental Governance" Report of the Executive Director, April 2001.

[3] The currently projected gap between business as usual emissions and Kyoto targets is 240 million tonnes per year, or 30% of Canada's projected emissions of 809 million tonnes. However, this is offset by an estimated 24 million tonnes of credit from business as usual forest and agricultural sinks.



GLOBAL ENVIRONMENTAL PROBLEMS WORSEN DESPITE EXISTENCE OF MEAS

While environmental treaties have proliferated in the past 20 years, environmental challenges have proliferated as well. Despite the number of treaties, the condition of the biosphere worsens. Here are a few of the many global examples:

Biodiversity loss is increasing, according to the 2000 assessment of IUCN, the World Conservation Union. A total of 11,046 species of plants and animals are threatened, facing a high risk of extinction in the near future, in almost all cases as a result of human activities. This includes 24 percent (one in four) of mammal species and 12 percent (one in eight) of bird species. The total number of threatened animal species has increased from 5,205 to 5,435 since the last time the IUCN's Red List was issued in 1996.[4] The *Convention on Biological Diversity* has not yet solved this problem.

The majority of the world's living Nobel laureates identify climate change as the most pressing challenge to humanity. Yet the *UN Framework Convention on Climate Change* has yet to have a discernable impact on greenhouse gas emissions that cause climate change, and reductions called for by the *Kyoto Protocol* will, by themselves, have only a minor effect on climate change.

Hazardous waste generation continues to rise. OECD countries currently generate 220 pounds of hazardous waste per person per year, a figure expected to increase by 47% by 2020. Large portions of this waste will enter the general environment and begin moving through food chains.[5] Hazardous waste treaties have not yet provided the necessary shift towards pollution prevention and cleaner production.

NEW FOCUS ON IMPLEMENTATION OF MEAS

The fact that the rapidly increasing number of environmental treaties has not stopped deterioration of global environmental conditions points out a "disconnect" between the problem and the solution. The treaties may not be strong enough, nations may not be implementing and enforcing them properly, or both.

In the past, the international community focussed on developing new treaties, rather than ensuring that nations actually comply with these treaty obligations. Increasingly, states recognize the need to go beyond negotiation of treaties to focus on implementation and compliance. The United Nations Environment Program says that effective implementation and compliance with agreements already negotiated is as important as

---

[4] "Confirming the Global Extinction Crisis – A call for international action as the most authoritative global assessment of species loss is released" IUCN News Release, Sept.28, 2000 online at http://www.iucn.org/redlist/2000/news.html.

[5] OECD, *OECD Environmental Outlook* (Paris: OECD, 2001) pp. 137, 314.

new agreements.[6] For the first time since the Rio Earth Summit in 1992, Canada is not involved in the negotiation of any regional or global environmental treaties.

Informed public participation can assist MEA implementation. Public participation is a key factor in making a treaty effective. In fact, the involvement of non-governmental organizations (NGOs) in monitoring the implementation of environmental treaties has been identified as a "key variable" accounting for policy change.[7]

ORGANIZATION OF THIS GUIDE

This Guide explains how treaties work internationally, and how they work in Canada.

It briefly charts the history of international environmental law. Then it discusses the international law making process, and parallel processes to give treaties legal force in Canada. Implementation, compliance and enforcement are discussed in the fourth chapter.

An overview of the major environmental treaties follows in chapters 5, 6 and 7. Each chapter in this section describes the nature of the environmental problem, the major treaties that address this problem, their status in Canada, and major NGOs working on the issue.

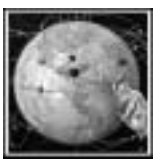
The next part of the Guide explains the importance of MEAs for a few key global issues: achieving sustainable development (development that meets the needs of the present while allowing future generations to meet their own needs); poverty alleviation and environmental protection; reconciling environment and trade; and the links between environment and human rights.

The report ends with a brief discussion of the future development of international environmental law.

---

[6] *Background Study on Possible Components of the Programme for the Development and Periodic Review of Environmental Law for the First Decade of the Twenty-First Century*, UNEP/Env.Law/4/INF/1, 4 September 2000.

[7] David Hunter et al. *International Environmental Law and Policy*, (New York: Foundation Press, 1998) 450.



CHAPTER 1 – BRIEF HISTORY OF INTERNATIONAL ENVIRONMENTAL LAW

International agreements about wildlife or water date back to the late 1800s, but were sparse in number until the last half of the 20th century. Forty years ago, international environmental law did not exist as a separate branch of law. The concept of ecosystem was unknown, and the term environment was rarely used. Milestones in international environmental law occurred in 1972 and 1992, the dates of two critical international meetings, the Stockholm Conference on the Human Environment and the Rio Conference on Environment and Development.

Today, there are at least 502 treaties related to the environment, of which 323 are regional.[8] The growth in this field of law results from increased resource use and consumption, a burgeoning world population, and recognition of the international dimension of almost all national environmental problems. Pollution spreads across boundaries, degrading water, the atmosphere, and land.

EARLY STAGES OF MEA DEVELOPMENT

Most early MEAs set the rules to exploit a natural resource of commercial value, such as whales, or to protect people from health threats, such as lead in paint. Wildlife treaties go back as far as a hundred years. Early examples of these treaties include the *Convention for the Protection of Birds Useful to Agriculture*, 1902; the *Treaty for the Preservation of Fur Seals*, 1911; and the *Convention for the Protection of Migratory Birds in the United States and Canada*, 1916. Treaties about shared water systems also have a long history. One of the first applicable to Canada was the *Boundary Waters Treaty Between Canada and the US*, signed in 1909.

Environmental issues received more international attention after the creation of the United Nations (UN) in 1945. The broad mandate of the UN produced a number of specialized agencies, many of which addressed at least one aspect of environmental management. The International Maritime Organization (IMO) addressed water pollution from ships; the World Health Organization (WHO) looked at atmospheric pollution and the Food and Agriculture Organization's (FAO) mandate included land conservation, food

[8] United Nations Environment Programme, *Multilateral Environmental Agreements – A Summary* UNEP/IGM/1/INF/1(UNEP: New York) 2001.

and health. The strong role that the UN eventually played in MEA development is not a result of the UN *Charter* which does not mention the environment.

Before 1972, MEAs fell mainly into two categories:

- Flora and fauna protection. The term "biodiversity" was not commonly used until the 1992 *Convention on Biological Diversity* popularized the term. About one half of this group of treaties focuses on marine wildlife. Several of these treaties continue to influence international policy debates: the *International Convention for the Regulation of Whaling* (1946), the *International Plant Protection Convention* (1951), and the *Ramsar Convention for the Protection of Wetlands* (1971).

- Marine environmental protection. The International Maritime Organization (IMO) was created during this period, and remains the dominant marine environment institution.[9]

1972 STOCKHOLM CONFERENCE

The modern era of international environmental law began in 1972 in Stockholm at the UN Conference on the Human Environment. A UN resolution listed the objective of the Conference as "to provide a framework for comprehensive consideration within the United Nations of the problem of the human environment in order to focus the attention of government and public opinion on the importance and urgency of this question and also to identify those aspects of it that can only or best be solved through international cooperation and agreement".

Products of the 1972 Conference included an action plan with 109 recommendations and the 26 principles of the *Declaration of Principles for the Preservation and Enhancement of the Human Environment*, also known as the *Stockholm Declaration*. This Declaration was the first attempt by the international community to provide a comprehensive statement of principles of international environmental law, and included important principles such as the duty to prevent transboundary pollution.

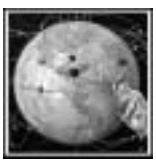
A Canadian elected to chair the Stockholm Conference later went on to become the first Executive Secretary of the new UN organization created at Stockholm — the United Nations Environment Programme (UNEP). The same Canadian, Maurice Strong, was also chosen to chair the Rio Earth Summit, twenty years later.[10]

UNEP was the first UN organization headquartered in the developing world, in Nairobi, Kenya. Its mandate is to promote international environmental cooperation and integrate environmental considerations into the work of the other operational UN agencies such as the UN Development Programme (UNDP).

---

[9] Treaties regulating nuclear energy, weapons and radiation are sometimes classified as MEAs, and sometimes as military treaties. They are not covered by this Guide.

[10] For his recollections on these events, see Maurice Strong, *Where On Earth Are We Going?* (Toronto: Knopf Canada, 2000).



A Governing Council made up of state representatives sets UNEP's work programme. The work is carried out by a Secretariat. The Governing Council's duties are to promote international cooperation in the field of the environment and coordinate environmental programmes within the United Nations system. Resolutions from Governing Council are a type of soft law as they create goals and set the framework for international environmental policy development. UNEP also contributes to the development and codification of international law and has played the leading role on environmental law in the UN system. The direction for UNEP's environmental law programme has been set by the different 'Montevideo programmes', action plans prepared by UNEP in consultation with expert advisory groups. The name refers to the place where the first programme, the *Programme for the Development and Periodic Review of Environmental Law* was adopted in 1981 - Montevideo, Uruguay. This progamme was subsequently revised by Montevideo II in 1993, and further updated by Montevideo III in 2001. UNEP's Governing Council formally adopted each of the programmes, which forecast upcoming environmental issues that may need new treaties or amendments to existing treaties, or further work by international agencies. [11]

MEA PROLIFERATION – 1972-1992

Environmental treaties multiplied in the twenty-year interval between Stockholm and Rio. UNEP was a catalyst for many of these new treaties.[12]

During this period, 302 MEAs were negotiated, many of which are regional rather than global. Over 40% of these treaties are related to protection of the marine environment, with the comprehensive 1982 *United Nations Convention on the Law of the Sea* (UNCLOS) as the centrepiece of this group. (As UNCLOS addresses many issues, it is not simply a MEA, but because of its importance for the environment, it is discussed in this Guide). The number of biodiversity treaties also proliferated in this twenty-year span. Notable examples include the *Convention on International Trade in Endangered Species* (CITES), 1973, and the *Convention on Migratory Species*, 1979. A series of MEAs related to chemicals, the atmosphere and air quality were also negotiated in this phase.

Governments devoted more attention to the environment following Stockholm, and most nations created an environmental protection agency or its equivalent in the 1970s or 80s. International financial institutions such as the World Bank created environmental policies and departments to complement their traditional lending and development portfolios in this era.

Environmental non-governmental organizations also blossomed during this period. Greenpeace was founded in Vancouver in 1971. Public awareness of environmental issues grew as well, and more media coverage fuelled public interest. NGO activism produced

---

[11] The Montevideo programmes can be found on UNEP's web site at http://www.unep.org/New_Law/page4.html.

[12] Mostafa Tolba and Iwona Rummel-Bulska, *Negotiating the Environment*, (Boston: MIT Press), 1999, the memoirs of the longest serving Executive Secretary of UNEP, document this period of MEA development.

successful campaigns to ban commercial whaling in 1982 and commercial trade in ivory in 1989.

A series of high profile reports and pronouncements in the 1980s and early 1990s underlined the need for enhanced environmental protection and strengthened environmental law. These included:

- the *World Charter for Nature*, adopted by the UN General Assembly in 1982;
- the 1991 *Caring for the Earth: A Strategy for Sustainable Living* report, prepared by the International Union for Conservation of Nature (IUCN), UNEP and the Worldwide Fund for Nature (WWF); and
- the 1987 report from the World Commission on Environment and Development, *Our Common Future*, known as the Brundtland report after the Commission's chair, Gro Harlem Brundtland, then Norwegian Prime Minister.[13]

Our Common Future was, and remains, a seminal report. It popularized the concept of sustainable development and proposed a definition of this concept — development that meets the needs of the present without compromising the ability of future generations to meet their needs — that is still used today. However, sustainable development remains an elusive concept. The Brundtland definition leaves many issues open to debate.

The Brundtland report criticized the separation of the environment from other policy arenas, and recommended the full integration of environmental and economic policy. It recommended substantial institutional and legal changes, including a call for a universal declaration on environmental protection and sustainable development, a new UN Programme on Sustainable Development and an international conference to review progress on all its' recommendations.

RIO CONFERENCE ON ENVIRONMENT AND DEVELOPMENT – 1992

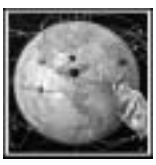
The UN General Assembly followed up on the Brundtland recommendation and convened the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 to "promote sustainable and environmentally sound development in all countries".

At the time, UNCED, also known as the Rio Earth Summit, was the world's largest ever gathering of heads of state, environmental groups and non-governmental organizations, and was a watershed in diplomatic history. UNCED produced three non-binding documents and two legally binding treaties.[14] The three non-binding documents are:

---

[13] Another prominent Canadian served as the Executive Secretary of the Commission: Jim McNeill, now head of The World Bank's Inspection Panel. See http://www.worldbank.org.

[14] These can all be found on line at: http://www.un.org/esa/sustdev/agenda21text.htm.



1. The *Rio Declaration on Environment and Development*, which repeats some of the principles from the *Stockholm Declaration*, and contains 27 guiding principles (the 'Rio Principles') outlining the rights of nations to development, and their responsibilities to protect the environment. The principles balance the priorities of developing and developed countries, reflecting a unique and delicate compromise, sometimes called the "Rio bargain". Developed countries championed principles relating to public participation, the precautionary principle and polluter pays (Principles 10,15 and 16), while developing countries insisted on including the right to development, poverty alleviation, and common but differentiated responsibilities (Principles 3, 5 and 7). In return for agreeing to conserve biological resources, the developing countries were promised additional financial and technological resources. The Rio Principles have been continually used since 1992 as a basis to start negotiations, and the exact language of some principles is often repeated. At the 2002 World Summit on Sustainable Development, much discussion focussed on the precautionary principle and the principle of common but differentiated responsibilities. Nations reiterated their support for both principles after protracted debate. Many of the Rio Principles are discussed in Chapter 2.

2. The UNCED Forest Principles, officially titled the *Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation, and Sustainable Development of all Types of Forests*, which were adopted instead of the Forest Convention that had been planned as nations could not (and still cannot) agree on internationally legally binding rules applicable to forests, and

3. Agenda 21, an ambitious, lengthy blueprint for sustainable development. Its four prongs are:

    - The social and economic dimensions section identifies necessary international actions to accelerate sustainable development in developing countries; combat poverty, change consumption patterns, and integrate environment and development in decision-making.

    - The part on conservation and management of resources for development points out the need to conserve and sustainably manage natural resources, and discusses protection of the atmosphere, combating deforestation, preventing land degradation, promoting sustainable agriculture, and protection of the oceans and freshwater resources.

    - To broaden public participation in decision-making, Agenda 21 calls for increasing the involvement of 'major groups' defined as women, children and youth, indigenous people, NGOs, local authorities, workers and trade unions, business and industry, the scientific and technological community, and farmers. These 'major groups' subsequently assumed a formal role in the Commission on Sustainable Development (CSD), through multistakeholder dialogues with government during the CSD's annual sessions.

    - The means of implementation section identifies how the international community can implement Agenda 21, through the provision of financial

resources, transfer of technology, institutional arrangements, international legal arrangements, and information for decision-making.

UNCED also produced two binding MEAs:

- the *Convention on Biological Diversity* (discussed in Chapter 6), and
- the *UN Framework Convention on Climate Change* (discussed in Chapter 5).

The conference also called for the launch of negotiations on a *Desertification Convention* which came into force in 1996 and is discussed in chapter 11 and started the process that resulted in the UN *Convention on Straddling and Highly Migratory Fish Stocks*, which came into force in 2001 and is discussed in chapter 6.

The Summit recommended the creation of a new intergovernmental agency, the Commission on Sustainable Development, to oversee the implementation of Agenda 21 and coordinate sustainable development activities at the international level.[15] Composed of 53 UN member states, the Commission meets annually in New York at the United Nations.

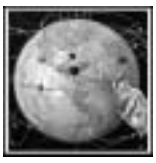
The Earth Summit's goal was to move environmental issues to centre stage for all governments, both in their domestic and international actions. The Summit aspired to involve all parts of society in defining sustainable development, share information in an open and "transparent" manner, and integrate environmental protection into economic and development decision-making. Many of these aspirations have now been at least partially met.

MEA DEVELOPMENT SINCE RIO – 1992-2002

During the period after the Rio Earth Summit, many new MEAs were negotiated, including the *Convention on Desertification*, the UN *Agreement on Straddling Fish Stocks*, the *Rotterdam Prior Informed Consent* (PIC) *Convention*, the Stockholm *POPs Convention*, the *Kyoto Protocol* to the *UN Framework Convention on Climate Change*, and the *Cartagena Biosafety Protocol* to the *Convention on Biological Diversity*. In addition, new Protocols were added to the UNECE *Convention on Long Range Transport of Airborne Pollutants*. A significant new regional treaty elaborating on Rio Principle 10 was also concluded: the *Aarhus Convention on Access to Information, Public Participation in Environmental Decision-making and Access to Justice in Environmental Matters*.

Single focus MEAs were supplemented with more ecosystem-oriented treaties. Moving away from a pure conservation or pollution prevention focus has produced more complex, useful treaties. The comprehensive climate change and biodiversity treaties affect multiple sectors and necessarily involve economic, trade and financial provisions.

[15] The CSD is discussed further in chapter 12, Sustainable Development. For more information on the CSD, see its web page at www.un.org/esa/sustdev/csd.; reports of its meetings are at the Earth Negotiations Bulletin at www.iisd.org.



These treaties take longer to negotiate and are harder to implement because of their broad focus, the complexity of their provisions and their impact on national economies.

At the Rio + 5 meeting in 1997, world heads of states agreed to join forces to accelerate MEA ratification and strengthen implementation, particularly focussing on the links between environment, equity and poverty. Though many of the indicators of environmental progress had deteriorated since Rio, adoption of the *Programme for the Further Implementation of Agenda 21* was supposed to have signalled a renewed worldwide commitment to sustainable development.

In 2000, the Secretary General of the United Nations invited nations to sign and ratify a core group of multilateral treaties reflecting the key policy goals of the UN. Three of those treaties were MEAs: the *Kyoto Protocol to the United Nations Framework Convention on Climate Change; the Convention on Biological Diversity* and the *Desertification Convention*.[16]

In addition, in 2000 to mark the new millennium, the UN held a special Millennium Summit and adopted the Millennium Development Goals. All 189 UN member states have pledged to meet the goals by 2015. The goals are reprinted in Chapter 10.

Despite this renewed commitment, environmental progress has stalled, public concern has dropped and many, but not all, environmental problems have worsened. UNEP's *Global Environmental Outlook* (GEO) reports surveyed environmental trends and developments in 2000 and again in 2002. The overall prognosis from GEO is grim:

> "Despite significant growth in domestic and international environmental law and policy, the global environment has continued to deteriorate over the past decade. Virtually every major environmental indicator has declined as compared with the Rio Conference period . . ."[17]

Other global research institutions have also pointed out the alarming discrepancy between actual environmental conditions and the level of public policy attention focussed on these conditions. For example, a World Resources Institute report reveals a widespread decline in the condition of the world's ecosystems due to increasing resource demands and warns that if the decline continues it could have devastating implications for human development and the welfare of all species.[18]

The need for further international environmental law development is illustrated by these environmental trends. Though progress has been made, much work remains.

Not all signals are negative. Positive recent developments in the area of international environmental law include a deal on climate change rules that seemed unachievable only

---

[16] United Nations, *Millennium Summit Multilateral Treaty Framework: An Invitation to Universal Participation*, (New York: United Nations), 2000.

[17] UNEP, *Global Environmental Outlook* (Nairobi: UNEP), 2000, and Global Environmental Outlook 2, (Nairobi: UNEP), 2002.

[18] *World Resources 2000-2001 — People and ecosystems: The fraying web of life,* (Washington: WRI) 2001.

a few years ago and new treaties on critical issues such as persistent organic pollutants and biosafety.

WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT – 2002

Accelerated growth of MEAs in the last quarter of the twentieth century has led to treaty congestion, (too many treaties adopted in a short period of time straining the limits of governments to implement), treaty fatigue (too many days spent each year negotiating new treaties or attending meetings of existing treaty bodies) and a search by the global community for new ways to improve international environmental governance. Countries recognize that numerous large international summits are not the solution for sustainable development and that progress meetings should not be routinely scheduled at five or ten year intervals, but only when there is a need for such a meeting. In 2002, Johannesburg hosted the World Summit on Social Development (WSSD), a ten-year report on progress on sustainable development since Rio.

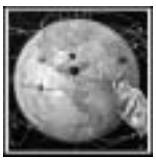
At WSSD, nations renewed their commitment to implementation of existing treaties, repeated calls for integration of economic and environmental policy and emphasized the vital roles that all members of society play in achieving progress. Poverty eradication, the special needs of Africa, and the social dimension of sustainable development were other prominent themes.

In addition, the Summit examined ways to strengthen international environmental governance, but decided not to create a new Global Environmental Organization, with comparable powers to the World Trade Organization.[19] Instead nations pledged to expand funding for UNEP, revise the Commission on Sustainable Development's work plan, and strengthen the role of other UN agencies in sustainable development.

The overarching issue of financing for development was also prominent at WSSD. Accusations that the developed world has not kept its end of the global bargain reached at Rio were fuelled by declines in aid levels and increases in developed world subsidies, such as agricultural subsidies, since 1992. Devising solutions for financing sustainable development will require ingenuity and concerted political will.

The WSSD Plan of Implementation made specific reference to a number of specific MEAs and tasked the CSD with reviewing developments in international sustainable development law. Improving coordination and effectiveness of MEAs was another theme of the WSSD. No new MEAs were proposed, though activists called for binding rules on corporate accountability as well as environment and human rights. Legal agreements did not receive as much attention as new partnerships for sustainable development. These "coalitions of the willing" allow interested states, international institutions, NGOs and multinational corporations to take action on issues of common concern, without the need for unanimity characteristic of treaties. For example, a new *Partnership for Principle 10* launched at WSSD involves NGOs, a few governments and the World Bank, UNEP, and

[19] Reform of global institutions for the environment was an initiative vigorously pursued by Canada during Canada's term as President of UNEP Governing Council. Chronicles of the meetings and documents of this initiative can be found at http://www.unep.org/ieg.



the IUCN working together to implement the three parts of Rio Principle 10: access to information, public participation in environmental decision-making and access to justice.[20]

WSSD's success will be measured in future by the action that states take on the two major challenges to sustainable development identified by UNEP's Global Ministerial Environmental Forum:

1. The pervasive effects of the burden of poverty on at least half of humanity; and

2. The excessive and wasteful consumption and inefficient resource use that perpetuates the vicious cycle of environmental degradation and increasing poverty.

Success will also be measured by how well the Summit implements new partnerships involving the full range of international institutions, civil society and corporate sectors in concrete action plans on clean energy, clean water and sanitation, and other issues of sustainability which have emerged since Rio or have still not been adequately dealt with by the global community. It is too early to judge whether the WSSD will be viewed as a success, or as the last of the large mega-summits on environment and development.

[20] See the Partnership's web site at http://www.pp10.org.

CHAPTER 2 – INTERNATIONAL ENVIRONMENTAL LAW

OVERVIEW OF INTERNATIONAL LAW

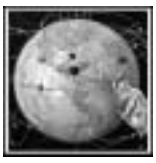
International law is the set of rules that states use to manage their relations. International law is very different from national law. In a national legal system, a central law-making body or legislature makes the laws; the executive implements the laws and secures their observance; and the judiciary interprets and applies the law. There are no equivalents to these bodies in the international legal system.

States are the dominant actors in international law, though international organizations such as the United Nations and World Trade Organization and non-governmental organizations (NGOs) play an increasing role in the international legal order. Even wealthy individuals can dramatically influence international policy. Ted Turner 's donation of $1 billion to the United Nations in 1997 is a graphic illustration of an individual's impact.

The main concept of international law is sovereignty, defined in legal dictionaries as "the supreme, absolute and uncontrollable power by which any state is governed". A state's sovereign power to control activities inside its' boundaries is limited by the international legal rules that the state has agreed to follow. In the international environmental law field, the tension between sovereignty and protection of the environment often surfaces.

Sovereign states make the rules that govern their citizens and that apply within the limits of their territorial jurisdiction, including the land within their borders, internal waters, territorial sea and the air above these areas extending to the point at which the legal regime of outer space begins. Each of these territorial areas is defined by legal rules. Areas outside the national jurisdiction of each state include the high seas, deep sea bed, atmosphere and outer space, and certain limited land areas in Antarctica. These areas are sometimes called the "global commons", and international rules also govern these areas.

International legal rules develop by consent among states. Treaties affect only those states that consent or agree to be legally bound by the written agreement. International laws are formed when states need to cooperate with other states. This need to cooperate creates an incentive to comply with international law. However, conditions do change, which can lead to violations of international law. Law breaking states may attract diplomatic pressures, sanctions, reprisals, and in extreme cases, military intervention.



Where does international law come from? It is derived from express written agreements between states usually called treaties, as well as from other sources such as custom, or the customary practice of states who believe they are legally required to conform to certain practices.[21] Treaties are the focus of this Guide, though significant "soft" international environmental legal instruments (documents that are not intended to be legally binding) are also discussed because of their importance to global environmental protection.

WHAT IS INTERNATIONAL ENVIRONMENTAL LAW?

International environmental law encompasses global, multilateral or bilateral agreements, as well as customary law, state practice, institutions that develop and administer the law, and the extra-territorial application of domestic law. International environmental law attempts to control, limit and prevent environmental damage and promote a clean and healthy environment. Environment is a broad topic, including fresh and salt water, soil, land, atmosphere, all living creatures and all other aspects of the physical environment. International environmental law is not confined to purely environmental subjects, but is intertwined with other pressing issues facing the world: the North-South divide; excessive and inequitable consumption patterns; human health; human rights; international and national trade; and investment and financial regimes.

PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW

No general treaty establishes a framework and principles for international environmental law. Instead, this body of law has developed piece-meal, in response to specific threats. Many concepts are repeated in each new treaty, and shared principles have emerged from the patchwork of treaties.

Principles of international environmental law are evolving. Most of these principles are found in bilateral or multilateral environmental agreements, but also in non-binding declarations, such as the 1972 *Stockholm Declaration on the Human Environment* and the 1992 *Rio Declaration on Environment and Development* (also known as the "Rio Principles"). Often, principles first set out in non-binding declarations are later translated into binding enforceable treaties. A concept included in a binding treaty has more weight and authority than one that is contained only in soft law declarations.

The following list of principles, emphasizing the Rio Principles, is meant to illustrate the wide range of potential legal principles that may be included in MEAs and is not exhaustive.

---

[21] The sources of international law are enumerated in Article 38(1) of the *Statute of the International Court of Justice* and, in addition to treaties, include customary international law and the general principles of law recognized by civilized nations.

SOVEREIGNTY OVER NATURAL RESOURCES

Each state has sovereignty, or supreme controlling power, over its natural resources. Each state has the right of possession and the right to freely manage and dispose of natural resources within the limits of international law. Sovereignty should be exercised in an environmentally responsible way. The sovereign right of control is limited by the state's duty to limit damage to the environment beyond its borders.

Principle 21 of the *Stockholm Declaration* and Principle 2 of the *Rio Declaration* codify this principle. These two related and linked concepts, sovereignty over natural resources and the duty not to cause harm beyond national borders, are repeated in binding MEAs such as *UNCLOS*, the *Climate Change Convention*, and the *Convention on Biological Diversity* which says in Article 3:

> "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdictions or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction."

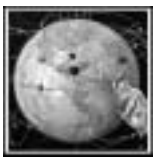
DUTY TO PREVENT TRANSBOUNDARY POLLUTION AND ENVIRONMENTAL HARM

The idea that states have a duty to not harm neighbouring states was first explored in the *Trail Smelter* case in which a tribunal established by the International Joint Commission, an agency set up by a Canada-US treaty, found that sulphur dioxide air emissions from a copper smelter in Trail, BC, were harming US territory.[22] The case is one of the few examples of a tribunal establishing an important principle of international environmental law, and has been widely cited as confirming the principle that a state is responsible for environmental damage to foreign countries that is caused by activities within its borders. As noted above, the duty not to cause harm is often linked to the concept of sovereign control over natural resources.

SUSTAINABLE USE OF NATURAL RESOURCES

This principle requires states to pay due care to the environment and to make rational use of the natural resources within their jurisdictions. The concept has evolved over time, from Principle 2 of the *Stockholm Declaration* which states that: "The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate" to Rio Principle 7 which says states shall cooperate to conserve, protect and restore the health and integrity

[22] "Under the principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties of persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence." (*US* v *Canada*, Trail Smelter Arbitration (United States v. Canada), 3 R. Int'l Arb. Awards 1911 (1938), reprinted in 33 A.J.I.L. 182 (1939).



of the Earth's ecosystem. MEAs also incorporate this principle: sustainable use is one of the three themes of the *Biodiversity Convention*; the objective of *UN Fish Agreement* is to "ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks"; and one of the objectives of the *International Tropical Timber Agreement* is to encourage members to develop national policies aimed at sustainable utilization and conservation of timber producing forests and their genetic resources.

SUSTAINABLE DEVELOPMENT

One of the key goals for MEAs is to ensure that sustainable development occurs, defined by the Brundtland Commission as:

> "... development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:
>
> - the concept of "needs", in particular the essential needs of the world's poor, to which overriding priority should be given; and
>
> - the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."[23]

Rio Principle 4 states that in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process. Rio Principle 8 links the achievement of sustainable development to the reduction and elimination of unsustainable patterns of production and consumption. Rio Principle 12 states that nations must cooperate to promote international trade policies that will lead to economic growth and sustainable development in all countries. Predicating sustainable development on economic growth is not a universally accepted position.

Environmental treaties referring to this principle include those on climate change, biodiversity, straddling fish stocks, desertification and tropical timber. Other non-environmental treaties, notably the treaty which established the World Trade Organization and the treaty governing the European Union, also list 'sustainable development' as an objective. The concept of sustainable development is discussed further in chapter 12.

RIGHT TO A HEALTHY ENVIRONMENT

As the *Stockholm Declaration on the Human Environment* notes, the environment is essential to the enjoyment of basic human rights, even the right to life itself. There are many links between environment and human rights, two major new branches of public international law which have developed over the past half-century. No legally binding international right to a clean environment yet exists, but the foundation for the future development of such a right has been laid. This topic is discussed further in Chapter 9.

---

[23] World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).

PRECAUTIONARY PRINCIPLE/APPROACH

Preventing damage to the environment, natural resources and human health has become a key concern of environmental law. The precautionary principle holds that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. This definition is used in the *Canadian Environmental Protection Act* and Agenda 21. The meaning of this principle in international law is evolving. Rio Principle 15 states that in order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. The *Stockholm POPS Convention* states in Article 1: 'Mindful of the precautionary approach as set out in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Convention is to protect human health and the environment from the effects of persistent organic pollutants.' The principle has also been adopted in the 2001 OECD Environmental Strategy.

COMMON HERITAGE OF MANKIND/COMMON CONCERN OF HUMANKIND

Agreements relating to the global commons have included the principle of 'common heritage of mankind', most notably in the UNESCO *World Heritage Convention*, the *Law of the Sea Convention* and the 1979 *Agreement Governing the Activities on the Moon and Other Celestial Bodies*. The concept applies to resources in the global commons, those areas outside the recognized jurisdiction of any state such as the high seas, deep-sea bed, atmosphere, outer space and even Antarctica. All states share the responsibility to protect the global environment, including areas within their own jurisdiction and those in the global commons.

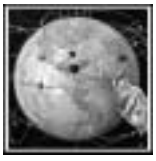
'Common heritage' has four characteristics: non- appropriation of resources by any one state; international management of the global resources; sharing of benefits from the use of the resources; and using the resources for peaceful purposes.[24]

A weaker version of this principle, 'common concern of humankind' is used in both the *Climate Change* and *Biodiversity Conventions* in their preambles and in substantive provisions on burden sharing, financing and transfer of technology. 'Common heritage' was rejected by the drafters of these Conventions, because developed countries objected to the resource benefit sharing implications, and developing countries resisted the idea of international management of sovereign biological resources.

COMMON BUT DIFFERENTIATED RESPONSIBILITY

"Common but differentiated responsibilities" provides that states share common responsibilities to protect the environment, but the actions they take to remedy these problems may be different because not all states have contributed equally to causing environmental problems (i.e., climate change caused by greenhouse gas emissions is largely due to the actions of industrialized, developed countries) and not all states have

[24] David Hunter et al. *International Environmental Law and Policy*, (New York: Foundation Press, 1998).



similar resources to invest in environmental protection. Rio Principle 7 states that developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command. The climate treaties demonstrate the application of this principle through the differing commitments for developed and developing countries to reduce emissions. Treating countries differently according to their economic circumstances is also an integral part of trade agreements, expressed in the WTO Agreements as 'special and differential treatment'.

INTERGENERATIONAL EQUITY

Recognition that the current generation holds the earth in trust for future generations, and that the environment must be managed to meet the needs of both present and future generations, is a newer concept in international law. Intergenerational equity is based on three principles:

1. Each generation should be required to conserve the diversity of natural and cultural resource base so it does not unduly restrict the options available to future generations;

2. Each generation should maintain the planet's quality so that it is bequeathed on balance in no worse condition than received; and

3. Members of every generation should have comparable rights of access to the legacy of past generations and should conserve this access for future generations.[25]

Both the *Stockholm* and *Rio Declarations* refer to future generations (Principles 1 and 2, respectively). The Stockholm *POPs Convention* is an example of a treaty that incorporates this principle.

PUBLIC PARTICIPATION

Procedural principles are common to many MEAs, emphasizing the 'three pillars' of environmental democracy: public participation; access to information; and access to justice. These are found, among other places, in Rio Principle 10, which states that environmental issues are best handled with the participation of all concerned citizens. Significant procedural rights are also included in the regional UN Economic Commission for Europe *Aarhus Convention on Access to Information, Public Participation in Environmental Decision-Making and Access to Justice in Environmental Matters*. Public participation is discussed further in chapter 11.

---

[25] Edith Brown Weiss, "The Emerging Structure of International Environmental Law" in Vig and Axelrod, eds. *The Global Environment — Institutions, Law and Policy* (Washington: CQ Press, 1999) p. 106.

POLLUTER PAYS

This principle requires polluters to pay the full costs of remediating the damage they cause to the environment. The cost of pollution prevention and control should be internalized or reflected in the cost of goods and services which cause pollution or environmental damage. Rio Principle 16 asks states to internalize environmental costs and to use economic instruments for this purpose. First used by the OECD in the 1970s, this term is found in Agenda 21, many MEAs, and many national environmental laws.

LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE

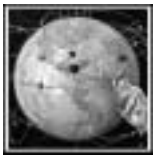
Stockholm Principle 22 concerns compensation, and says that states shall cooperate to develop international law regarding liability and compensations for victims of pollution and other environmental damage. Twenty years later in Rio, states called for 'expeditious' and 'determined' progress on these issues in Rio Principle 13. The *Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Waste and Their Disposal* is an example of this principle in practice. Funds established under two International Maritime Organization (IMO) treaties, the 1992 *Civil Liability Convention for Oil Pollution* and the 1992 *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage* compensate victims of oil pollution from ships. Two other IMO conventions on liability for damage from carriage of hazardous and noxious substances and bunker oil pollution are not in force as of 2002. In 2002, UNEP renewed efforts to clarify the international law on liability and compensation for environmental damage and transboundary harm.

DUTY TO CONDUCT ENVIRONMENTAL IMPACT ASSESSMENTS

Assessing the probable impacts of new projects, policies or plans on the environment in advance of granting final approval is an established part of the decision-making process of most states and international agencies. The duty to conduct environmental impact assessments (EIAs) is found in many environmental treaties, such as the *Biodiversity* and *Climate Change Conventions*. Impacts should ideally be assessed as early as possible before irrevocable decisions are taken and should not be limited solely to impacts within a state's own territory. Canada, like many other nations, requires EIAs to take account of transboundary impacts. One regional treaty, the *Convention on Environmental Impact Assessment in a Transboundary Context*, also known as the *Espoo Convention*, has been developed to address transboundary EIA, and is discussed in more detail in chapter 11.

DUTY OF NON-DISCRIMINATION/ENVIRONMENTAL JUSTICE

This principle requires states not to discriminate in relation to environmental harm. Rio Principle 14 holds that states should discourage the relocation or transfer to other states of activities or substances that cause environmental degradation. The *North American Free Trade Agreement* includes this principle in Article 1114 stating that the Parties agree it is inappropriate to encourage investment by relaxing domestic health, safety or environmental measures.



The environmental justice movement is based on non-discrimination. Environmental justice fights to redress current patterns of concentrating toxic industries in poorer

neighbourhoods and countries, hurting the most vulnerable. The US Environmental Protection Agency defines environmental justice as the "fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations, and policies." Concern that minority and/or low-income populations bear a disproportionate amount of adverse health and environmental effects in the developed world is mirrored in developing countries' perception that an undue share of harmful impacts are shifted to their territories by the developed world. Export of environmentally harmful products (e.g., pesticides that have been banned in the home state) to developing countries is addressed in MEAS such as the regional Organization of African Unity *Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa*, which requires all Parties to take appropriate legal, administrative and other measures within the area under their jurisdiction to prohibit the import of all hazardous wastes, for any reason, into Africa from non-Contracting Parties and deems any such imports illegal and a criminal act and the *POPs Convention* which restricts the import and export of 10 intentionally caused persistent organic pollutants.

Links between environmental justice and sustainable development are becoming more widely recognized.[26]

RIGHT TO DEVELOPMENT

The right to development is a highly contested concept, and is the topic of annual battles at the UN Commission on Human Rights. Its meaning and implications have not been defined and it is not part of any of the six 'core' human rights treaties. The right to development was established in a UN General Assembly Declaration in 1986, which states that "the right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized." It was reaffirmed at the Vienna Conference on Human Rights in the *1993 Vienna Declaration and Programme of Action*. Rio Principle 3 also restates this right. There is no internationally agreed or legally accepted definition of the right, though the UN Commission on Human Rights has established a dual mechanism to explore in greater depth ways of implementing the right to development: an open-ended Working Group on the Right to Development and an independent expert on the right to development.

OTHER PRINCIPLES

This listing of principles is not exhaustive. The *Rio Declaration* contains other principles such as cooperation to eradicate poverty, enacting effective environmental legislation, the role of youth, women and indigenous people and the peaceful resolution of disputes.

---

[26] Centre for International Environmental Law — *One Species, One Planet: Environmental Justice and Sustainable Development* (Washington, DC: CIEL, 2002).

Since Rio, experts have listed principles of international sustainable development law, and have also attempted, unsuccessfully to date, to codify these principles.[27]

HARD LAW AND SOFT LAW

The sources of international law are sometimes characterized as "hard law" and "soft law". Treaties are hard law. States who negotiate and ratify treaties intend to be legally bound and are expected to make all efforts to comply with these laws. However, even though this Guide focuses on treaties, soft law is increasingly important in the development of international environmental law. Soft law has been called more flexible, dynamic, and democratic than hard law. Its creation does not depend on formal negotiations between authorized diplomats. Soft law can be initiated or substantially influenced by NGOs, international institutions like UNEP or the World Bank. Different groupings of states can also significantly affect soft law development as in the case of the OECD.

Hard law includes conventions, treaties, agreements, and protocols, all different names for legally binding written agreements between states. In the field of international environmental law, treaties or MEAs contain most international legal obligations. Treaties are created to codify existing and emerging practices, and to create new binding rules.

All the international rules concerning treaties that have developed over years of state practice have themselves been collected and codified in a treaty, the *Vienna Convention on the Law of Treaties*. Canada has agreed to be legally bound by this treaty, and is therefore called a '"Party" to the treaty. The *Vienna Convention* defines what a treaty is; outlines the procedures for states to demonstrate their consent to be bound by the treaty; sets the rules for treaty procedure; and addresses other matters such as determining priority between treaties.[28]

Soft law refers to documents like declarations, guidelines, resolutions, statements of principle or codes of conduct that are not legally binding. It includes United Nations resolutions, conference declarations such as the *Rio* and *Stockholm Declarations*, and statements from major UN bodies such as the United Nations Environment Program, UNEP. Some observers would also classify statements from major non-governmental organizations such as the IUCN – WWF *World Conservation Strategy* as being a form of soft law.[29]

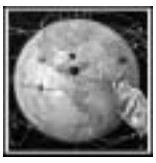
Though soft law generally creates aspirational goals rather than strict legal duties, this is not always the case. On occasion a non-binding document is so precise and detailed that

---

[27] See *Report of the Expert Group on Identification of Principles of International Law for Sustainable Development*, (London: ILA) 1995 the IUCN's *Draft International Covenant on Environment and Development*, 2nd ed. (Bonn: IUCN), 2000 and David Hunter et al. *International Environmental Law and Policy*, (New York: Foundation Press, 1998).

[28] A separate Convention governs treaties that involve states and international organizations, the 1986 *Vienna Convention on the Law of Treaties between States and International Organizations or Between International Organizations*.

[29] This Guide uses the term "soft law" very broadly, including all types of normative efforts that shape transnational environmental relations.



it could easily be mistaken for a treaty. An example is the OECD *Guidelines for Multinational Enterprises*, revised in 2000. As the Foreword from the OECD Secretary General (Donald Johnstone, a Canadian) notes, the *Guidelines* are an example of the type of multilateral instrument that will be used more and more in future to set rules, which, though not legally binding, are meant to work, be implemented, followed up and monitored. The *Guidelines* are discussed in more detail in chapter 11.

Soft law declarations may also be negotiated by private sector corporations, or by these corporations in partnership with an international organization. Examples include UNEP's *Statement on Financial Institutions and the Environment*, or the numerous corporate social responsibility commitments made by individual corporations or by geographical or industry sectors. Some soft law statements like the *Global Reporting Initiative*, an attempt to harmonize corporate social and environmental reporting procedures, cut across industry sectors.[30]

Soft law is becoming more common internationally. Soft law instruments may lay the foundation for later legally binding agreements. For example, the 1989 UNEP – FAO Prior Informed Consent (PIC) guidelines for certain toxic chemicals and pesticides led to the 1998 *Rotterdam Prior Informed Consent (PIC) Convention*, and the FAO's 1983 *International Undertaking on Plant Genetic Resources* led to the adoption of the 2001 *International Treaty on Plant Genetic Resources for Food and Agriculture.*

An important aspect of soft law is decisions of "Conferences of the Parties" (or COPs) to various treaties. Technically, these decisions are not legally binding unless they are incorporated into the treaty, but they often flesh out essential details of treaties. For instance, extensive detailed decisions of the *UN Framework Convention on Climate Change* are essential to the working and effectiveness of the *Kyoto Protocol*. Although technically not legally binding, the COP decisions on implementation of the *Kyoto Protocol* have a force that is almost equivalent to the Protocol itself, setting out in detail how compliance will be determined and what states are required to do.

Whether or not states and others comply with soft law commitments in the same manner as they do binding treaty law remains a subject of debate. Initial research findings suggest that soft law compliance is more likely when the soft law instruments are linked to binding international agreements, or to existing regional and national legal arrangements.[31] This highlights the significance of COP decisions.

WHAT IS A TREATY?

A treaty between nations is similar to a contract between individuals. It is a written agreement that all parties involved consented to and intend to guide their actions. In the

---

[30] The UNEP Statement is at http://www.unep.ch/finance/bank1.html., and the web site of the Global Reporting Initiative is at http://www.globalreporting.org/.

[31] Edith Brown Weiss, "Conclusions: Understanding Compliance with Soft Law." In Dinah Shelton, ed. *Commitment and Compliance: the Role of Non-Binding Norms in the International Legal System* (Oxford: Oxford University Press) 2000.

environmental field, treaties are agreements between states to take common action on a problem that transcends national boundaries. Treaties have a fixed geographic scope. A treaty often, but not always, creates an international organization to carry out the work defined by the Parties, take new decisions and further develop the applicable international law.

The *Vienna Convention* defines a treaty as "An international agreement concluded between states in written form and governed by international law whether embodied in a single instrument or in two or more related instruments and whatever its particular designation". Treaties may be known by other names, such as conventions, protocols, covenants, pacts, charters or agreements, but the different names have no legal significance. If the agreement is between states, in written form, and is intended to be legally binding and governed by international law, then it is a treaty.

To decide whether a particular agreement is a treaty, the intent of negotiating parties must be examined. If they intended to be bound by international law, there will usually be some evidence of that intent in the words of the agreement. If the agreement says "The Contracting Parties hereby agree…", or uses other terms such as "rights" or "obligations," that is evidence of an intention to be bound. If the agreement says that the states (not Parties) "declare" their intent, as in the *Declaration on the Establishment of the Arctic Council*, that is evidence that the states did not intend to create a legally binding treaty. The *Rio Declaration on Environment and Development* is another example of a non-binding statement by states. States intentionally use the title 'Declaration' when they do not intend to create legally binding commitments, and on occasion even more explicitly emphasize that a document is not a treaty, as in the "Non-Legally Binding" Forest Principles adopted in Rio.

A treaty cannot conflict with a 'peremptory norm' of international law. These norms are universal, applicable to all states, and cannot be contracted out of through the treaty process. Article 53 of the *Vienna Convention* states that a treaty is void if it conflicts with a peremptory norm of international law. The most widely known examples of these norms are prohibitions against genocide and slavery.

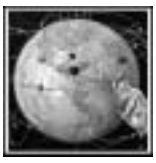
WHO CAN AGREE TO BE LEGALLY BOUND BY A TREATY?

Nation states are the primary subjects of the international legal system. The majority of treaties are between states.

Some other entities such as associations of states, like the European Union or the United Nations also have the "legal personality" which allows them to conclude treaties. A treaty can be concluded between a state and an international organization, or between two or more international organizations, but not between a state and a corporation.

BILATERAL OR MULTILATERAL

Treaties may be bilateral – i.e., have two states as Parties – or multilateral – i.e., have more than two states as Parties.



Many of Canada's environmental treaties are bilateral agreements with the United States as both countries have a common interest in protecting the environment over the 9,000 kilometres of shared borders. The earliest examples applicable to Canada are agreements with the United States, such as the 1909 *Boundary Waters Treaty*, or the 1916 *Convention on the Protection of Migratory Birds in Canada and the United States*. More recent examples are the *Canada/US Air Quality Agreement* and the *Great Lakes Water Quality Agreement*.

The major environmental treaties, such as the climate change and biodiversity agreements, are multilateral. Both these treaties have 186 Parties as of 2002. These are very high rates of membership – there are 191 states that are members of the United Nations.

FRAMEWORK AND SELF-CONTAINED TREATIES

A "framework treaty" is a type of treaty that contains general obligations, usually with a procedure for reaching more detailed agreement on specific obligations through protocols or subsequent legal agreements in the future. This type of multilateral treaty has become common for global environmental subjects. Examples of framework treaties include the *UN Framework Convention on Climate Change*, the *Convention on Biological Diversity* and the *Vienna Convention for the Protection of the Ozone Layer*. All three of these treaties have at least one Protocol: the *Kyoto Protocol* under the UNFCC; the *Biosafety Protocol* under the CBD; and the *Montreal Protocol* on ozone, the only one of these Protocols in force as of 2002.

A self-contained treaty works through annexes or appendices, which are revised periodically by the Contracting Parties at Conferences or meetings. Examples of this type of Convention include the *World Heritage Convention*, which maintains a World Heritage List of natural and cultural sites whose outstanding values should be preserved for all humanity; and the *Convention on International Trade in Endangered Species* (CITES), which maintains three different Appendices of species at risk. Revising an Appendix or List is usually easier than negotiating a new Protocol or addition to a treaty, but is only suitable for subjects that can easily be set out in a list.

PROTOCOLS

In the environmental field, the term "Protocol" is usually used to describe a legally-binding agreement that elaborates on, or contains detailed substantive commitments to implement the objectives of a framework treaty. For example, a number of Protocols for specific air pollutants exist under the UNECE *Convention on Long-Range Transboundary Air Pollution*. Protocols must be agreed, signed and ratified separately from the framework treaty. An Optional Protocol to a treaty establishes additional rights and obligations, and allows some willing Parties to go farther than the original treaty. An example from the human rights field is the *Optional Protocol to the International Covenant on Civil and Political Rights*.

HOW DOES A STATE AGREE TO A TREATY?

The *Vienna Convention* provides that states can demonstrate their intent to be legally bound by a treaty in a variety of ways, including: signature; exchange of instruments constituting a treaty; ratification; acceptance or approval; accession; or any other agreed means.

SIGNATURE

Most often a state will indicate its intention to become a Party by first signing the treaty. Two different purposes for signature must be distinguished: a state can sign a treaty to indicate approval of the final text, or can sign to show consent to be bound by the treaty. Signature alone is nowadays usually insufficient to show consent to be legally bound to a multilateral treaty, but shows that the state is willing to proceed with the international law-making process. Additional steps, such as ratification, are usually required. Environmental treaties commonly state that they will be "open for signature" until a specified date. When a state signs a treaty, it agrees to refrain from any acts which would defeat the object and purpose of the treaty.

EXCHANGE OF INSTRUMENTS

This procedure allows states to exchange instruments, or written documents, to conclude the treaty. Usually, an exchange of instruments will be used to formalize a bilateral treaty.

RATIFICATION

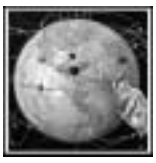
This is the most common way states show consent to be bound by environmental treaties. The *Vienna Convention* defines ratification as "the international act so named whereby a state establishes on the international plane its consent to be bound by a treaty". Ratification occurs when a state completes the necessary formal procedures for executing an instrument of ratification, and then exchanges this document with another state for a bilateral treaty or, for a multilateral treaty, sends it to a depository, the place where all the documents of ratification are collected.

ACCEPTANCE OR APPROVAL

These are alternatives to ratification which have the same legal effect as ratification. Many environmental treaties say that they are "subject to ratification, acceptance or approval", leaving it up to the state to decide which procedure to follow.

ACCESSION

This procedure allows a state to agree to be bound by a treaty that has already been concluded by other states. Accession will be used, for example, if the treaty has come into force. Accession has the same legal effect as ratification.



PARTY TO A TREATY

Before a treaty enters into force, a state that has demonstrated its intent to be bound is called a "contracting state." Only after the treaty has entered into force is a state that has consented to be bound called a "Party." Throughout this Guide, when the term "Party" is used, it refers to a state that is legally bound by a particular treaty.

DEPOSITARY

To demonstrate that a state has agreed to the treaty, an instrument or document showing ratification (or its equivalent) is deposited, or placed, in a specified location. A treaty will usually designate a depositary, which can be a location in a country, or more often today, an international organization, like the United Nations. The UN Secretary General is the depositary for over 500 multilateral treaties.[32] Depositaries must accept all ratifications and documents related to the treaty, examine whether all formal requirements have been met, deposit them, register the treaty and notify Parties of all new developments regarding the treaty.

In Canada, the Department of Foreign Affairs maintains a register of treaties. Access to information about the register may be sought from the Registrar of Treaties at the Department of Foreign Affairs and International Trade.

RESERVATIONS

A state does not usually need to agree to every single provision of a treaty in order to become a Party to that treaty. It can contract out of one or more of the treaty's obligations by entering a reservation to the treaty. A reservation is defined by *the Vienna Convention on the Law of Treaties* as:

> "a unilateral statement, however phrased or named, made by a state, when signing , ratifying, accepting, approving or acceding to a treaty, whereby it purports to exclude or to modify the legal effect of certain provisions of the treaty in their application to that state".

For example, Norway is a party to the *International Convention for the Regulation of Whaling* but has issued a reservation about the catch quotes on whaling imposed by the treaty. The *Convention on International Trade in Endangered Species of Wild Flora and Fauna* (CITES) allows Parties to enter reservations or a unilateral statement that it will not be bound by the provisions of the Convention relating to trade in a particular species listed in the Appendices as endangered. This procedure has been used, for example, by some African states for the elephant, and France, Demark and Finland for the mustela altaica or mountain weasel.

Reservations are allowed unless the treaty specifically states that they are not allowed. For example, the UN *Convention on the Law of the Sea* and the *Kyoto Protocol* do not allow for

---

[32] See United Nations depository website at http://untreaty.un.org/

reservations. A state must agree to be legally bound by every provision of those treaties or decide not to consent to them at all.

Reservations are forbidden if they are incompatible with the object and purpose of the treaty.

ENTRY INTO FORCE

A treaty enters into force and becomes binding law for those states that have consented to be bound (and those states only) in a manner and on the date provided for in the treaty or as the negotiating states may agree. The treaty itself will usually specify how it enters into force.

The most common way for an environmental treaty to enter into force is when ratification by a set number of the negotiating states occurs. For example, Canada signed and ratified the UN *Fish Agreement* (UNFA), or the *Agreement on Highly Migratory or Straddling Stocks*, but it was not legally binding on Canada until it entered into force. That treaty required thirty states to ratify it before it entered into force. The required number of ratifications was reached in 2001, and UNFA entered into force on December 11, 2001.[33]

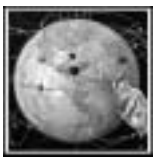
After a state signs a treaty, but before it enters into force and becomes legally binding, a contracting state is obliged to refrain from acts which would defeat the object and purpose of the treaty. In the context of environmental treaties, this obligation means that a state would be prohibited from taking any environmentally damaging action covered by the treaty before it entered into force.

Sometimes, to enter into force, a treaty specifies that additional requirements must be met by the states that agree to be legally bound. The 1984 *Protocol to the Convention on Long-Range Transboundary Air Pollution* required ratification by 19 states within the geographical scope of the protocol, namely Europe, before it came into force. The *Montreal Protocol on Substances that Deplete the Ozone Layer* came into force only after ratification by 11 states representing at least two-thirds of the 1986 estimated global consumption of the controlled ozone depleting substances. The rules for entry into force of the *Kyoto Protocol* require two conditions to be met: ratification by 55 Parties to the climate change convention, and ratification by Annex I Parties (developed countries) that accounted for 55% of that group's carbon dioxide emissions in 1990.

AMENDMENTS OF TREATIES

Treaties may be amended by agreement between the Parties, and are normally amended by concluding an additional written agreement. Amendments change the original treaty provisions only for those Parties that adopt the amendment. A state is not required to adopt any amendments to the original treaty and is allowed to remain a Party to the

[33] List of signatories and ratifications/accession available at the UN web site for the *Law of the Sea* at http://www.un.org/Depts/los/fish_stocks_conference/fish_stocks_conference.htm.



treaty, but not to the subsequent amendments. A treaty will often specify particular amendment procedures. If it does not contain these procedures, then any amendments will require the consent of all Parties.

WHICH TREATY TAKES PRECEDENCE IN THE EVENT OF A CONFLICT?

If there are two treaties with conflicting provisions, and both treaties have identical Parties, then the law is clear. The later treaty will take precedence to the extent of the conflict. The earlier treaty will apply only to the extent that its terms are compatible with those of the later treaty.

Treaties often contain provisions about their relationship to subsequent treaties. "Conflict clauses" or "savings clauses" can be used to prevent disputes. The clauses are used to record the intention of negotiators and not leave the dispute to be resolved by the rules of the *Vienna Convention*. In the environmental arena, the *North American Free Trade Agreement*, contains a unique clause, Article 104, Relation to Environmental and Conservation Agreements, which states that the trade provisions in listed MEAs all 'trump' NAFTA in the event of an inconsistency between their provisions and those in NAFTA.

> Relation to Other Environmental Agreements – Nothing in this Agreement shall be construed to affect the existing rights and obligations of the Parties under other international environmental agreements, including conservation agreements, to which such Parties are party.

Other trade treaties, such as the WTO Agreements, do not contain similar provisions.

Another much-debated example of this type of clause appears in one of the Preambular paragraphs to the *Biosafety Protocol*:

> Emphasizing that this Protocol shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements.

REGISTRATION AND PUBLICATION

The *United Nations Charter* requires every treaty and every international agreement entered into by any member of the United Nations to be first registered and then published by the United Nations Secretariat. Over 40,000 treaties of all types (not just environmental) were registered with the UN by 1998. In the ten years from 1988 to 1998, on average 1,200 treaties were registered each year. The United Nations Treaty Series (UNTS) is the definitive published source for treaties. A treaty is not published in the UNTS until it has entered into force and been registered.

INTERPRETING TREATIES

The general rule of interpretation as set out in Article 31 of the *Vienna Convention* is that treaties "shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its objects and purpose." If the treaty's meaning is still ambiguous, obscure or manifestly absurd or unreasonable after reading the full treaty text and any other agreements which may have been made between the Parties about the treaty, then other interpretative aids may be used, such as the preparatory work for the treaty. These rules of interpretation for treaties are similar to the rules used to determine the meaning of domestic laws.

STAGES OF ENVIRONMENTAL TREATY-MAKING

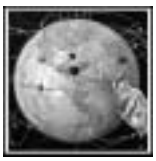
MEAs can be proposed by an individual state, a small group of states, one or more non-governmental organizations, or, the most common method, by a resolution approved by the members of an inter-governmental body, usually a UN body. UNEP's Governing Council initiated a number of MEAs, including the *Montreal Protocol, Basel Convention* and *Biodiversity Convention*. In the case of recent MEAs, it is usually up to governments to voluntarily contribute the financial support needed to support the negotiations. It is generally not practical to launch and conduct negotiations without the support of an international body.

Environmental treaties are driven by scientific consensus that action needs to be taken by the global community. Treaties develop in stages, from the time the problem is identified through to full implementation of the treaty at the national level.

Stages of an Environmental Treaty

The stages of developing an environmental treaty typically are:

- Identification of the scientific problem;
- Building political consensus to address the problem;
- Convening global meetings to draft the treaty text by negotiation;
- Signing the completed treaty;
- Ratification, acceptance, approval or accession to the treaty (alternate procedures for making the treaty binding on a state);
- The treaty comes into force;
- Elaborating on the treaty, or developing more detailed actions that must be taken, either in a protocol to the treaty or through Plans of Action or programmes of Work that set out what needs to be done; and
- Amendments to the treaty and expanding on the treaty secretariat's programme of work.



Proceeding through these stages can happen relatively quickly, as with the ozone treaty regime that was rapidly developed and implemented through domestic legislation in Canada. Or the process can be very slow – the *United Nations Convention on the Law of the Sea* took 10 years to negotiate and another 12 years before it came into force in 1994. Due to lack of ratification, it is still not in force in Canada as of 2002.

AT AN ENVIRONMENTAL TREATY NEGOTIATION

The alphabet soup of acronyms used at MEA negotiations can be confusing to a neophyte.

The most common negotiating groups at MEA meetings are:

- The European Union (EU). The 15-member states of the EU coordinate a single negotiating position at MEA meetings. Usually only one representative speaks for the EU during the plenary session.

- JUSCANZ: Non-EU developed countries. The core is normally Japan, USA, Canada, Australia and New Zealand but also can include Norway, Switzerland, Iceland, Korea, Mexico and sometimes Israel. The group was formed to allow non-EU developed countries to coordinate their positions. The JUSCANZ group may coordinate a negotiating position, but each state which is part of the group speaks individually at the plenary session.

- G-77 and China. This group takes its name from the group of 77 developing countries which was influential in the UN in the post-colonial period of the 1960s and 70s. The group now includes virtually all developing countries , numbering over 130 states, and is subdivided into geographic groups, e.g., Africa, Asia and Pacific, Latin America and the Caribbean.

- Eastern Europe. The countries of the Eastern Europe and most countries of the former Soviet Union also meet as a group.

Other groups may play a role at negotiating meetings. For example, AOSIS is the Alliance of Small Island States, an influential group at climate change meetings due to the direct and disproportionate impacts that these states will suffer from climate change. The Umbrella Group was the name given to the negotiating bloc representing most non-EU industrialized countries including Canada, Russia and the US throughout the climate change negotiations. The Miami Group, a coalition of the major exporters of genetically modified seed and crops including Canada, Argentina, Australia, Chile, the USA and Uruguay, played a significant role in the *Biosafety Protocol* negotiations. Other alliances emerge and dissolve as the issues under discussion change.

A unique feature of the politics of MEA negotiations is that "most global environmental agreements have been negotiated and adopted despite significant reservations – and in some cases, the active opposition – on the part of the most powerful of all countries, the

US, a situation that is entirely inconceivable in the GATT/WTO context."[34] The US actively opposed and is not a Party to the *Biodiversity Convention*, for example. At the 2001 Bonn Climate Summit, the nations of the world reached agreement on an implementation plan for the *Kyoto Protocol*, while the US has announced it does not plan to ratify the Protocol.

KEY FEATURES OF ENVIRONMENTAL TREATIES

Most modern MEAs typically have the following main components:[35]

- An introductory preamble and statement of guiding principles.
- A statement of objectives of the agreement.
- Definition of key terms used in the treaty.
- Substantive commitments by the parties.

  These commitments may be very specific, such as to reduce greenhouse gas emissions by a specified amount within a set deadline, or more general, such as to identify threats to biodiversity and attempt to eliminate these threats. The Canadian MEA database has grouped commitments under these headings: assistance, compliance, conservation measures, consultation, control measures, cooperation, development of science and technology, education and training, emergency response, enforcement, exchange of information, financial obligations, further international measures, general pollution control/prevention, impact assessment, implementation, indigenous and local communities, monitoring, national inventories, national legislation/policy development, notification, public participation and information, remediation, reporting, review, scientific cooperation, sharing of benefits, trade measures, and transfer of technologies.[36]

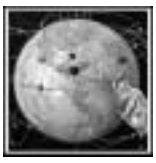
- Provisions for regular meetings of the parties to develop and approve work programs, to discuss implementation issues, and to update the agreement through decisions, Protocols, amendments or Annexes.

  Decisions about the MEA are usually made at a periodic Conference of the Parties (COP) or Meeting of the Parties (MOP). The term "Conference of the Parties" generally refers to conferences of parties to a framework convention, while "Meeting of the Parties" is used for meetings of parties to a Protocol. Combined meetings are referred to as "COP/MOPs". At these meetings, the budget and programme of work to implement the

[34] Konrad von Moltke, *Whither MEAs? The Role of International Environmental Management in the Trade and Environment Agenda*, (IISD: Winnipeg, MB), 2001.

[35] This list is adapted from Exhibit 2.5, Typical Features of an International Environmental Agreement in "Chapter 2 Working Globally – Canada's International Environmental Commitments" in 1998 Report of the Commissioner of Environment and Sustainable Development (Ottawa: Commissioner of Environment and Sustainable Development 1998).

[36] http://pubx.dfait-maeci.gc.ca/A_Branch/AES/Env_commitments.nsf/Homepage.



treaty are established. National reports on implementation are reviewed. A COP can also decide on the need for a new Protocol, to make more specific rules on one of the topics covered by the MEA. Another COP function is to revise Annexes, or lists regulated by the treaty, such as the list of wetland sites designated by the *Ramsar Convention*.

- Provisions to establish a secretariat or similar organizational body with administrative and co-ordinating functions.

  A secretariat acts as the host or home office for the treaty. Secretariats for MEAs provide the ongoing support for meetings of the Parties and may also implement projects or programmes of work. Many MEA secretariats are located in common locations, such as Geneva, home to numerous other UN and trade organizations, like the WTO. In Canada, Montreal is home to the secretariats for the *Biodiversity Convention* and Montreal Protocol Multilateral Fund as well as the North American Commission on Environmental Cooperation.

- Provisions to establish Advisory bodies.

  Advisory bodies can be established by treaty or by international organizations. For instance, the UNFCCC establishes a Subsidiary Body on Scientific and Technological Advice (SBSTA). Despite its name, SBSTA is a highly political forum that negotiates recommendations to the COP. In contrast, the WMO and UNEP set up the Intergovernmental Panel on Climate Change (IPCC) as a truly scientific, independent expert group to provide necessary technical and scientific advice to the international community. Although the IPCC has a tradition of independence, there have been recent criticisms that US interference has lead to selection of a chairperson affiliated with the oil industry. Advisory bodies can also be created to deal with discrete issues, as for example, with the *Biodiversity Convention 's* Expert Panel on Access and Benefit Sharing.

- Reporting and information sharing obligations.

  MEAs typically require Parties to report on their efforts to implement and comply and to share information through a Clearing House Mechanism (CHM) designed to collect and share scientific, technical, environmental or legal information about the MEA. A CHM can promote best practices, and share experiences of different countries on implementation and solutions for common problems. The CHM of the *Biodiversity Convention* includes case studies, national and other reports, and information on programmes such as the Global Taxonomy Initiative. Other examples of CHMs are found under the *Montreal Protocol*, the *Global Plan of Action to Address Land Based Sources of Marine Pollution* and the *POPs Convention*.

- Provisions for monitoring, reviewing and amending the agreement.

- Compliance mechanisms, which can include specific compliance or non-compliance procedures.

  Compliance mechanisms range from minimal to sophisticated procedures. Compliance provisions adopted under the *Kyoto Protocol* set a fairly high standard, establishing a

both a process to facilitate compliance through assistance and a judicial process to make determinations of non-compliance and impose consequences for non-compliance.

- Dispute settlement provisions.

  Dispute settlement mechanisms are underdeveloped. Only a few MEAs use a body unique to the treaty, such as the *Law of the Sea's* International Tribunal on the Law of the Sea. Many MEAs follow a graduated process for dispute resolution. The same untried non-binding provisions are incorporated into most MEAs without much discussion. The Parties are bound to try to settle their dispute by negotiation, then mediation, and if that doesn't work, they may resort to a court, usually the International Court of Justice (ICJ), though resort to the ICJ is generally seen as impractical, and is rarely used.

- A financial mechanism.

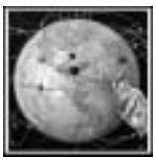
  Financial mechanisms may be created by the terms of the treaty. One example is the *Multilateral Fund for the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer*, established by an amendment to the *Protocol* in 1990. This Fund distributes funds from developed country Parties to developing country Parties to help them with the costs of compliance. Another financial mechanism, the Global Environment Facility (GEF), jointly administered by the World Bank, UNEP and the UN Development Programme (UNDP) is used to fund environmental projects with global benefits by developing countries and countries in economic transition. The GEF is the designated financial mechanism for international agreements on biodiversity, climate change, and persistent organic pollutants, and it also supports projects that combat desertification and protect international waters and the ozone layer.

FINANCING MEAS

The costs of operating a secretariat, convening COPs, holding advisory body meetings, enabling participation of civil society in treaty negotiations, and carrying out programmes of work are high. Various methods are used to finance these activities. Trust funds, composed of mandatory or voluntary contributions from Parties, are the most common funding source. The actions required by MEAs may also be funded by multilateral financial mechanisms, such as the Global Environmental Facility, the only new funding source for international environmental commitments that has become operational since 1992. Most recent MEAs have voluntary funding arrangements based on the UN scale of assessments (the amount that each nation must pay as annual dues to support the United Nations, assessed by means of an agreed on scale). Few MEAs benefit from any mandatory assessed funding from the UN's general budget. Many MEAs are chronically under funded, as is the chief UN environmental body, UNEP.

CIVIL SOCIETY INVOLVEMENT IN MEAS

The term "non-governmental organization" or "NGO" generally refers to any non-profit, voluntary citizens' group which is organized on a local, national or international level.



The term civil society is also used more and more frequently to describe NGOs working for the public good.[37]

Perhaps more than any other branch of international law, international environmental law is influenced by civil society groups at all stages throughout the formation, negotiation, implementation and enforcement of agreements.

Civil society groups or NGOs play multiple roles in MEAs, which have been classified by UNEP as:

- providing technical knowledge;
- awareness raising;
- assisting the secretariat in communicating with non-parties;
- promoting implementation in the field;
- gathering and transmitting information about possible non-compliance;
- implementation of relevant national policies;
- pressuring governments to implement the MEAs; and
- participating in the decision-making process.[38]

No set of rules about participation applies universally to MEAs. The new regional UNECE *Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* may point the way towards standardization of public participation rules in the domestic context, eventually paving the way for internationally agreed rules on public participation.

Most modern MEAs apply rules of procedure based on those developed for the Rio Earth Summit that allow accredited NGOs to play an active role at MEA meetings. Participation is often limited to lobbying delegates of Parties in the corridors of MEA meetings and observing the meetings. Sometimes NGOs are given opportunities to address meetings. NGOs may also be excluded from some treaty meetings if a state party objects, and have restricted participation rights in plenary sessions of MEA meetings.

NGOs influence legal and policy developments by taking part in government delegations, preparing law reform briefs, and issuing report cards such as WCEL's recent report card on OECD nations' role in climate change negotiations.[39]

---

[37] Alison van Rooy, ed. *Civil Society and Global Change* – Canadian Development Report 1999 (Ottawa: North-South Institute, 1999) p. 8.

[38] UNEP, *International Environmental Governance: Multilateral Environmental Agreements* UNEP/IGM/2/INF/3, 10 July 2001.

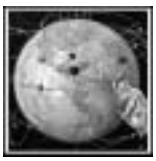
Greenpeace's Brent Spar Campaign is a notable example of achieving policy change through untraditional tactics. The campaign to stop dismantling of oil and gas rigs at sea took off in 1995 when Shell Oil proposed to dump its 4,000 tonne Brent Spar installation into the North Sea. Greenpeace's actions included landing a helicopter on the oil platform to unveil a "Save the North Sea" banner as well as organizing a consumer boycott. Shell eventually changed its mind due to this public pressure, and the responsible international authorities shortly after agreed to a moratorium on ocean dumping of oil and gas installations.

One of the most powerful tools to encourage compliance with MEAs is to require collection of data and to give all interested parties free access to the information – if the information is made public, NGOs and others can shine the spotlight on those countries that have not followed through with their commitments.

On occasion, NGOs have been credited with prompting the negotiation of a new MEA. The recent *Aarhus Convention on Public Participation in Environmental Decision-making* is one example.

NGOs may also be involved in directly implementing MEAs. For example, the *World Heritage Convention* names three non-governmental and inter-governmental organizations responsible for implementing the Convention. Under the *Convention on International Trade in Endangered Species* (CITES), the World Conservation Monitoring Unit tracks trade in listed species.

[39] Chris Rolfe, *Negotiating the Climate Away: Report Card on Environmental Integrity of OECD Nations' Climate Summit Negotiation Position* (WCEL: Vancouver, 2000) at http://www.wcel.org/wcelpub/2000/13244.html.



CHAPTER 3 – INTERNATIONAL ENVIRONMENTAL LAW TREATIES IN CANADA

TREATY PROCEDURE IN CANADA

After a treaty has been proposed, many steps must be taken before it becomes binding law in Canada. Turning words on paper into changes in law and behaviour usually takes many years.

Within Canada the stages of adopting a treaty reflect the stages of international treaty implementation discussed in Chapter 2: negotiation, signature, ratification or accession, entry into force of the treaty generally, entry into force of the treaty in Canada, and enactment of domestic implementing legislation. The aspects of this process that are unique to Canada are described below.

NEGOTIATION OF MEAS

Although each MEA negotiation process is unique, several common features apply to Canadian negotiation processes. The federal government begins the negotiations by identifying the lead agencies that will participate. The Department of Foreign Affairs and International Trade is always involved, while other departments such as Environment, Health, Agriculture, Natural Resources, Fisheries and Oceans, Industry and the Canadian International Development Agency (CIDA) will play a greater or lesser role depending on the issue. For example, CIDA was the lead agency for the *Desertification Convention*, while Environment Canada led the biodiversity and biosafety negotiations.

A negotiating mandate is sought from Cabinet before the Canadian delegation enters into active negotiations. The mandate is normally sought once Canadian officials have a good idea what issues are likely to be negotiated. For example, in the *Biosafety Protocol* negotiations, a mandate was not sought for several years after discussions began because it was not clear what issues would ultimately be negotiated. The mandate will identify Canadian objectives and interests, approve negotiating parameters for the negotiations and identify sensitive issues on which concerned ministers will need to be consulted during the course of negotiations. Government departments working with the Privy Council Office usually work out the draft mandate. Although mandates are supposed to take into account all Canadian interests, Canada has been critiqued for taking a lop-sided, pro-industry, anti-environment stance in many recent negotiations.

The provinces are normally consulted as well. Their views are particularly important where the actions needed to implement the treaty fall within provincial jurisdiction.

The government also usually, but not always, consults with Canadians about proposed negotiating positions. Consultations may consist of forming a non-governmental advisory committee, holding meetings across the country, asking for submissions, posting information on the Internet, and commissioning reports from experts. The political sensitivity of an issue may lead to greater secrecy, as with the *Softwood Lumber Agreement* negotiations, where no avenues for non-governmental input were available. In contrast, negotiations over the biological diversity and climate change conventions were transparent.

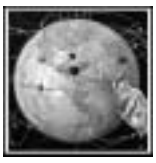
Delegations to represent Canada at MEA negotiations will usually include one or more non-governmental representatives, a laudable policy not followed by many other governments. The delegation's size varies for each MEA. The most recent Canadian delegation to the climate change negotiations included about 100 representatives, about half of which were federal officials, and half were members of Parliament, and representatives of provincial governments, NGOs, industry, aboriginal groups and youth. Delegations to less economically significant treaty meetings will be considerably smaller.

SIGNING AND RATIFICATION IN CANADA

The federal government has the constitutional authority to enter into treaties with other states. The "treaty power" is considered to be part of the royal prerogative, or the inherent right of the sovereign head of state. Historically, the head of state would sign a treaty. So the King or Queen of England would sign on behalf of Canada. Today, treaties are commonly concluded between governments, and the heads of state are not involved. On rare occasions, the Prime Minister will sign a treaty. At the Rio Earth Summit in 1992, Prime Minister Brian Mulroney was the first industrialized head of state to sign the *Convention on Biological Diversity*. The Minister for Foreign Affairs will usually sign the treaty or authorize another government official to sign the treaty.

The *Vienna Convention* sets out a formal procedure, in which a state provides an "Instrument of Full Powers" demonstrating authority to sign the treaty. In Canada, this authority belongs to the Governor General, Prime Minister and Minister of Foreign Affairs, if authorized by an Order-in-Council (OIC) of Cabinet. The authority can also be delegated so that other government officials may sign agreements on behalf of Canada.

An OIC is needed to sign a treaty and usually an additional OIC is needed to ratify the treaty. Unlike the US, where a two/thirds majority vote in the Senate is required to ratify a treaty, Parliament does not need to legally approve either the signing or the ratification of a treaty. However, Parliamentary approval is usually sought between signing and ratification. The text of the treaty and reasons for ratification will be tabled in the House of Commons.



ENTRY INTO FORCE FOR CANADA

A treaty will bind Canada domestically when the treaty has entered into force generally *and* has been ratified (or the equivalent) domestically. The date of entry into force generally and entry into force for Canada may vary if ratification occurs after the general entry into force of the treaty. So if the required number of countries ratified a new treaty bringing it into force internationally by January 1st, but Canada ratified the treaty on February 1st, the treaty is in force in Canada as of February 1st.

TREATIES AND DOMESTIC LAW IN CANADA

Once a treaty has come into force, countries are bound by international law to implement its obligations into their domestic law. The main principle of treaty law, confirmed by the *Vienna Convention on the Law of Treaties*, is that a state that has agreed to a treaty must perform it in good faith.

Countries have considerable freedom on *how* they implement treaties in their national law (often called "domestic" "municipal" or "internal" law in the international law context). They have an overriding obligation to ensure that their national law is in compliance with treaties that they sign. A state may not plead its own domestic law as an excuse for violating international obligations. If implementing national legislation is required to give effect to the provisions of the treaty, that legislation ideally will be passed before the state gives its consent to a treaty. This is the practice in Canada although it is not always practical for treaties such as the *Kyoto Protocol* that require a range of domestic laws to implement.

In Canada, customary international law (the law of nations that is *not* set out in treaties) is automatically part of Canadian law unless it conflicts with a domestic statute. In contrast, treaties are not considered to be part of domestic law until a law has been passed to specifically implement the treaty. For instance, environmentalists wanting to protect habitat of endangered species in Canada, cannot do so in Canadian courts relying on the *Convention on Biological Diversity*. Any obligations that exist in international law must be mirrored in legislation before they become binding in Canadian law.

Many statutes in Canada incorporate MEA obligations directly. For example, the *Canadian Environmental Protection Act* contains legal obligations derived directly from treaties on transport of hazardous waste, ozone depleting substances, transboundary waters, and ocean dumping.

WHICH LEVEL OF GOVERNMENT IS RESPONSIBLE FOR IMPLEMENTING A TREATY IN CANADA?

In many countries, such as the US, when a treaty is signed and ratified, it becomes binding law. In Canada, the constitutional jurisdiction to implement international treaties is more complicated.

The Canadian Constitution does not specifically address the power of either level of government to make treaties, although it is generally accepted that the federal Executive

Branch has the power to negotiate and enter into treaties. However, the federal government does not have the clear authority to bind any of the provinces to an international treaty. If the subject matter of the treaty falls within provincial jurisdiction, the traditional legal opinion is that international legal obligations may be implemented only through the enactment of provincial laws. This can create practical problems. In the leading case on this subject — the *Labour Conventions*[40] case decided by the Judicial Committee of the Privy Council[41] — the Judicial Committee ruled that the federal government could not legislate maximum work weeks or minimum wages even if Canada was committed to passing such legislation by treaty. If a treaty concerned an issue under provincial jurisdiction (e.g., forest practices or labour law) then the provinces had to pass implementing legislation.

As most urgent environmental problems today are matters of shared provincial and federal jurisdiction (e.g., protection of biological diversity, control of greenhouse gas emissions) the best implementation plan for MEA commitments will often involve laws being passed by both the provinces and the federal government. Developing a joint federal provincial implementation scheme can both delay implementation and increase the complexity of implementation.

Despite the *Labour Conventions* case, there are several factors suggesting that the federal government has greater powers to implement environmental treaties than is often acknowledged. First, courts have found that the existence of a treaty is an indication — albeit not proof – that an issue is a "matter of national concern", and matters of national concern come within federal jurisdiction.[42] Secondly, a number of cases have suggested that anything relating to pollution or migration of animals across provincial or national boundaries is a matter of national concern.[43]

Some experts suggest that the Supreme Court of Canada might be willing to go even further and reverse the *Labour Conventions* case.[44] The Supreme Court of Canada has expressed a willingness to revisit this issue, and there are several constitutional grounds on which a federal treaty implementation power can be grounded. Regardless of its actual powers, to avoid ruffling provincial feathers and to avoid constitutional challenges, the federal government follows a policy of cooperative consultation on treaties where provincial interests are involved.

One example of how Canada has dealt with the federal/provincial problem can be found in the way it has dealt with the North American Agreement on Environmental

---

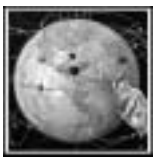
[40] Labour Conventions case, *A.G. Canada v. A.G. Ontario* [1937], A.C. 326 (P.C.).

[41] The Judicial Committee was the ultimate court of appeal in the British Empire. Appeals to the Committee from Canada were abolished in 1949.

[42] *R.* v. *Crown Zellerbach Canada* [1988] 1 S.C.R. 401. In that case the court relied on ocean dumping protocols among other things to conclude that dumping of marine waste in provincial waters was a matter of federal jurisdiction.

[43] See *R.* v. *Crown Zellerbach Canada, Ibid; Inter-provincial Cooperatives v. The Queen* (1975), [1976] S.C.R. 477.

[44] P. Hogg, *Constitutional Law of Canada*, 2nd ed. (Toronto: Carswell, 1985); E. Hughes "International Environmental Law" in *Canadian Environmental Law*, 2nd ed. (Toronto: Butterworths, 1999), s.1.08.



Cooperation (NAAEC). Under NAAEC, Canada agreed to be bound only for matters within the federal jurisdiction, but allowed the federal government to declare that particular provinces had agreed to commit to the treaty. Provinces that have not committed to the treaty do not have equal rights to the NAAEC complaint provisions. Subsequently, Canada negotiated the *Canadian Intergovernmental Agreement Regarding NAAEC*.[45] The agreement binds provincial signatories to implementation of NAAEC and establishes processes for provinces to participate in implementation of NAAEC. As of the end of 2002, the agreement is only signed by Alberta, Manitoba and Quebec.

SUFFICIENCY OF DOMESTIC IMPLEMENTING LAW

No set of rules exists to determine whether a treaty has been effectively implemented into Canadian law. On occasion courts have been asked to decide whether or not a domestic law has properly implemented a treaty. If the text of the treaty is included in the statute, a court will be likely to recognize that it has been implemented. If the law is meant to implement a treaty but does not include any express provisions to that effect, a court may use the treaty to "inform" its interpretation of the law.

Other than the *Canada-US Migratory Birds Convention* and the Appendices to the *Convention on International Trade in Endangered Species* which are both set out in full in Canadian domestic laws, MEAs are not usually included in Canadian domestic law in their full text.

The federal government often finds that existing domestic laws are sufficient to implement treaty obligations.

Experts have suggested that a new constitution should contain a clear statement that the federal government has exclusive jurisdiction over external affairs affecting Canada as a whole and that it may enact any legislation it wishes in pursuance of its external affairs policy and a clear statement that ratified treaties are the law of the land subject only to valid and unambiguous provincial or federal legislation.[46]

---

[45] *Canadian Intergovernmental Agreement Regarding the North American Agreement on Environmental Cooperation* (1995): http://www.naaec.gc.ca/eng/implementation/cia_e.htm.

[46] R. MacDonald "The Relationship between International Law and Domestic Law in Canada" in MacDonald, Morris, Johnston eds., *Canadian Perspectives on International Law and Organization* (Toronto: University of Toronto Press, 1974) 131.

CHAPTER 4 – IMPLEMENTATION, COMPLIANCE AND ENFORCEMENT OF MULTILATERAL ENVIRONMENTAL AGREEMENTS

Environmental treaties face major implementation challenges because of the lack of human and financial resources devoted to MEAs in both developed and developing countries, lack of political will, and the lack of procedures to review compliance in many MEAs.

This chapter discusses enforcement and implementation of MEAs. First, it provides an overview and defines key terms. Then it catalogues mechanisms available to enforce MEA commitments, ranging from a traditional court judgment to innovative individual complaint procedures.[47] Even the best enforcement of an MEA may not halt environmental degradation if the MEA is weak. The final section of the chapter discusses effectiveness and addresses factors that may increase an MEA's effectiveness.

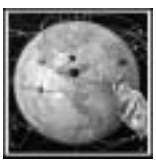
IMPLEMENTATION, COMPLIANCE AND ENFORCEMENT

A healthy environment can only be achieved by changes in individual, corporate and government behaviour. Yet, treaties only affect relations between nations. For MEAs to solve environmental problems, they must affect the content and enforcement of domestic law. And the domestic laws must affect behaviour. The expectation is that as international law expands, it leads to more domestic obligations for both individuals and corporations, regardless of where they "do business".[48]

---

[47] The commitments that countries assume under MEAs are usually translated into domestic laws. Looking at how well domestic environmental laws are enforced is beyond the scope of this report, though there appears to be a troubling trend towards lax enforcement in Canada. Reports documenting problems with enforcement include: WCELRF, *Undermining the Law- Addressing the Crisis in Compliance with Mining Laws in BC* (Vancouver: WCELRF) 2001; Friends of the Earth, *Primary Environmental Care: An Assessment of Environment Canada's Delivery*, (Ottawa: FOE) 2001; Martin Mittelstaedt, "Ontario Pollution Fines Plunge," *Globe and Mail*, Jan 10, 1997; *Committee Report of Nova Scotia's Environment Act Legislative Review Process 2000*; House of Commons Standing Committee on Environment and Development, *Enforcing Canada's Pollution Laws: The Public Interest Must Come First!*, 3rd Report, (Ottawa: House of Commons) 1998.

[48] Elaine Hughes, *International Environmental Law* in *Canadian Environmental Reporter*, 1999, 2.105.



Does this theoretical process of international law affecting on the ground environmental conditions work? Although some experts believe that almost all countries comply with almost all of their binding international commitments almost all the time,[49] the proliferation of environmental obligations has not yet produced the changes in behaviour required to fully protect the environment. Lately, there is a trend towards an increased focus on strengthening implementation and compliance of MEAS at the international level.[50]

Before discussing whether MEAs have generally proved to be effective, or have produced the environmental improvements they were designed to achieve, the terms "implementation", "enforcement" and "compliance" require definition.

Implementation: This is the process by which the intent gets translated into action. It is not the treaty itself but implementation that determines whether the commitment has practical influence. Implementation occurs at both the national and international level. An example of national implementation is the passage of a domestic law to implement a treaty. An example of implementation at the international level is the establishment of a Conference of the Parties, a Secretariat to administer the treaty, and the preparation of regular reports from that treaty body.

Compliance: Compliance means whether individual, corporate or state behaviour conforms with the applicable law. High compliance with MEAs by states is common but may only produce limited changes in behaviour at the individual or corporate level. For example, the International Whaling Commission set catch quotas for whales for many years with high rates of compliance, but the quotas did not limit the decline of all whale species. Compliance with treaties is high because countries choose to negotiate and join agreements with which they know they can easily comply. Proposed commitments that could lead to non-compliance do not earn the consent of most governments.[51] Compliance is often seen as a process rather than a static measurement. Thus, in some contexts non-compliance may not be indicative of the failure of international law, so long as countries are moving toward compliance.

Enforcement: Enforcement refers to the legal actions to obtain compliance with environmental laws. Often enforcement refers to legal actions against a non-complying nation, individual or corporation. For instance, fines are an enforcement action, but technical assistance or education are facilitative actions that fall outside the ambit of enforcement. Enforcement can occur both domestically, through actions such as warnings, fines and criminal sanctions applied against corporations or individuals, or internationally through actions such as diplomatic sanctions, withdrawal of treaty rights,

---

[49] Kal Raustiala and David Victor " Conclusions" in David Victor et al, *The Implementation and Effectiveness of International Environmental Commitments – Theory and Practice*, (MIT Press: Cambridge, Ma.) 1998, 661.

[50] Edith Brown Weiss and Harold Jacobson, eds., *Engaging Countries – Strengthening Compliance with International Environmental Accords*, (MIT Press: Cambridge) 1998, 512.

[51] Kal Raustiala and David Victor " Conclusions" in David Victor et al, *The Implementation and Effectiveness of International Environmental Commitments – Theory and Practice*, (MIT Press: Cambridge, Ma.) 1998, 662.

penalties, orders to pay compensations, orders to cease certain behaviour (i.e., overfishing), or trade sanctions.

Enforcement mechanisms for international laws fall into several categories:

- **State and International Action Pursuant to Treaty.** This category includes specific processes created by treaties whereby international institutions or states monitor compliance, determine non-compliance and/or respond to non-compliance.

- **International Courts, Tribunals and Adjudication Panels.** There are a large number of international decision-making bodies which include tribunals that can determine whether a state has complied with international law, and whether enforcement measures need to be imposed.

- **Unilateral State Action.** States can impose sanctions on other states for non-compliance, even in the absence of agreed international rules for these sanctions.

- **Public action at the international level.** This includes actions initiated by the public that use processes created by treaties to enforce international law, for instance, using citizen complaint processes.

- **Public action at the national levels.** This includes actions initiated by the public that use domestic legal process to enforce international law, for instance, suing for environmental damage caused in country A by actions in country B.

The remainder of this chapter is devoted to examining each of these enforcement mechanisms.

STATE AND INTERNATIONAL ACTION PURSUANT TO TREATY

The compliance systems established by MEAs include institutions through which parties share information, compare activities, review implementation and performance, handle non-compliance and adjust commitments under treaties. These systems are becoming more common and more elaborate. Compliance systems can include any or all of the following elements:

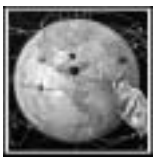
- Obligations for reporting on treaty implementation, including requirements to provide measurable data on activities undertaken in response to international obligations;

- Institutions for monitoring, reviewing and analysing implementation or progress toward implementation.

- Mechanisms for initiating a response to non-compliance;

- Mechanisms for adjudicating non-compliance;

- Mechanisms for facilitating compliance through capacity building, transfer of technology, education and training; and



- A system of consequences for failure to comply with obligations.

The elements of a compliance system in an MEA will reflect a number of variables including the political will of the international community to be tightly bound to international commitments and its desire to ensure compliance by other states. Generally, MEAs tend to adopt a softer approach to compliance than multilateral trade agreements and some experts suggest that softer approaches have encouraged nations to move towards compliance and allowed nations to agree to more significant obligations.[52] At the same time, nations recognize the need for rigour in certain cases. For instance, the compliance system agreed to under the *Kyoto Protocol* sets a new standard for MEAs in combining rigorous implementation reviews, with facilitation, a judicial approach to determining non-compliance and automatic consequences for non-compliance.

Compliance systems often reflect the nature of commitments. Commitments can include:

- Vague commitments to take some action. For instance, the *Framework Convention on Climate Change* requires parties to "adopt national policies and take corresponding measures on the mitigation of climate change." Such measures are to demonstrate that industrialized nations are taking the lead in modifying long-term emission trends. Other examples of imprecise commitments are found in the *Biodiversity Convention* and *Ramsar Convention* which require the protection of habitats and species but set no measurable targets or timelines.

- Definitive requirements, for example, to phase out substances or reduce production of substances within a certain timeframe and by a precise amount. For instance, the *Montreal Protocol*, *Kyoto Protocol* and the *Persistent Organic Pollutants (POPs) Convention* set out very clear timetables for emission reductions or phase-outs of specified substances. Another example of definitive requirements is found in the *Protocol on Environmental Protection* to the *Antarctic Treaty* which strictly controls activities in the southern polar region.

- Prohibitions on specific actions (e.g., ocean dumping of most wastes is outlawed by the *London Convention*).

- Prohibitions or restrictions on trade in certain products (*Convention on International Trade in Endangered Species,* POPs and the ozone treaties*).*

- Requirements for documenting certain actions (e.g., transboundary movement of hazardous waste).

- Requirements for providing annual reports on implementation.

- Requirements to help finance implementation of commitments by developing countries (typically such requirements do not specify specific amounts or specify which countries are to pay what amount).

---

[52] See for instance, Abram Chayes and Antonia Handler Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements*, (Boston, Ma: Belknap Press)1995.

Kyoto Protocol: A New Standard for Compliance and Enforcement

Compliance and enforcement was a key issue in the final negotiation of the Marrakesh Accord on implementation of the *Kyoto Protocol*. The accord sets out elements of a compliance system that is more advanced than other UN environmental agreements.[53] Elements include:

Independent Review. Independent expert review teams review nations' systems for monitoring and reporting emissions and conduct an objective, annual comprehensive review of all aspects of parties' implementation of the Kyoto Protocol.

Initiating a Response. The independent expert review teams are required to put unresolved questions of implementation in review reports that are submitted to the Secretariat. A Compliance Committee reviews all questions of implementation included in review reports as well as questions of implementation raised by other parties.

Appropriate Action. The Compliance Committee must either:

- Determine that the question of compliance is *de minimus*, not based on the requirements of the Protocol or not supported by sufficient information;
- Submit questions relating to compliance with quantitative emission limits, reporting or eligibility to engage in emission trading to the Enforcement Branch of the Compliance Committee;
- Submit other questions to the Facilitative Branch of the Compliance Committee.

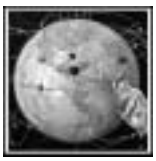
Under this system, questions related to the strict quantitative emission limits that are at the heart of the *Kyoto Protocol* or are integral to its functioning go to the Enforcement Branch. Determination of compliance with vaguer commitments go to the Facilitative Branch which can help a party achieve compliance by providing technical, financial or advisory assistance.

Adjudication. A key aspect of the Kyoto system is that the Enforcement Branch of the Compliance Committee plays an adjudicative role, with procedures such as hearings and reasons for judgement that ensure fair process. This fairness was essential to Parties' willingness to accept the powers of the Enforcement Branch.

Consequences. The consequences of non-compliance are significant although not as significant as typical of trade agreements. Parties found in non-compliance with reporting requirements or with excess emissions are not allowed to participate in the emissions trading system. Parties who have exceeded allowable emissions in one commitment period have excess emissions deducted from their allowable emissions for following commitment period. They are also assessed a minor penalty equal to 30% of excess emissions.

Ultimately these consequences could prove inadequate. There is a risk that Parties will borrow from the future without making real efforts at compliance. And, there is nothing to stop them from withdrawing from the Protocol. The environmental community had advocated the use of financial penalties backed up by trade sanctions as the ultimate consequence for non-compliance. Nonetheless, the Kyoto Protocol is unique among MEAs in that it has clear, automatic consequences for non-compliance.

[53] Key decisions are included in the *Report of the Conference of the Parties at Its Seventh Session, Held at Marrakesh from October 29 to November 10, 2001*, UN doc number, FCCC/CP/2001/13/Add.1. Published in four volumes, these decisions are available at http://unfccc.int/resource/docs/cop7/13a01.pdf, http://unfccc.int/resource/docs/cop7/13a02.pdf, http://unfccc.int/resource/docs/cop7/13a03.pdf and http://unfccc.int/resource/docs/cop7/13a04.pdf



REPORTING

Reporting is an incentive for better compliance because states are reluctant to admit non-compliance and more willing to comply if they know other Parties will comply. MEAs often provide detailed guidance on the content of Parties' reports. However, states usually report on their own compliance with each MEA, which can be a problem. Studies show that self-reported national data for MEAs often produce data that is incomplete, unreliable and inconsistent.[54] There is a clear tension between encouraging honest self-reporting, on the one hand, and identifying non-compliance and initiating a response to non-compliance, on the other hand. There have been some instances in which Parties have simply skipped reporting rather than revealing a more significant violation.

COMPLIANCE REVIEWS

Often MEAs provide no specific authority or resources to the secretariat to perform a monitoring function. A 1992 analysis of eight major MEAs revealed that only one, CITES, created a specific mechanism for assessing compliance.[55] That report recommended the MEAs provide authority and resources for monitoring, set specific criteria for monitoring, use expert outsiders to evaluate data and reports, and include transparent procedures allowing for participation from civil society and target groups.

Many of these recommendations are reflected in recent agreements. The 1994 *Oslo Protocol* on sulphur emissions and the 1997 *Kyoto Protocol* both establish institutions that review national reports for compliance with reporting requirements. Expert review teams established by Article 8 of the *Kyoto Protocol*, are independent, conduct in-country visits and provide thorough and comprehensive technical assessments of national emissions inventories. Among other things, they recommend adjustments to inventories if a Party has failed to follow the appropriate rules. Thus, even if a party's self-reporting is inadequate, there is still a mechanism for assessing compliance.

In many cases, reviews of compliance still rely on cooperation of the parties. Implementation Committees established under the *Montreal Protocol* can gather information relating to compliance, but only if a party invites the Committee to do so. Some treaties, however, create mechanisms for verifying compliance regardless of cooperation. The *Convention on International Trade in Endangered Species of Wild Fauna and Flor*a relies on independent organizations to monitor compliance through the cross matching of import and export records, and the *UN Agreement relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* allows on-board inspections by one party to verify compliance with internationally agreed fishing rules. The *Antarctic Treaty* similarly allows designated observers of any Party to make unannounced on-site inspections of any station, installation or equipment within Antarctica, as well as aerial inspection. The use of outside observers may be one way to improve the quality of reports and generally improve compliance.

---

[54] GAO, *International Environment – Literature on the Effectiveness of International Environmental Agreements*, (Washington, DC: US GAO), 1999.

[55] GAO, *International Environment: International Agreements Are Not Well Monitored* (Washington, DC: US GAO), 1992.

Non-Compliance Procedure – Montreal Protocol on Substances that Deplete the Ozone Layer

The *Montreal Protocol on Substances that Deplete the Ozone Layer* has a unique non-compliance procedure in which parties can raise concerns for their own abilities to meet the objectives of the treaty. An Implementation Committee helps bring the non-compliant party up to compliance through a review process.

Unlike court or tribunal actions, this procedure is intended to be non-confrontational and to facilitate and encourage compliance rather than "punish" non-compliance. A review may be initiated by the secretariat of the Protocol, one of the state parties to the Protocol or by the potentially defaulting party itself. Neither individuals nor NGOs may submit requests for review under this Procedure.

Once a review is initiated, the Secretariat invites the party whose conduct is being questioned to respond. The Committee then reviews the complaint and the response and decides if additional information needs to be requested or if onsite information gathering is required. A report with recommendations is prepared and submitted to the Meeting of the Parties. The Implementation Committee may take a number of actions if non-compliance is found, such as providing technical and financial assistance, e.g., assistance in collection and reporting of data; issuing cautions; and suspending treaty rights, such as denial of funds from the Multilateral Fund.

This facilitative approach is generally viewed as a success, as ozone-depleting substances (ODS) are being phased out relatively quickly.[56] However, the soft approach is backed up by enforcement tools for non-compliance, a key factor in the success of this Procedure. Failure to report data as required by the Protocol has led to recommendations from the Implementation Committee to revoke access to technology transfer and financial assistance in at least 3 instances (Mauritania, Kuwait and Lebanon), and resulted in the swift provision of the required data.[57]

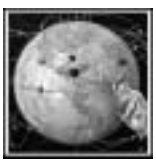
INITIATING A RESPONSE

A key enforcement issue is how to trigger a compliance response. The *Convention on Biological Diversity* relies on negotiation between parties to settle non-compliance issues. The *Montreal Protocol* relies on parties raising non-compliance issues with the secretariat, thus triggering the response process. However, states are generally reluctant to criticize other states in the environmental arena, for fear of drawing attention to their own record. Unlike trade agreements, where industries within a Party have a vested interest in ensuring compliance by competitor nations, a country's failure to live up to its MEA obligations detracts from the overall achievement of an international goal, and is less likely to have enough of an impact on another state to warrant initiating a complaint. Indeed, under the *Montreal Protocol*, most reports of non-compliance have been made by Parties reporting their own non-compliance.

---

[56] *Effective Dispute Resolution – A Review of Options for Dispute Resolution Mechanisms and Procedures*, Center for International Law, Washington, DC, September 1999 at 28.

[57] *Effectiveness of Trade and Positive Measures in Multilateral Environmental Agreements: Lessons from the Montreal Protocol*, Center for International Law, Washington, DC, prepared for the United Nations Environment Programme, 1997.



The *Kyoto Protocol* creates a process (see box above) whereby the independent expert review of compliance is required to report any questions of non-compliance to a Compliance Committee that adjudicates on compliance and imposes consequences.

In some cases, non-government organizations can trigger compliance proceedings. This is discussed further below.

DETERMINATION OF COMPLIANCE

Determinations of compliance or non-compliance vary considerably among multilateral agreements. Under the *Montreal Protocol*, the process is flexible: submissions regarding potential non-compliance go to an Implementation Committee that studies the matter by identifying facts and possible causes. The Implementation Committee then prepares a report and makes recommendations, which are forwarded to the Meeting of the Parties with final decisions taken by a two-thirds majority. The fact that final decisions are made by a two-thirds majority makes the process political. Because the focus of compliance under the *Montreal Protocol* is facilitative, this process works.

Due process and certainty become more important where the stakes are higher. The most formalized, least political processes generally exist for non-environmental treaties. For instance, the World Trade Organization has a relatively judicial process, with panellists that make rulings sitting in their individual capacity, processes for making submissions, commenting on draft reports and extensive reasons for judgement. Panel decisions are automatically adopted unless the Dispute Settlement Body unanimously decides not to adopt the decision. The *Kyoto Protocol*'s Enforcement Committee process, and the *North American Agreement on Environmental Cooperation* are more formalized, apolitical processes than processes for other environmental treaties.

RESPONSE MEASURES

There are many potential responses to non-compliance under environmental treaties. These include:

- **Facilitation of Compliance through Assistance and Advice**. This is the primary means of ensuring compliance under the *Montreal Protocol*. (See box above)

- **Non-Compliance Reports.** Under the *Convention on International Trade in Endangered Species*, the CITES Standing Committee evaluates compliance problems and reports findings in an Alleged Infractions Report. These reports can form the basis for requests by the Standing Committee to restrict trade with non-complying parties, and have been effective in convincing parties to alter behaviour.

- **Suspension of Treaty Rights.** Suspension of a party's eligibility to vote, to receive financial assistance for implementation of the treaty or to engage in treaty activities such as emissions trading can all be effective means of encouraging compliance.

- **Treaty Penalties.** Under the *Kyoto Protocol*, when parties exceed allowable emissions they must reduce their emissions by a larger amount in the subsequent commitment period.

- **Monetary Penalties.** The *North American Agreement on Environmental Cooperation* provides for financial penalties for the persistent non-enforcement of domestic environmental laws. These penalties can only be assessed after an arbitration panel has ruled that the pattern of non-compliance exists, adopts a remedial plan for the Party, and finds that the Party has not implemented the remedial plan. Monetary penalties against Canada are enforceable in the courts.

- **Trade Sanctions.** Parties have interpreted the *Convention on International Trade in Endangered Species* as allowing parties to implement trade sanctions on non-complying parties when the Standing Committee requests parties not to accept documents from a breaching party.

INTERNATIONAL COURTS, TRIBUNALS, AND ADJUDICATION PANELS

Article 33 of the United Nations Charter states that all members of the United Nations shall settle their international disputes by peaceful means, such as negotiation, mediation, conciliation, arbitration and judicial settlement. There is a range of mechanisms that states can potentially use to enforce MEAs.

A key distinction in treaty dispute settlement is between voluntary and compulsory dispute resolution. Under a system of voluntary jurisdiction, states must first agree to have a case heard by a particular court or tribunal, such as the main international court, the International Court of Justice (ICJ). More recent tribunals, such as those established by the WTO and by the Law of the Sea feature compulsory jurisdiction — any state that is a Party to the relevant treaty must submit to a designated tribunal which will decide the dispute.

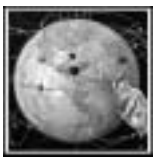
In international law, traditionally only states have had rights to complain that other states have violated treaty or other international law obligations. Individuals are not permitted to complain of non-compliance by either their own country or another country (although this may be slowly changing – see discussion below).

The following is a description of the tribunals, courts or panels that have had to deal with environmental disputes. Other bodies, such as the Enforcement Branch of the *Kyoto Protocol's* Compliance Committee have been established, but not yet used.

INTERNATIONAL COURT OF JUSTICE

The International Court of Justice (ICJ), also known as the World Court, was created by a statute annexed to the UN Charter and is the judicial arm of the United Nations. The ICJ has jurisdiction to settle disputes between states who have consented to its jurisdiction, and its decisions are binding only on those states which consent to its jurisdiction.

The Court can only hear disputes between states. It may receive disputes that are submitted to it, or give advisory opinions on questions submitted to it by the UN General Assembly, Security Council or other specialized UN bodies. Individuals and NGOs have



no direct recourse to this enforcement body. A judge of the Court notes that in the future, NGOs may be allowed to file amicus curiae, or friends of the court briefs.[58]

A fundamental limitation of the ICJ is that states choose, each time a dispute is brought, whether to submit to the court's jurisdiction. They must agree to be bound by its decisions. This lack of compulsory jurisdiction reveals a key weakness of international law – "nations are ultimately free to choose to violate, or simply withdraw from, international arrangements if they no longer consider them to be in accordance with their ultimate interests."[59]

The International Court of Justice may be asked to judge a case involving a claim about environmental protection, or may be asked to decide a dispute which involves environmental as well as other issues. Few strictly environmental cases have been heard by the Court. The Court established a specialized chamber on environmental disputes in 1993, but no disputes have yet been sent to that chamber.

This Court has had limited influence on international environmental law. Its procedures are considered to be too complicated, time-consuming, and expensive for the issues likely to be at issue under an MEA. Many experts believe that states are reluctant to use the Court in any event, but particularly for environmental disputes. For example, states injured by the nuclear accident at Chernobyl could have pursued claims against the former Soviet Union, who had refused to pay any compensation for these injuries, but no state launched an action. Despite the many disputes related to compliance with the *Convention on Trade in Endangered Species* (CITES), no disputes between the parties have led to ICJ or arbitral proceedings. In one critical set of cases, the *Nuclear Test* cases, the Court did not rule on the key question of whether nations were entitled to be free from the hazardous increased radiation due to fallout from the Muruora atmospheric testing atoll, a result that some observers say indicates an unwillingness or inability to deal with contentious environmental problems. And in Spain's judicial challenge to Canada's seizure of a Spanish fishing vessel on the high seas for catching undersized fish, the Court did not resolve even the preliminary question of jurisdiction.

One example of an ICJ environmental case that did result in a decision involved construction of a system of locks on the Danube River. Hungary and Slovakia had signed a treaty concerning this project. Hungary terminated the treaty, and refused to complete its portion of the construction. Slovakia built a modified version of the project. Hungary argued that the project had not received an adequate environmental assessment, and would be a disaster. The Court was asked to rule on a number of issues, and decided that Hungary was not entitled to terminate the contract on environmental grounds, and that Czechoslovakia was not entitled to divert the Danube without the agreement of Hungary.[60]

---

[58] Higgins, Rosalyn, "Remedies and the International Court of Justice: An Introduction" in M. Evans, ed., *Remedies in International Law*, (Hart Publishing: Oxford), 1998.

[59] Alexander Gillespie, *The Illusion of Progress – Unsustainable Development in International Law and Policy*, (London: Earthscan), 2000, 143.

[60] Case Concerning the Gabcikco-Nagymoros Project (Hungary-Slovakia) 1997 ICJ.

The Court does not hear very many cases: only 67 judgments and 24 Advisory Opinions have been delivered since 1946. In contrast, 196 cases have been initiated before the WTO dispute body since it was created in 1995, of which 21 have been decided and 37 were settled or discontinued.[61]

Judgments of the Court are final and binding. Judgments may be enforced by the UN Security Council, pursuant to Articles 4 (1) and (2) of the UN Charter, but these powers have never been used.

LAW OF THE SEA TRIBUNAL

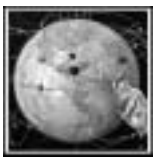
The International Tribunal for the Law of the Sea (ITLOS) was established by the *UN Convention on the Law of the Sea* (UNCLOS) in 1994. It consists of 21 judges appointed by UNCLOS parties and is available to hear disputes between states that arise under UNCLOS as well as agreements that have designated it as a dispute resolution body. It has established specialized Chambers, such as a Chambers for Fisheries Disputes and a Chambers for Marine Environment Disputes. The Seabed Disputes Chamber has exclusive and compulsory jurisdiction over activities in the seabed area as defined by UNCLOS.

This Tribunal has heard ten cases as of 2002. An example of a significant environmental case heard by the Tribunal is the *Southern Bluefin* case. Australia and New Zealand complained that Japan was over-fishing southern bluefin tuna in an experimental fishing program that Japan had unilaterally established. The Tribunal acted swiftly to impose "provisional measures": less than a month after hearing the case, it issued a decision that conservation measures should urgently be undertaken to prevent further deterioration of the stocks. However, this environmental victory was short-lived. An ITLOS Arbitral Tribunal later reached a different decision revoking the provisional measures and held that any dispute between the Parties should be decided under another more specific treaty, the *Convention for the Conservation of Southern Bluefin Tuna*.

Another case before ITLOS also has significant environmental issues at stake. In 2002, a claim by Ireland against the United Kingdom was brought before the Tribunal alleging that mixed oxide fuel from a UK nuclear fuel processing plant is polluting the Irish Sea.

TRADE TRIBUNALS

Trade tribunals or other trade decision-making bodies are increasingly called upon to rule on conflicts between trade agreements and environmental protection laws. These tribunals include the Dispute Settlement Body of the World Trade Organization (WTO); national courts deciding cases under the *North American Free Trade Agreement*, particularly chapter 11 which allows investors to bring disputes directly against states (rather than asking their own country to bring the dispute); and the *North American Agreement on Environmental Cooperation* (NAAEC). No formal cases have been brought under the NAAEC dispute settlement provisions, but a number of "citizen complaints" have been launched under a procedure created by Articles 14 and 15.



[61] These figures are current to 1999 and are from Philippe Sands et al. *Manual on International Courts and Tribunals*, (Butterworths: London), 1999.

The 1985 Agreement which created the WTO includes a series of trade agreements, including the *General Agreement on Tariffs and Trade* (GATT) and the WTO *Understanding on the Settlement of Disputes which creates the Dispute Settlement Body* (DSB). The DSB is "widely viewed as perhaps the most potent dispute settlement system in existence at the international level."[62]

A number of features distinguish the DSB from other international dispute resolution bodies:

- It has compulsory jurisdiction to decide complaints between states that are Parties to the WTO Agreements;
- It has an Appellate Body which is almost always resorted to by the losing party;
- The Appellate Body's decisions are automatically binding under a "reverse consensus" procedure: a consensus decision of the WTO General Council must reject the decision for it not to be binding; and
- Most significantly, decisions can be enforced through compensation by the losing party for its offending trade measures, or through countermeasures, which are retaliatory trade measures issued against the loser by the victor if compensation is not paid.

To date, almost all the environmental trade disputes heard by the DSB (or its predecessor), in which countries argued their laws were justified for environmental reasons, have failed. The exception related to the protection of health was recently upheld in a case involving Canada. Canada challenged France's ban on importing asbestos, and the WTO ruled that the ban was not a disguised trade restriction, but a valid restriction designed to address health risks arising from asbestos (the use of which is mostly banned in Canada). GATT Panels, and subsequently DSB decisions and Appellate Body decisions, have rejected claims that laws were passed to protect the environment, and instead have found that their true intent was to restrict trade, and that the domestic measures at issue unjustifiably discriminated against foreign suppliers. In three health and environmental cases, the WTO body ruled against a regulation under the US *Clean Air Act*, the sea turtle protections under the US *Endangered Species Act*, and a European ban on beef produced with growth hormones.[63]

---

[62] Center for International Law, "Effective Dispute Resolution — A Review of Options for Dispute Resolution Mechanisms and Procedures", Washington, DC. September 1999 at 19.

[63] These cases are analyzed in Martin Wagner and Patti Goldman, *The Case for Rethinking the WTO, The full story behind the WTO's environment and health cases*, Earthjustice Legal Defense Fund, November 1999, available online at http://www.earthjustice.org/work/intl_index.html.

Intervention as a "Friend of the Court" in Tribunal Decisions: WTO Shrimp/Turtle dispute

Enforcement of treaty obligations through dispute resolution tribunals varies according to the tribunal. The purpose of the tribunal, the qualifications and experience of the tribunal's decision makers, and the opportunities for participation are critical factors in enforcing environmental obligations.

For forums like the WTO that have no expertise in environmental problems, one possible way to increase effectiveness is to increase public participation in the tribunal's decision-making procedures. Even where there is no established procedure for public interest intervention, the possibility of filing a brief as a "friend of the court" or amicus curiae, exists. This occurred in the Shrimp/Turtle decision of the WTO.

This dispute involved a US law designed to protect endangered sea turtles from being killed in shrimp trawl nets. The US law required nations catching wild shrimp and exporting them to the United States to use "turtle-excluder devices" (TED). Some nations challenged this US law, arguing that the TED requirement was designed to restrict trade and therefore violated GATT. The US argued the law was justified by the "environmental exceptions" to Article XX of the GATT, exempting WTO members from their trade obligations in order to protect human, animal and plant life (Art. XX(b)) or conserve natural resources (Art. XX(g)) when deemed necessary.

A well known US NGO, the Center for International Environmental Law (CIEL) submitted an amicus curiae (friend of the court) brief to the WTO in this dispute, though the rules of procedure did not make provision for filing this brief. CIEL's brief included scientific information about the plight of endangered sea turtles and made legal arguments supporting the interpretation of WTO rules in light of international environmental law principles for sustainable development. CIEL also argued that the WTO's dispute settlement system should be opened to allow for more public participation.

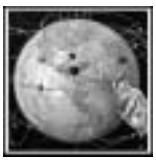
The initial WTO dispute settlement panel refused to allow the brief to be considered, and also struck down the US law as an arbitrary and unjustifiable restriction to international trade. When the US appealed this decision, CIEL filed a second brief. Though the WTO Appellate body agreed that the US law did not qualify as one of the environmental exceptions to the GATT rules, it did accept the CIEL brief, marking "a significant step forward in increasing openness and transparency at the WTO."[64] The WTO Appellate Body found that the terms of the WTO's Dispute Settlement Understanding authorized panels to seek information from any individual or body.[65]

OTHER TRIBUNALS

A wide range of other international tribunals exists. A chart showing the full range of international judicial bodies has been prepared by the Project on International Courts and

[64] CIEL's website includes a Shrimp-Turtle page at http://www.ciel.org/shmptur.html.

[65] *United States – Import Prohibition of Certain Shrimp and Shrimp Products,* WTO, Report of the Appellate Body, WT/DS58/AB/R, Oct. 12, 1998, available online at http://www.wto.org/wto/dispute/distab.htm.



Tribunals, whose web site also carries the full text of decisions and the latest news from all these bodies.[66]

Tribunals set up to resolve disputes other than environmental disputes on occasion make decisions with significant environmental decisions. For example, one tribunal which is making decisions on international environmental claims, unrelated to a violation of a particular MEA, is the UN Compensation Commission, the tribunal established to hear Gulf War-related compensation claims.[67] It has jurisdiction over two broad categories of environmental damage claim: for damage and the depletion of natural resources in the Persian Gulf region resulting from oil-well fires and the discharge of oil into the sea; and for clean-up and other costs of providing assistance to Kuwait.

Some environmental cases have been heard by human rights tribunals, such as the European Court of Human Rights and the Inter-American Commission on Human Rights. See chapter 10, on human rights and the environment, for further discussion.

UNILATERAL STATE ACTION

States may choose to act unilaterally to protect against a perceived threat to their environment. These actions can dramatically demonstrate the need for an MEA, and may lead to one. An often cited example of this type of action was Canada's passage of the *Arctic Waters Pollution Prevention Act* in 1970 to guard against potentially devastating oil pollution from American ships. This domestic legal requirement for an enhanced level of protection for marine ice-covered areas subsequently found itself translated into a very similar international legal requirement in the *Law of the Sea Convention*, inserted into that treaty by one of the chief Canadian negotiators.

Similar actions by the US have evolved into MEA provisions in the area of ozone depleting substances. The US was one of the first countries to restrict production of these substances and was prepared to legislate against other countries who did not agree to similar restrictions.

Applying domestic laws to control activities outside a state's own jurisdiction is a controversial, but not unknown, enforcement method. The US has been the main proponent of this form of enforcement of international law, through laws such as the one that was challenged in the WTO *Shrimp/Turtle* dispute. In that case, restrictions were enforced by bans on imports of shrimp from other countries.

Canada took more direct action in its 1995 arrest of a Spanish ship for an alleged breach of international fish agreements to conserve migratory stocks. Canada passed the *Canadian Coastal Fisheries Protection Act* which attempted to extend Canadian jurisdiction

---

[66] This chart is available on the PICT web site at http://www.pict-pcti.org/publications/pubscrollref.html.

[67] The United Nations Compensation Commission (UNCC) was created in 1991 as a subsidiary organ of the UN Security Council to process claims and pay compensation for losses and damages suffered as a direct result of Iraq's unlawful invasion and occupation of Kuwait: http://www.unog.ch/uncc/.

to part of the area outside Canada's exclusive economic zone limits regulated by the Northwest Atlantic Fisheries organization (NAFO). Canada also informed the ICJ that it would not accept the jurisdiction of the Court for any disputes arising from its management and conservation measures taken in the NAFO area. When the federal Fisheries Minister authorized seizure of a Spanish fishing vessel on the high seas in 1995, Spain complained that this act violated the law of the seas and that Canada's law was invalid because no state can have jurisdiction over the high seas. Spain brought an action against Canada at the ICJ, but Canada refused to accept the Court's jurisdiction. The Court did not resolve the preliminary question of jurisdiction, and so never had the opportunity to rule on the merits of the case. This case and overfishing in general are discussed further in Chapter 6, Conservation of Ecosystems and Biological Diversity.

PUBLIC ACTION AT THE INTERNATIONAL LEVEL – INDIVIDUAL AND NGO COMPLAINT MECHANISMS

The public has increasing access to individual complaint mechanisms to enforce environmental laws and policies. Two examples are described in this section.

The role of the individual in international law is contentious. The traditional view is that individuals have no role. The development of individual complaint procedures have challenged this view.

These mechanisms had their start in the field of human rights. Procedures established by some human rights treaties allow individuals, once they have exhausted the complaint mechanism procedures of their domestic court systems, to submit a complaint of a violation of individual human rights to an international body.

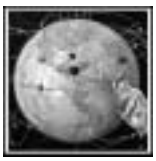
More recently, these types of complaint procedures have been available in environmental cases, for example through the citizen's submission provisions established by the North American Commission for Environmental Cooperation, or through complaints made about World Bank financing of potentially environmentally destructive projects, resulting in the establishment of Inspection Panels.

ARTS 14 AND 15 NORTH AMERICAN AGREEMENT ON ENVIRONMENTAL COOPERATION (NAAEC)

The North American Agreement on Environmental Cooperation (NAAEC) sets up a public complaint procedure for persistent non-enforcement of domestic environmental laws.

Any person or non-governmental organization from one of the three Parties to NAAEC (Canada, the US and Mexico) may make a claim to the Commission for Environmental Cooperation (CEC) that a government is failing to enforce its environmental law, catalyzing a process that can lead to the development of a factual record.

First, the CEC Secretariat determines that the initial criteria for a claim of non-enforcement are met. The Secretariat must find that the submission "appears to be aimed at promoting enforcement rather than at harassing industry". The test for "failing to effectively enforce its environmental law" is narrowed by two key exceptions: the



"reasonable exercise of discretion" and a "decision to allocate enforcement resources". The complainant must first pursue any available "private remedies" and the complaint cannot proceed if there is judicial or administrative proceeding underway. The penalty provision restricts the remedy to situations involving a "persistent pattern" of non-enforcement, which is defined to exclude anything before the agreement came into force.

The Secretariat then determines whether the submission merits requesting a response from the Party. If a response is requested and received, the Secretariat may then recommend to the Council that a factual record be prepared. The Council, (the environment ministers of Canada, Mexico and the United States), may then instruct the Secretariat to prepare a factual record on the submission. The final factual record is made publicly available upon a two-thirds vote of the Council.[68]

As of 2000, twenty-seven complaints had been made since the Agreement came into force: nine against Canada, ten against Mexico and eight against the United States. Of these complaints, the CEC prepared three factual records: one involving construction of a dock in a sensitive area in Cozumel, Mexico; one involving non-enforcement of the Canadian *Fisheries Act* and *National Energy Board Act* against hydro-electric dam operators; and one involving hazardous waste from an abandoned lead smelter in Tijuana, Mexico.

A similar agreement and procedure exist for Canada and Chile. The Canada-Chile Agreement for Environmental Cooperation (CCAEC) is an environmental side-agreement to the Canada-Chile Free Trade Agreement. Article 14 of the Agreement creates a complaint procedure similar to that used in the NAAEC. The first submission on enforcement was received from a Chilean NGO about the Cascadia Chile forestry project.

INDEPENDENT INSPECTION PANEL, WORLD BANK

The World Bank created its Inspection Panel in 1994, after an independent review documented numerous serious violations of the Bank's internal procedures, including a complete lack of environmental assessment for the huge World Bank financed Sardar Samovar dam project in India.[69] The Inspection Panel is an independent body designed to hear complaints from affected people who have suffered or may suffer harm from alleged violations of the Bank's policies and procedures as the result of the approval or implementation of a project. The Panel may review only compliance with existing procedures and policies and may not look at the adequacy of those policies. The Panel may recommend an investigation into a complaint which will proceed only with the Bank's approval. Ultimately, the Bank decides what action to take, if any, after receiving the Panel's investigation report.[70] This mechanism is not strictly an individual complaint

[68] See the Commission's web at www.cec.org, for a description of the procedure, a Citizen's Guide to the complaint procedure, and the full text of all cases.

[69] An interesting Canadian note is that one of the authors of this report was Thomas Berger, who headed the Berger Inquiry into Northern Pipelines in the late 1970s. *Sardar Samovar: The Report of the Independent Review* (World Bank: Washington), 1992. Another prominent Canadian, Jim McNeill, was appointed as one of the first Panellists for the Independent panel.

[70] The web site for the World Bank's Inspection Panel is at http://www.worldbank.org/html/ins-panel. See also Dana Clark and Michael Hsu, *A Citizen's Guide to the World Bank Inspection Panel,* Center for International Environmental Law, (CIEL) (2d ed.) Oct.1999. The Asian Development

mechanism, as individuals must be part of an organization or community to request a complaint. Nonetheless, it is a powerful tool for enforcement of environmental obligations.

World Bank Independent Inspection Panel – A Voice for Citizens

Since the Panel was created in 1994, 20 requests for independent inspections have been filed. At least one Panel report has caused the withdrawal of the Bank from a project, in the case of the Arun III hydroelectric project in Nepal. Several modifications of projects have been made in response to Panel reports. Two controversial recent projects at the World Bank – the China Western Poverty Reduction Project and the Chad/Cameroon Oil Pipeline Project – have both been examined by the Panel. The Chinese investigation is still underway as of December 2002, while the Panel recorded their approval of the actions and next steps put forth by World Bank Management in response to the Inspection Panel's findings in its Investigation Report for three related Chad-Cameroon Pipeline projects in September 2002.

PUBLIC ACTION AT THE NATIONAL LEVEL

Litigation is the typical enforcement technique at the domestic level. For international environmental obligations, domestic litigation can:

- enforce international environmental law, and/or
- bring a claim for damage caused in a foreign country in a domestic court.

Each of these options is discussed in more detail below.

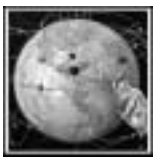
DIRECT ENFORCEMENT OF MEA OBLIGATIONS

International treaties may be enforced through the courts of a nation. In Canada, international treaties are increasingly cited in domestic litigation, though more often in the fields of trade and human rights rather than environment.

Using domestic courts to enforce international obligations is advantageous in a number of ways. Domestic courts have clear jurisdiction over corporations and individuals, whose behaviour is the focus of much international environmental law. Injunctions can be issued by these courts to prevent damage before it occurs. These courts also have authority over assets which can be used to satisfy judgments.

The field of international environmental law has had little impact to date on domestic practice in Canada because courts generally find that they cannot apply international

Bank and the Inter-American Development Bank also have Inspection Panels. The International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) are not subject to the jurisdiction of the World Bank Inspection Panel, but they are subject to review by the Compliance Advisor/Ombudsman.



treaty law unless it has been implemented by domestic legislation.[71] Recent cases challenging the validity of regulations which allegedly discourage log salvaging as violating Canada's obligations under the international *Convention on Salvage*, and the inadequacy of laws governing genetically modified organisms as violating Canada's obligations under the *Convention on Biological Diversity* may change this situation.[72]

FOREIGN CLAIMS IN DOMESTIC COURTS

Another enforcement technique for international environmental law is to start a lawsuit for environmental damage caused in one country in the courts of another country. The rationale for choosing this method is that the courts in some countries have more developed legal systems, are more likely to impose heavy sentences, and are home to the parent of the less well-financed subsidiary corporations that caused the foreign damage.

A number of cases of this kind have been heard by US courts. The only apparent Canadian example to date is a case involving a class action $69 million claim for environmental damage in Guyana. The case was barred by the Quebec Superior Court. The damage was allegedly caused by a cyanide and toxic effluent spill from a Canadian-owned gold mine in Guyana. A Guyanese Commission of Inquiry found that the cause of the discharge of effluent from the treatment plant was the erosion of the core of the dam due to faulty construction of the rockfill from which the dam was built. The Commission also found the Canadian corporation responsible for the loss since it was the party that brought cyanide, a noxious substance, to its property. After canvassing the location of witnesses, location of material evidence, state of Guyana's judiciary and other factors, the Quebec court found that Guyana was clearly the appropriate forum to decide the issues, and refused to allow the case to proceed in Canada. [73]

Foreign direct liability cases have also been brought in the UK and Australia aiming to hold parent companies liable for harmful effects of their subsidiaries operating in developing countries. These claims have been based on environmental damage as well as violations of labour or human rights standards.[74]

EFFECTIVENESS OF ENVIRONMENTAL TREATIES

Effectiveness is the degree to which environmental treaties lead to changes in behaviour that help solve environmental problems.

---

[71] Jutta Brunnee, "International Environmental Law in Canadian Courts", vol. 7, Issue 1, RECIEL, 47-56.

[72] Both cases are described in the Sierra Legal Defence Fund newsletter, June 2000, available online at www.sierralegal.org.

[73] ***Recherches Internationales Québec v. Cambior Inc.*** [1998] Q.J. No. 2554.

[74] For an overview of these cases and a discussion of the issues, see Halina Ward, *Governing Multinationals: The Role of Foreign Direct Liability*, (London: Royal Institute of International Affairs, 2001).

A number of factors influence the effectiveness of a MEA. These may be classified according to:

1. **Characteristics of the activity involved.** For example, can the environmental problem be solved by a technical fix? The availability of substitutes for ozone depleting substances is one reason why the *Montreal Protocol* is generally agreed to be effective;

2. **Factors involving the country.** Many factors about a country will affect compliance: history, culture, physical size and geographical conditions, economy, political and legal institutions, technical capability, etc. For example, is it an open and democratic society that includes full participatory rights for NGOs? The involvement of NGOs in monitoring the implementation of a particular MEA is a key factor, so much so that a leading text identifies it as the "key variable" accounting for policy change.[75] The most critical factor is a country's intent and capacity to comply.

3. **The characteristics of the accord.** The design of the regime is important: binding treaties are generally believed to have a greater influence on state behaviour than non-binding instruments.[76] Other characteristics of MEAs linked to effectiveness are:

   - **The perceived equity of the obligations.** Developed and developing countries have different responsibilities and abilities to implement treaties. The principle of "common but differentiated responsibilities" describes this concept. Many of the significant modern treaties would not have been signed by developing countries unless they perceived that the arrangements were equitable. MEAs may address this implementation issue through facilitating access to funding, for example, through the Global Environment Facility or the *Montreal Protocol* Multilateral Fund.

   - **The number of regulated parties.** The fewer the number of actors involved, the easier to regulate, and the easier to obtain high compliance rates.

   - **Presence of a "leader" state.** "Leader" countries who champion an environmental cause have been shown to lead to higher compliance, in both hard and soft law situations.

   - **Precision of the obligations.** Though "the more precise the better" is a general rule for enhanced effectiveness, precision in itself is not enough. Precise and relatively simple obligations are easier to comply with than precise and complicated ones.[77]

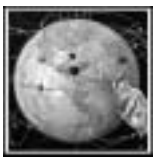
   - **Provisions for obtaining scientific and technical advice.** Defined procedures for enlisting expert scientific and technical assistance will increase effectiveness.

   - **Reporting requirements.** Reporting lets states know whether or not behaviour has changed, especially if baseline data has been reported. Treaties like the *Montreal*

[75] Hunter et al, *International Environmental Law and Policy*, (New York: Foundation Press), 1998, 450.

[76] Edith Brown Weiss and Harold Jacobson, eds., *Engaging Countries – Strengthening Compliance with International Environmental Accords,* (MIT Press: Cambridge) 1998.

[77] Edith Brown Weiss and Harold Jacobson, eds., *Engaging Countries – Strengthening Compliance with International Environmental Accords,* (MIT Press: Cambridge) 1998.



Protocol, *Kyoto Protocol*, and *POPs Convention* all make good use of detailed reporting schemes.

- **Monitoring provisions.** Other forms of monitoring that can improve a treaty's effectiveness include information provision by NGOs, as in *CITES* or by industry, as in the *Montreal Protocol*.

- **Secretariat.** An efficient secretariat that has enough staff and resources to monitor treaty compliance is another prerequisite for more effective treaties. One of the best funded MEA Secretariats, that of the *Framework Convention on Climate Change*, has a budget of US $12 million/year and about 100 staff. The Secretariat of the *Convention on Biological Diversity* has a staff of 53 and a budget of approximately US $7 million.

- **Incentives.** Financial incentives can be a key factor in increasing effectiveness. First, many developing countries agreed to participate in Conventions only because of the promise of financial and technology transfers. Second, priorities such as poverty alleviation or provision of basic human needs will take precedence over environmental protection, requiring richer countries to fund the compliance costs for developing countries if the environmental improvements sought by the global community are to occur.

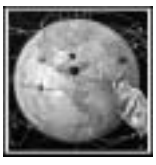
- **Sanctions.** Coercive remedies such as sanctions are an important adjunct to compliance measures. Trade measures are used in several MEAs, successfully dealing with the trade aspects of an environmental issue. Other sanctions include denial of treaty membership benefits, such as the provision of technical or financial assistance.

CANADA'S RECORD ON IMPLEMENTATION – BRIDGING THE IMPLEMENTATION GAP

Canada's Commissioner of Environment and Development has referred to Canada's performance on MEAs as constituting an "implementation gap". Bridging this gap will require additional research on the issues of what makes a MEA effective, and whether the enforcement mechanisms contained in each MEA are sufficient. Research to date suggests that both non-coercive compliance systems and strong enforcement sanctions are necessary for maximum effectiveness. As with domestic law, the "carrot" and the "stick" are both essential elements of a compliance and enforcement system.

Another critical factor is more public accountability for the governments who negotiate these agreements. To increase accountability, the public needs more information on how well the treaty has been implemented and how it measures up to an external benchmark of performance, such as an environmental performance indicator. Public rights of participation are also important. More opportunities for participating in the development and drafting of these treaties, review of their implementation, and rights of appeal through individual complaint mechanisms and direct enforcement in international and national courts and tribunals will also increase the effectiveness of MEAs.

Each of the following chapters discusses Canada's implementation record on specific MEAs.



CHAPTER 5 – ATMOSPHERE

Canada is party to a number of treaties dealing with protection of the atmosphere and protection of air quality. This chapter highlights the most noteworthy of these:

- **The Climate Change Treaties.** These include the *United Nations Framework Convention on Climate Change (the UNFCCC)* and the *Kyoto Protocol to the UNFCCC.*

- **The Stratospheric Ozone Protection Treaties.** These include the *Vienna Convention on the Protection of the Ozone Layer* and the *Montreal Protocol on Substances that Deplete the Ozone Layer.*

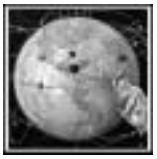
- **Smog and Acid Rain Treaties.** These include a variety of treaties including the *Convention on Long-Range Transboundary Air Pollution* and a series of *Protocols* under it, as well as the *1991 Agreement Between the Government of Canada and the United States of America on Air Quality* and the *Ozone Annex* to that *Agreement*.

CLIMATE CHANGE TREATIES

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE	**Link to the text:**	http://www.unfccc.de/resource/conv/index.html
	Signed by Canada:	June 12, 1992
	Ratified by Canada:	December 4th, 1992
	International Status:	In force as of March 21, 1994. Ratified by over 186 countries.
	In Force in Canada:	In force as of March 21, 1994
	Amendments:	None
KYOTO PROTOCOL TO THE CONVENTION ON CLIMATE CHANGE	**Link to the text:**	http://www.unfccc.de/resource/protintr.html
	Signed by Canada:	April 29, 1998
	Ratified By Canada:	December 17, 2002.
	International Status:	102 Parties have ratified. Will not enter force until ratified by at least 55 Parties to the Convention representing at least 55% of 1990 emissions of carbon dioxide from the industrialized world. As of December 2002, it was ratified by parties representing 43.9% of emissions. Ratification by the Russian Federation will bring it into force.
	In Force in Canada:	Needs international entry into force.
	Amendments:	None
FCCC SECRETARIAT	**Link**:	http://www.unfccc.de
CANADA CLIMATE CHANGE	**Website:**	http://www/climatechange.gc.ca

WHAT'S THE PROBLEM?

Greenhouse gases such as carbon dioxide, methane, water vapour, and nitrous oxide allow solar radiation to penetrate the atmosphere and warm the earth's surface. Greenhouse gases trap some of this heat – or infrared radiation – and stop it from being reradiated into space. This allows life to thrive. Without the greenhouse effect, the earth would be far colder than it was at the height of the deepest ice age.



However, human emissions of greenhouse gases — primarily from burning fossil fuels and deforestation — have increased concentrations of greenhouse gases in the atmosphere, upsetting the balance between energy received from the sun and heat reradiated into space. Carbon dioxide concentrations in the atmosphere are currently 31% above the levels that prevailed prior to the industrial revolution. Methane concentrations have increased by 151%, nitrous oxide by seventeen percent.

Increased atmospheric concentrations have begun changing the climate. Despite natural occurrences that would normally cool temperatures (e.g., volcanic eruptions), the global average surface temperature has increased by 0.6 °C in the last century, with the warmest decade on record being the 1990s. Nine of the ten warmest years on record occurred since 1990. As predicted by climate change models there has also been an increase in droughts in some areas, and increased precipitation and flooding in other areas.

Scientists expect these trends to continue. Depending on whether humans shift away from energy intensive industry and reliance on fossil fuels, global average temperatures are expected to increase by 1.4 to 5.8 °C between 2000 and 2100 — at rate of change which is without precedent in the last 10,000 years. Scientists predict that this warming is likely or very likely to be accompanied by increased drought in some areas, increased heavy rainfall events, and increases in tropical cyclones.

Global emission reductions of fifty to seventy percent are needed to stabilize atmospheric concentrations and the climate system.

MAJOR COMMITMENTS SET OUT IN THE TREATIES

Convention

The ultimate objective of the FCCC is to achieve:

> "stabilization of greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic [human-induced] interference with the climate system."

The FCCC is based on the principle of "common but differentiated responsibilities". It notes that the largest share of historic and current emissions originate in developed countries, and it establishes responsibilities that vary according to countries' ability to take action. For instance, all Parties are to formulate and implement programs containing measures to mitigate climate change, but only the industrialized world is required to adopt policies and measures with the aim of returning emissions to their 1990 levels by 2000. Annex II Parties – essentially countries that were members of the OECD in 1992 – are to support climate change activities in developing countries by providing financial support above and beyond current levels of financial assistance.

As its name implies, the FCCC is a framework of general principles and institutions. It sets up a process for developing more meaningful commitments. The *Kyoto Protocol* is potentially the first major step under this framework.

Kyoto Protocol

Article 3 of the Protocol establishes a commitment period between 2008 and 2012 (the "First Commitment Period") during which industrialized nations must limit their emissions of six greenhouse gases (carbon dioxide, methane, nitrous oxide, perfluorocarbons, sulphur hexafluoride and hydrofluorocarbons). Parties are given a quota of allowable emissions (the "assigned amount") that is based on a certain percentage of emissions in a base year. Canada's assigned amount is 94% of 1990 emissions times five (to reflect the five years in the First Commitment Period). The US assigned amount is 93% of 1990 emissions times five; the European Union's is 92%. The *Kyoto Protocol* does not set targets for after 2012, but is based on the assumption that Parties will negotiate subsequent commitment periods that will start in 2013.

The *Kyoto Protocol* includes several mechanisms to achieve emissions reductions – joint implementation, the clean development mechanism and emissions trading. Although only one of the three mechanisms is formally referred to as emissions trading, all three involve trading of allowable emission quotas or emission reduction credits. These mechanisms are intended to reduce the costs of achieving reduction targets: parties that can cheaply reduce emissions by more than required can do so and sell reduction credits or emission quotas to other parties. Under emissions trading parties industrialized nations simply trade parts of their assigned amount. Under joint implementation they do the same, but the units trades are associated with a specific project. Under the clean development mechanism, credits are generated for reductions in developing countries. These credits allow industrialized nations to increase emissions.

Emissions trading has pros and cons environmentally. Without trading, emission limits may be impractical or not enforced. On the other hand, loopholes or weaknesses in trading systems may allow global emissions to increase over what would occur in the absence of trading.[78]

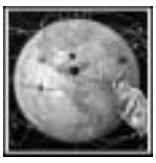
The *Kyoto Protocol* also provides Parties with flexibility by allowing them to emit more from fossil fuel emissions if they take actions to protect certain carbon reservoirs or enhance sinks. Under Article 3.3, Annex B Parties will be credited (or debited) with increases (or decreases) in carbon removed from (released into) the atmosphere in the period 2008 to 2012 due to afforestation, reforestation, or deforestation, if those activities happened since 1990.[79] Reforestation in the context of Article 3.3 means converting non-forest land to forest – thus excluding regeneration of forests after logging.[80]

---

[78] Potential loopholes are discussed in WCEL's *Earth in Balance Briefing Note* series: http://www.wcel.org/wcelpub/2000/13242.html.

[79] COP 4 clarified the obtuse language of Article 3.3, agreeing that 3.3 meant: "The adjustment to a Party's assigned amount shall be equal to verifiable changes in carbon stocks during the period 2008 to 2012 resulting from direct human induced activities of afforestation, reforestation and deforestation since 1 January 1990. Where the result of this calculation is a net sink, this value shall be added to the party's assigned amount. Where the result of this calculation is a net emission, this value shall be subtracted from the party's assigned amount." Climate Secretariat document FCCC/CP/1998/L.5. C.

[80] Until recently, Canada asserted that reforestation includes post harvest regeneration. However, "reforestation" is defined by the IPCC 1996 Guidelines as meaning conversion of un-forested land



Although an agreement was reached on the wording of the Kyoto Protocol in November 1997, many crucial technical and political issues were left unresolved. Many nations felt they could not ratify the Protocol until these issues were resolved. This process culminated with the Bonn Accord of June and the Marrakesh Accord of November 2001 when the international community negotiated a series of decisions that guide application of the Protocol. These decisions are crucial to an understanding of how the Protocol will work in practice. These decisions number hundreds of pages and are available at the UNFCCC website.[81]

The November 2001 Marrakesh Accord agreed that Parties, could, up to a specified limit, choose to count greenhouse gas emissions and removals from forest management, cropland management, grazing land management, and re-vegetation. Under the terms of this agreement Canada will likely be able to count all of the carbon removed from the atmosphere by managed forests in Canada, a major concession by the international community to Canada. Other key aspects of the Bonn and Marrakesh accords relate to rules for emissions trading, monitoring and compliance (see chapter 4).

Canada and the Climate Treaties

In the late 1980's and early 1990's, Canada showed leadership on the climate change issue. At the 1989 Bergen Conference of the United Nations Economic Commission for Europe, and again at the Second World Climate Conference in May 1990, the federal government committed Canada to stabilizing emissions of greenhouse gases at 1990 levels by the year 2000.[82] Subsequently, the House of Commons Standing Committee on Environment recommended a commitment to a twenty percent reduction by 2005.[83]

Despite these commitments and commitments under the FCCC, Canada's emissions climbed by 13% from 1990 to 1998. This rate of increase was the seventh highest within the industrialized world, and the second fastest increase among large emitters.[84] Canada

---

that once contained forests back to forested status. The 1996 Guidelines are adopted into the Protocol by Article 5.2. At the negotiations in November 2000, brackets around the definition of reforestation were dropped, indicating a general consensus that reforestation did not include post harvest regeneration.

[81] Key decisions are included in the *Report of the Conference of the Parties at Its Seventh Session, Held at Marrakesh from October 29 to November 10, 2001*, UN doc number, FCCC/CP/2001/13/Add.1. Published in four volumes, these decisions are available at http://unfccc.int/resource/docs/cop7/13a01.pdf, http://unfccc.int/resource/docs/cop7/13a02.pdf, http://unfccc.int/resource/docs/cop7/13a03.pdf and http://unfccc.int/resource/docs/cop7/13a04.pdf

[82] Canada, *Canada's Green Plan* (Ottawa: Minister of Supply and Services, 1990) at 100. The commitment referred to greenhouse gases other than ozone depleting substances controlled by the *Montreal Protocol*.

[83] Canada, House of Commons, Standing Committee on Environment, *Out of Balance, The Risks of Irreversible Climate Change* (Ottawa: Queen's Printer of Canada, 1991) at 45.

[84] Australian, Monaco, Ireland, Spain, Greece and Portugal had steeper increases, but for all countries other than Australia, the increases were less significant because of low emissions in 1990: see FCCC/SBI/2000/INF.13.

has the fourth highest per capita emissions in the industrialized world. However, Canada is responsible for only about 2% of world emissions.

Successfully reversing these trends will likely involve a mix of programs across all sectors. Necessary measures include programs to facilitate voluntary action (e.g., providing information to the public on energy efficiency), government investment in efficiency or renewable energy (e.g., purchase of green power and investment in transit); regulatory (e.g., energy efficiency standards for homes, appliances and vehicles) and economic incentives (e.g., removing subsidies to fossil fuels, emissions trading programs with legal caps on emissions, tax credits for investment in home energy efficiency and shifting taxes from investment or jobs to greenhouse gas emissions).

While large amounts of effort have gone into consultation on climate change, federal and provincial governments have been reluctant to adopt economic incentives or regulatory programs, and government investment has been limited through the 1990s. Of 88 measures recommended to federal and provincial Ministers at the conclusion of the 1993-94 national consultation process on climate change, a March 2000 report found that no meaningful action has been taken on 37 of the 88 measures. Taking into account partially implemented measures, only 33 percent of the 88 measures have been implemented. The mainstay of the national strategy has been a voluntary challenge to industry. Another study found that on average, the emission trends of companies fully participating in the Voluntary Challenge Program were no better than national trends.[85]

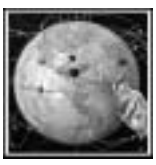
According to a 1998 report of the Commissioner of the Environment and Sustainable Development,

> "the NACPP [National Action Plan on Climate Change] has been inadequately implemented. Many of the key elements necessary to manage the implementation of Canada's response to climate change are missing or incomplete. For example, there is no clear assignment of roles and responsibilities, no national communication program, no implementation plan, limited provision for regular, results-based monitoring of progress and no consolidated summary-level reporting to Parliament. …The federal government has a responsibility to lead the nation in developing a realistic, broad-based and cost-effective response to climate change that minimizes any negative impact and maximizes any positive impact on Canada's economy. The implementation approach needs to be substantially rethought, with an effective management structure put in place."[86]

After extensive consultations from 1998 through to 2000, during which numerous actions to reduce greenhouse gases were evaluated, the federal government and provinces agreed to develop packages of measures for implementation prior to ratification of the *Kyoto Protocol*. In October 2000, the federal government and several provinces announced their "Phase One" commitments. Combined with funding commitments in the 2000 federal budget, the federal Action Plan 2000 committed $1.1 billion over five years. The plan includes several positive elements, including a commitment to financial incentives for

[85] For both studies see http://www.pembina.org/pubs/fiveyears.htm.

[86] 1998 Report of the Commissioner of the Environment and Sustainable Development, available at http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c8menu_e.html.



emerging renewable energy distributors and a commitment to purchase 20% of federal electricity from green sources. On the other hand, it is still focused on voluntary measures and is vague on details. The Plan states that it will reduce Canada's greenhouse gas emissions by 65 megatonnes by 2010 – one third of the way to the Kyoto target. Unpublished analysis suggests this is an optimistic evaluation, dependent on very aggressive implementation of the plan.

Among provinces, action on climate change ranges from non-existent to well-intentioned but limited. A September 2000 report rated five provinces on their performance on climate change. British Columbia received the highest score – 30.5 points out of 100. Saskatchewan received the lowest score – 20.5 points. Ontario received 27.5 points, Alberta 26.5 points and Quebec 22.0 points.[87] Provincial action plans announced subsequent to that report have been limited at best. British Columbia's October 2000 Action Plan had the most significant commitments – including a program to support industry energy audits and a commitment by BC Hydro to offset some of its emission increases – but it is unlikely to dramatically shift the Province away from rapidly rising greenhouse gas emissions.

Canada's inaction has been the focus on international and domestic criticism. In September 2000, the OECD criticized Canada's inaction on climate change. The OECD Survey found:

> while an extensive consultation process has been launched, much more concrete action is needed. Meanwhile, greenhouse gas (GHG) emissions are rising steadily and are currently about 13 percent higher than in 1990. With a government plan forthcoming only later in the year, it will be very difficult to meet the *Kyoto Protocol* targets …. Even if Canada is able to buy GHG emission quotas on an international market, it will probably have to take steps to accelerate the reduction in domestic fossil-fuel consumption per unit of GDP. In this case, rather than resort to command-and-control-type regulations, it would be advisable to rely primarily on a cost-effective instrument, such as a tradeable permit scheme, and not to exclude specific sectors (such as transport and energy) from its application. Increased taxes on fuel might be helpful to reduce emissions related to transport. In any case, measures will need to be implemented well before the target period in order to allow for a gradual adjustment in the energy-using capital stock.[88]

The divergence between Canada's emission trends and Canada's Kyoto commitment appeared to motivate Canada to seek rules under the *Kyoto Protocol* that made the commitment easier to reach. In the period leading up to the Marrakesh Accord, Canada was internationally criticized for promoting a number of rules that would reduce the effectiveness of the Kyoto Protocol. A November 2000 report by West Coast Environmental Law rated negotiation positions of all OECD countries in relation to four key issues. A rough assessment was made of the impact a position would have on environmental integrity of the *Kyoto Protocol*. Canada's positions were rated as having the

---

[87] Pembina Institute "Provincial Government Performance on Climate Change: 2000" at http://www.pembina.org/pubs/ReportCard.htm.

[88] Organization for Economic Cooperation and Development, Economic Survey of Canada, August 2000, available at http://www.oecd.org/eco/surv/esu-can.htm.

second most negative impact on integrity.[89] In the final Marrakesh Accord, Canada succeeded in getting most of the flexibility that it wanted, while Europeans and other nations were successful in ensuring that such flexibility did not undermine the Protocol.

With the negotiation of the Marrakesh Accord in late 2001, Canada embarked on a year long process to decide on a national plan for implementation and to decide whether Canada would ratify. Prime Minister Jean Chretien and Minister of Environment, David Anderson provided firm leadership in favour of ratification; however, an extremely vocal and often highly misleading campaign was waged by Alberta and large emitters opposing ratification.

Prime Minister Chretien prevailed with ratification in December 2002, but only after a large number of concessions were made to large emitters. Chief among the concessions to industry and Alberta were promises relating to emission limits and emissions trading for large emitters. The federal government promised that high emission technologies such as coal fired electricity and tarsands oil generation would receive an emission limit that would grow with production and be less stringent than the standard for lower emitting technologies; that the price of emission rights would be capped at $15/per tonne (the federal government would subsidize reductions if they exceeded that amount); and that the amount of reductions from large emitters would be capped. These changes allowed large emitters to announce that Kyoto would only add 20 to 27¢ to the $12 production cost of a barrel of oil.[90] However, environmental groups such as West Coast Environmental Law have warned that they would also increase the costs of emission reductions for Canadians as a whole and reduce the effectiveness of the program in shifting Canada away from high emission industries and technologies, a shift that is vital in the long run.

Other elements of the federal implementation plan include targets for ethanol in gasoline, the possibility of efficiency standards for vehicles, retrofits for housing, targets for renewable energy among new sources of electricity, possible standards for capture and flaring of landfill gas, purchase of international emission rights. The measures announced by the federal government will, by themselves, be inadequate for Canada to achieve compliance with the Kyoto Protocol. According to the federal *Climate Change Plan for Canada*[91] another 60 megatonnes of reductions are needed.

NGO Information

Many NGOs are very active on climate change. The most active groups include:

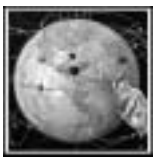
David Suzuki Foundation. http://www.davidsuzuki.org/. The Foundation has an ongoing campaign to educate the public as well as government and business leaders about the urgency and practical strategies for reducing global warming caused by human activities.

---

[89] West Coast Environmental Law, Negotiating the Climate Away, available at http://www.wcel.org/wcelpub/2000/13244.html.

[90] Globe and Mail, January 10, 2003, p. B-1.

[91] Canada, Climate Change Plan for Canada (December, 2002), available at www.climatechange.gc.ca



The campaign seeks out up-to-date research and ensures that this information reaches the widest possible audience.

Greenpeace. Greenpeace is active both internationally, http://www.greenpeace.org, and in Canada, http://www.greenpeacecanada.org/ on climate change issues. As well as their high profile actions to draw attention to climate change and stop developments that increase greenhouse gases, Greenpeace is active at international meetings identifying and advocating an end to loopholes and here in Canada advocating for concrete actions to reduce greenhouse gases.

Pembina Institute for Appropriate Development. http://www.pembina.org/default.htm. The Pembina Institute is an independent, citizen-based think tank, an activist public interest organization and a non-profit consulting group with a solid reputation for technically reliable and innovative results. The Institute has undertaken research and analysis resulting in a number of substantial reports on various aspects of climate change policy. Staff actively participate in multi-stakeholder processes on climate change at the provincial, national and international levels, and work with the Institute's education program to reach schools and the general public on this important issue.

Sierra Club of Canada. The Sierra Club of Canada National Office is the home of the Canadian Climate Action Network Secretariat and is an outspoken advocate for reduced greenhouse gas emissions.

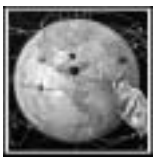
West Coast Environmental Law Association (WCELA). www.wcel.org. The Canadian Climate Action Network has chosen West Coast as its representative at major climate negotiations since 1997. WCELA has advocated for rules under the *Kyoto Protocol* that are pragmatic but do not sacrifice environmental effectiveness. Domestically WCELA is active in promoting emissions trading or carbon tax programs that encourage greenhouse gas emissions throughout the economy.

TREATIES FOR THE PROTECTION OF THE OZONE LAYER

The *Vienna Convention* establishes a framework for cooperation, development of policies, and formulation of agreed measures in order to protect human health and the environment against adverse effects resulting or likely to result from human activities that modify or are likely to modify the ozone layer. Specific obligations relating to the control and elimination of ozone-depleting substances are contained in the *Montreal Protocol on Substances that Deplete the Ozone Layer*. The *Montreal Protocol* has been amended five times to expand the number of substances covered and to accelerate the timetable for eliminating ozone-depleting substances.

TREATIES FOR PROTECTION OF THE OZONE LAYER

VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER	**Link to the text:**	http://www.unep.ch/ozone/vienna.shtml
	Signed by Canada:	March 22, 1985.
	Ratified by Canada:	June 4, 1986. (Canada first nation to ratify!)
	International Status:	In force September 22, 1988.
	In Force in Canada:	September 22, 1988.
	Amendments:	None
THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER	**Link to the text:**	http://www.unep.ch/ozone/montreal.shtml
	Signed by Canada:	September 16, 1987.
	Ratified By Canada:	June 30 1988.
	International Status:	In force on January 1, 1989.
	In Force in Canada:	January 1, 1989
	Amendments:	The London Amendment to the Montreal Protocol; Negotiated June 29 1990; Ratified by Canada: July 5, 1990 (Canada first nation to ratify!): In force internationally 10 August 1992. The Copenhagen Amendment to the Montreal Protocol: Negotiated November 1992; Ratified by Canada: March 18, 1994; In force internationally on 14 June 1994 Montreal (1997) Ratified by Canada 17 March 1998; In force internationally 10 November, 1999 Beijing (1999): Accepted by Canada 9 February 2001: To enter into force 60 days after it has been ratified, accepted or approved by 20 states. So far only five states have ratified, accepted or approved.
OZONE SECRETARIAT	**Link**:	http://www.unep.org/ozone



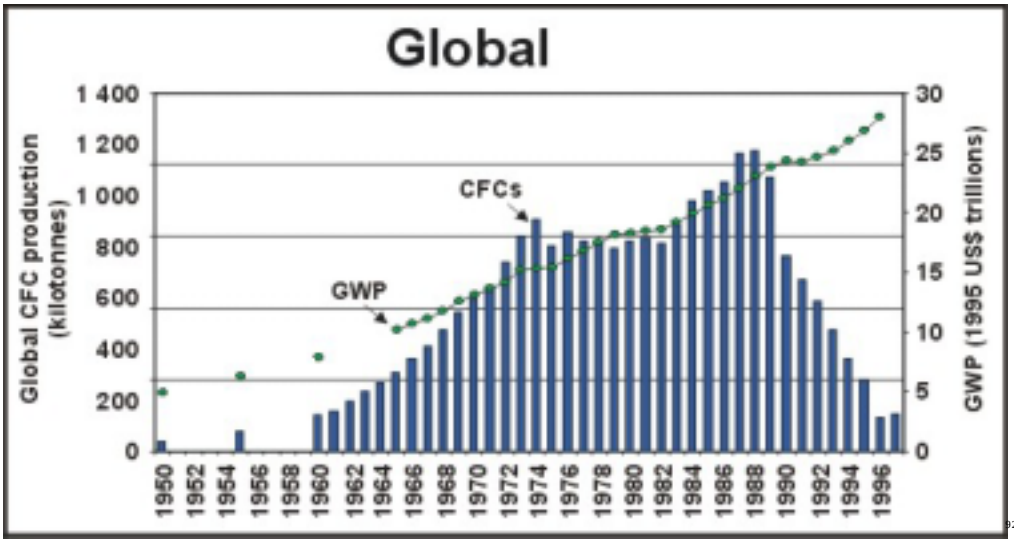
WHAT'S THE PROBLEM?

Ozone in the stratosphere – ten to fifty kilometres above the earth's surface – protects life on Earth by filtering out biologically harmful wavelengths of ultraviolet (UV) radiation emanating from the sun, in particular UV-B. Ozone in the stratosphere is destroyed by the presence of various ozone depleting substances (ODSs) – in particular chlorofluorocarbons (CFCs). CFCs are long-lived compounds that have been manufactured since 1928 and used in aerosols, foams, refrigeration, air conditioners, solvents, fire extinguishers etc. CFCs dispersed at the surface eventually reach the stratosphere where they cause ozone depletion. This ozone depletion has been dramatically confirmed through the Antarctic "Ozone Hole" discovered in 1985 and observations, since then, of ozone depletion in the middle and higher latitudes. Since 1979, there has been a global decrease in the annual average amount of stratospheric ozone: a 4–6% decrease per decade at mid-latitudes, and a 10–12% decrease per decade at higher southern latitudes.

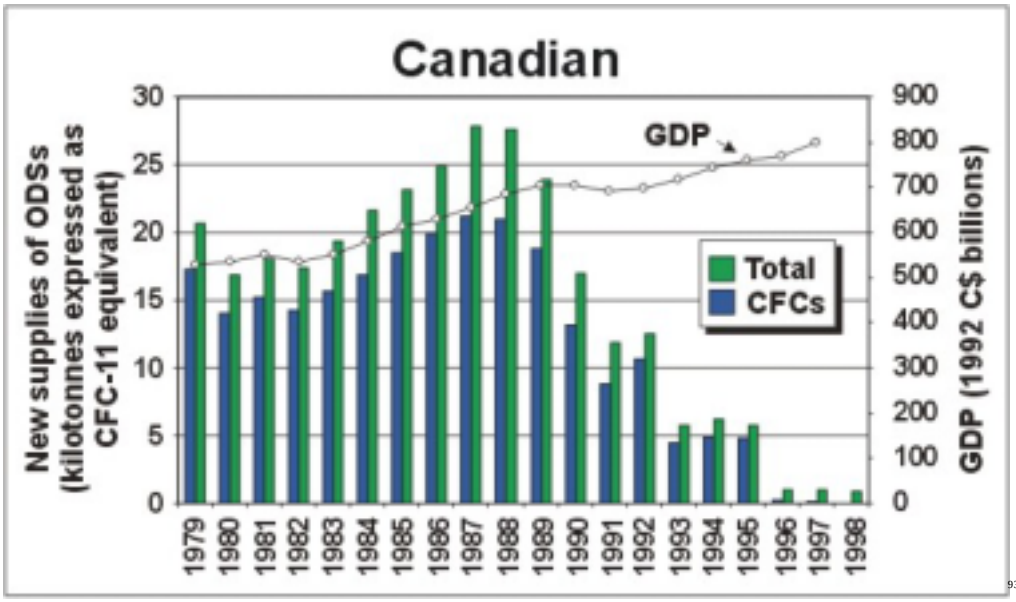
Any significant decrease in ozone in the stratosphere will result in an increase of UV-B radiation reaching the earth's surface. The intensity of mid-range UV radiation (UV-B) at the Earth's surface has increased as a result of ozone depletion in the stratosphere. In fact, measurements show that globally averaged ground-level UV-B radiation rose ten percent from 1986 to 1996. Increases in levels of UV-B radiation can result in the increase in skin cancers, suppress the immune system, exacerbate eye disorders including cataracts and affect plants, animals and plastic materials. It is believed that a sustained 1% decrease in stratospheric ozone will result in a 2% increase in cases of nonmelanoma skin cancer. Increased UV-B may also reduce some crop yields and disrupt marine food chains.

Due to reductions in emissions of ODSs required by the *Montreal Protocol*, ODS levels in the atmosphere peaked in the late 1990s and are expected to decline slowly through the next century. Scientists expect to see ozone recovery beginning around 2010 to 2015, with full recovery expected around 2050 to 2060, or later if emissions of ODSs are greater than expected in the next ten to fifteen years.

The figures below show reductions in Canadian and Global production of ozone depleting substances.



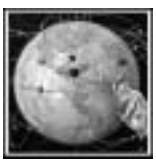
[92]



[93]

[92] Environment Canada, National Environmental Indicator Series, Global Stratospheric Ozone Depletion, http://www.ec.gc.ca/ind/English/Ozone/Graphs/default.cfm?Graph=stgrL01_e.jpg

[93] Environment Canada, National Environmental Indicator Series, Canadian Stratospheric Ozone Depletion, http://www.ec.gc.ca/ind/English/Ozone/Graphs/default.cfm?Graph=stgrL02_e.jpg



MAJOR COMMITMENTS SET OUT IN THE TREATIES

Convention: nations agreed to take "appropriate measures...to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the Ozone Layer;" but the measures are unspecified. The main thrust of the convention was to encourage research, cooperation among countries and exchange of information. Despite its glaring weaknesses, the *Vienna Convention* set an important precedent: for the first time nations agreed in principle to tackle a global environmental problem before its effects were felt, or even scientifically proven .

Protocol: the *Montreal Protocol* set actual reduction targets and sets the elimination of ozone-depleting substances as its final objective. The Protocol is designed so that it can be tightened or "adjusted" as the scientific evidence strengthens, without having to be completely renegotiated. Its control provisions have been strengthened through a series of amendments. For developed countries, reductions are as follows:

- **CFCs:** eliminate domestic consumption by January 1 1996 except for essential uses (currently restricted to inhalers). Production for use in developing countries phased out by 2015.

- **Halons:** eliminate domestic consumption by January 1 1994 except for essential uses. Production for use in developing countries phased out by 2010.

- **Carbon Tetrachloride; methyl chloroform; hydrobromofluorocarbons:** eliminate domestic consumption by January 1 1996 except for essential uses and limited production for use in developing countries.

- **Hydrochlorofluorocarbons:** limit use to situations where more sustainable alternatives are not available and choose substances with less potential for ozone depletion; freeze production at 1989 levels by 1996; reduce emissions to 65% of 1989 levels by 2004, 35% by 2010; 10% by 2015 and reduce to 0.5% by 2020 (only for purposes of servicing refrigeration equipment); complete elimination by 2030.

- **Methyl Bromide:** 50% reduction from 1991 levels by 2001; reduce to 30% of 1990 levels by 2003; eliminate by 2005. Exceptions for essential uses. Limits on production for developing countries.

- **Bromochloromethane:** elimination by 2002.

Developing countries with low levels of consumption are subject to a delayed schedule for elimination of ozone depleting substances. The Protocol establishes a mechanism financed by developed countries – the Multilateral Fund – to provide financial and technological support to developing countries in complying with the provisions of the Protocol.

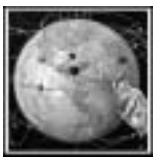
CANADA AND THE OZONE TREATIES: INTERNATIONAL LEADERSHIP AND DOMESTIC IMPLEMENTATION

Since the early 1980s, Canada has been a strong proponent of the need for international controls on ozone-depleting substances. Canada became the first country to ratify both the *Vienna Convention* and the *London Amendment*. Canada's timetable for the phase out of ODSs exceeded the original requirements of the *Montreal Protocol*.

Within Canada, the federal government regulates production, import and export of bulk ODS – the controls needed to implement *Montreal Protocol* consumption limits – the federal government regulates consumption under the *Ozone Depleting Substances Regulations, 1998*. Tradeable permits and allowances have been used to phase out ozone-depleting substances under this regulation and its predecessors. The regulation also restricts imports of recycled ODSs and products containing ODSs; regulates exports of products with ODSs; bans HCFCs in uses where alternatives exist; limits use of HCFCs to replacement of ODSs. As a result of federal regulation new supplies of ozone-depleting substances (ODSs) in Canada fell from a high point of 27.8 kilotonnes in 1987 to approximately 0.9 kilotonnes (composed mostly of HCFCs) in 1998.

The provincial governments are responsible for supplementing these controls with measures to avoid releases of ODSs, and the federal government is responsible for avoiding releases at federal facilities or federally regulated industries. Provincial requirements can include mandatory recovery and recycling of ozone-depleting substances; requirements for proper labelling of equipment containing ODSs and training for equipment service providers; specification of methods to be used to install, remove, repair or service products containing an ODS; and prohibitions on the recharging of leaking equipment. While these efforts are not required by the *Montreal Protocol*, they are important aspects of protecting the atmosphere. Unfortunately, provinces have not all adopted equally effective measures to protect the ozone layer. While all prohibit releases, at the end of 1999 only three jurisdictions had regulations prohibiting recharge of car air conditioners with CFCs, and only three had met a national commitment to control use of hydrofluorocarbons and perfluorocarbons – substitutes for ODSs which have powerful global warming potentials.[94]

[94] Environment Canada, (2000) *Comparison of ODS Regulations in Canada*, http://www.ec.gc.ca/ozone/regs/.



Friends of the Earth ranked provinces as follows in terms of their efforts to protect the ozone layer:

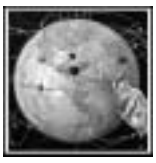
Jurisdiction	Score
Alberta	**D+**
British Columbia	**A+**
Manitoba	**C+**
New Brunswick	**B+**
Newfoundland	**B-**
Nova Scotia	**F**
Ontario	**C-**
Prince Edward Island	**B+**
Quebec	**F**
Saskatchewan	**F**
Federal Government Operations and Federal undertakings	**A+**

NGO INFORMATION

Friends of the Earth Canada: FOE Canada is the main group in Canada that continues to work on ozone protection issues. Recent activities include programs to safely recover and dispose of existing CFC stocks in refrigeration equipment and highlighting inadequacies in provincial regulation of CFCs: http://www.foecanada.org/index.html.

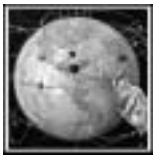
TREATIES FOR PROTECTION FROM SMOG AND ACID RAIN

CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION ("LRTAP")	**Link to the text:**	http://www.unece.org/env/lrtap
	Signed by Canada:	November 13, 1979
	Ratified by Canada:	December 15, 1981
	International Status:	In Force as of March 16, 1983. Ratified by.
	In Force in Canada:	In Force as of March 16, 1983
	Amendments:	None
	Annexes and Protocols:	Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-term Transmission of Air Pollutants in Europe Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30% (see below) Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions (the "Oslo Sulphur Protocol") Protocol to Abate Acidification, Eutrophication and Ground-level Ozone



PROTOCOL TO THE 1979 CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION ON THE REDUCTION OF SULPHUR EMISSIONS OR THEIR TRANSBOUNDARY FLUXES BY AT LEAST 30% (THE "1979 HELSINKI SULPHUR PROTOCOL")	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Helsinki, Finland, 1979
	Signed by Canada:	November 1, 1988
	Ratified By Canada:	January 25, 1991
	International Status:	In Force as of March 16, 1983
	In Force in Canada:	In Force as of March 12, 1986
	Amendments:	None
	Secretariat:	United Nations Economic Convention for Europe: http://www.unece.org/env.htm
PROTOCOL TO THE 1979 CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION CONCERNING THE CONTROL OF EMISSIONS OF NITROGEN OXIDES OR THEIR TRANSBOUNDARY FLUXES (THE "1988 SOFIA NOX PROTOCOL")	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Sofia, Bulgaria, October 31, 1988
	Signed by Canada:	November 1, 1988
	Ratified By Canada:	January 25, 1991
	International Status:	In Force as of February 4, 1991
	In Force in Canada:	In Force April 25, 1991
	Amendments:	None
PROTOCOL TO THE 1979 CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION CONCERNING THE CONTROL OF EMISSIONS OF VOLATILE ORGANIC COMPOUNDS OR THEIR TRANSBOUNDARY FLUXES (THE "1991 GENEVA VOC PROTOCOL")	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Geneva, Switzerland, November 18, 1991
	Signed by Canada:	November 19, 1991
	Ratified By Canada:	Not Ratified
	International Status:	In force on September 29, 1997
	In Force in Canada:	Not in force
	Amendments:	None

PROTOCOL TO THE 1979 CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION ON FURTHER REDUCTION OF SULPHUR EMISSIONS (THE "1994 OSLO SULPHUR REDUCTION PROTOCOL)	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Oslo, Sweden, June 14, 1994
	Signed by Canada:	June 14, 1994
	Ratified By Canada:	July 8, 1997
	International Status:	In force on August 5, 1998
	In Force in Canada:	Not in force
	Amendments:	None
PROTOCOL TO THE 1979 CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION PERSISTENT ORGANIC POLLUTANTS (THE AARHUS PROTOCOL ON PERSISTENT ORGANIC POLLUTANTS)	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Aarhus, Denmark, June 24, 1998
	Signed by Canada:	June 24, 1998
	Ratified By Canada:	December 18, 1998
	International Status:	Not in Force. In force 90 days after ratified by 16 Parties. Signed by 36 Countries. Ratified by 6 as of March 2001.
	In Force in Canada:	Not in force.
	Amendments:	None.
	Note:	The 1998 Aarhus Convention on Persistent Organic Pollutants is discussed in Chapter 7 on Toxics.



PROTOCOL TO THE 1979 CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION ON HEAVY METALS (THE "1998 AARHUS PROTOCOL ON HEAVY METALS")	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Aarhus, Denmark, June 24, 1998
	Signed by Canada:	June 24, 1998
	Ratified By Canada:	December 18, 1998
	International Status:	Not in Force. In force 90 days after ratified by 16 Parties. Signed by 36 Countries, Ratified by 9 as of March 2001.
	In Force in Canada:	Not in force.
	Amendments:	None.
	Note:	The 1998 Aarhus Convention on Heavy Metals is discussed in Chapter 7 on Toxics.
PROTOCOL TO ABATE ACIDIFICATION, EUTROPHICATION AND GROUND-LEVEL OZONE (THE "1999 GOTHENBURG ACIDIFICATION PROTOCOL"	**Link to the text:**	http://www.unece.org/env/lrtap
	Adopted:	Gothenburg, Sweden, November 30, 1999
	Signed by Canada:	December 1, 1999.
	Ratified By Canada:	Not Ratified.
	International Status:	Not in Force; No Ratifications ATP.
	In Force in Canada:	Not in force.
	Amendments:	None.
AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF CANADA ON AIR QUALITY	**Link to the text:**	http://www.epa.gov/airmarkets/usca/agreement.html
	Signed by Canada:	March 13, 1991.
	Ratified By Canada:	Not applicable.
	International Status:	In force March 13, 1991
	In Force in Canada:	In force March 13, 1991.
	Amendments:	Ozone Annex to the 1991 Canada-United States Air Quality Agreement.
	Secretariat:	http://www.ijc.org

OZONE ANNEX TO THE 1991 CANADA-UNITED STATES AIR QUALITY AGREEMENT	**Link to the text:**	http://www.ec.gc.ca/air/annex_e.htm
	Accepted:	October 12, 2000
	Signed by Canada:	December 2000
	International Status:	Ratified by US and in force December 7, 2000
	In Force in Canada:	In force December 7, 2000
	Amendments:	None.

WHAT'S THE PROBLEM?

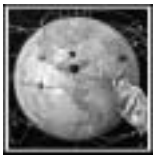
Air pollution has grown, with the scale of human activity, from a local to a regional, and now threatens to become a hemispheric problem. Until the latter part of the twentieth century, although often extreme, air pollution was limited to urban areas. Environmental managers have tried to disperse emissions, building higher smoke stacks that solved the acute problem, but sent plumes of pollution over wide areas. Pollution became regional in scale. Today, half of the smog in the Windsor Quebec corridor originates in the United States, and likewise Americans along the Eastern seaboard will suffer if environmental standards in Ontario, Quebec and the Maritimes are too lax. Air quality in Vancouver has improved, while the areas downwind of Vancouver have deteriorated.

Two aspects of air pollution are dealt with in this chapter: acid rain (or acid precipitation) and smog.

Acid Precipitation

Acid rain, snow and fog is caused by emissions of sulphur oxides (SOx) and nitrogen oxides (NOx). In Canada, SOx originates mainly from metallurgical smelting and coal fired power generation. In Canada, transportation (cars, trucks, trains, etc.) accounts for over 50% of Canada's NOx emissions, power generation contributes 10%, and industrial, commercial, and residential combustion processes combined amount to 30%. These pollutants can travel thousands of kilometres in the atmosphere, where they mix with water vapour to form a mild solution of sulphuric and nitric acid. Rain, snow, hail, fog and other precipitation wash this solution down to earth as acid rain. More than 50% of the acid rain that falls in eastern Canada comes from US sources.

Acid rain can affect virtually anything it contacts – including soil, water, plants and building materials. As lakes become more acidified they support fewer microorganisms with significant impact on fish and fish-eating birds, such as loons. Acid rain both washes away nutrients in forest soils and releases toxic chemicals, such as aluminium, which interferes with the uptake of nutrients. This stunts tree growth and makes trees more vulnerable to disease and pests. These effects are especially severe in Eastern Canada because soils and bedrock are less able to neutralize acid. Acid rain can also accelerate the



corrosion of materials such as limestone, sandstone, marble, brick, concrete and metal, causing serious concerns for older buildings and outdoor sculptures and monuments.

Acid rain's effects are magnified by ultraviolet (UV) radiation, and climate change. For example, because acidity reduces the amount of dissolved organic matter in lake water, acidic lakes are clearer and therefore more vulnerable to the effects of increased UV levels.

Smog

Smog is a soup of carbon monoxide, ground level ozone and fine particulates. Carbon monoxide is a poisonous gas emitted by cars and released by forest fires and open burning. Ground level ozone is formed in the atmosphere from the reaction of sunlight, volatile organic compounds (VOCs) and NOx.

VOC come from a variety of sources, including industry, motor vehicles and areas sources (e.g., gas station refilling, open burning, paints and solvents in households, incomplete combustion in home heaters). Ozone is a powerful irritant that can cause harm to humans even at levels where it is invisible to the eye. Both ozone and fine particulate decrease lung functioning, exacerbate cardio-respiratory diseases, and increase or exacerbate asthma. Ozone decreases the bodies' defenses against infection.

Particulates are fine solids or liquids (but not pure water) that are suspended in the air. Three classes of particulate matter are of particular concern for human health: PM10 (less than ten microns[95] in diameter), fine particulate (less than 2.5 microns (PM 2.5); and ultra fine particulates (less than one micron). Fine and ultra fine particulate are increasingly recognized as primary causes of health problems from air pollution. Fine particulate is directly emitted from fossil fuel combustion, but also forms in the atmosphere from SOx, NOx, VOC and ammonia emissions. The highest concentrations of fine particulate often occur in small communities with industry, e.g., Quesnel, BC, or Shawnigan, Quebec; however, greater Vancouver and the Windsor Quebec corridor have the highest concentrations of PM 2.5.

According to the federal government two thirds of Canadians are exposed to harmful levels of smog, and an estimated 5,000 Canadians die prematurely due to smog – two thousand more deaths than occur due to motor vehicle accidents. Far more are hospitalized, have emergency room visits or have to restrict their activities. The Ontario Medical Association says air pollution costs Ontario citizens more than $1 billion a year in hospital admissions, emergency room visits and absenteeism.

Ozone and particulate also have other adverse effects, reducing crop yields in Southern Ontario and the Fraser Valley, potentially leading to forest die-back, reducing visibility and causing damage to buildings.

Smog moves freely across national boundaries, and in many cases can only be dealt with effectively as a transboundary or international issue. Environment Canada estimates that air pollutants from the US may cause up to half of the ozone in southwestern Ontario and up to 75 percent of the ozone in the Southern Atlantic Region. Pollutants also flow from

[95] A micron is one thousandth of a millimetre, or one millionth of a metre.

Canada into the US. Scientists warn that pollution in China will adversely affect North American air quality in the 21st Century.

MAJOR COMMITMENTS SET OUT IN THE TREATIES

The *Convention on Long-Range Transboundary Air Pollution* (LRTAP) provides a framework through which countries will limit, gradually reduce and eventually prevent air pollution, including long-range transboundary air pollution, by encouraging cooperation and the exchange of information between countries. The protocols to the Convention establish more specific reduction targets. The *US-Canada Air Quality Agreement* contains requirements aimed at acid rain, and its annex relates to ozone creating pollutants.

SOx

Various treaties limit Canada's, or the eastern provinces', sulphur dioxide emissions:

1979 Helsinki Sulphur Protocol

The 1979 *Helsinki Sulphur Protocol* required a nation-wide 30% reduction in emissions from 1980 levels by 1993 (3.25 million tonnes per year).

1991 United States-Canada Air Quality Agreement

The *United States-Canada Air Quality Agreement* sets a nation wide target of 2.3 million tonnes per year limit for Eastern Canada by 2000, a forty percent reduction from 1980 levels. This cap was originally set by federal provincial agreements, but the agreement with the US indefinitely extended the time frame of the federal provincial agreement.

1994 Oslo Sulphur Protocol

The 1994 *Oslo Sulphur Protocol* reiterates the national limit and establishes a Sulphur Oxides Management Area ("SOMA") for the Maritime Provinces and Ontario and Quebec south of James Bay. Emissions in the SOMA are limited to 1.75 million tones per year as of 2000, a 46% reduction from 1980 levels. Emission reduction targets, as deep as 80%, are also set for European Parties

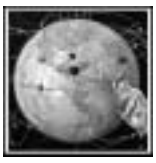
The 1994 *Oslo Sulphur Protocol* also sets long term goals for reductions based on maximum deposition rates ("critical loads") that can be achieved without damaging the environment. Parties are to take measures to increase energy efficiency and the use of renewable energy; and to limit sulphur content in fuels going "as far as possible and without entailing excessive costs."

By 2004, the Oslo Sulphur Protocol obligates European Parties to adopt specific control standards for industrial emissions. Canada is exempted from these requirements.

Smog

1999 Gothenburg Acidification Protocol

The Protocol is aimed primarily at SOx, NOx, VOCs and ammonia emissions in Europe. Strict ceilings are set for European countries but not Canada or the US. These ceilings were negotiated on the basis of scientific assessments of pollution effects and abatement



options. Parties whose emissions have a more severe environmental or health impact and whose emissions are relatively cheap to reduce will have to make the biggest cuts. Once the Protocol is fully implemented, Europe's sulphur emissions should be cut by at least 63%, its NOx emissions by 41%, its VOC emissions by 40% and its ammonia emissions by 17% compared to 1990. These reductions are required by 2010.

The Protocol also sets tight standards for specific types of plants, processes and products, but these are not applicable to the US or Canada. Standards are set for Canada and the US, but they are based on current standards in force at the time the Protocol was agreed to. Because the agreement does not create any new obligations for Canada it is not referred to below.

1988 Sofia NOx Protocol

This protocol requires Parties to, as a first step, to freeze emissions of nitrogen oxides or their transboundary fluxes at 1987 levels. 19 of 25 Parties have achieved this level, and an overall 9% reduction has been achieved by all parties.

Parties are also required to determine critical loads (i.e. ambient levels below which damage to the environment does not occur), estimate reductions in emissions needed to achieve such critical loads and develop timetables for implementing measures to achieve the reductions.

1991 United States-Canada Air Quality Agreement

As with Acid Rain, a number of agreements commit Canada to curbing its smog causing emissions. The 1991 *United States-Canada Air Quality Agreement* commits Canada to achieve by 2000 a reduction of annual national emissions of nitrogen oxides from stationary sources by 100,000 tonnes below the year 2000 forecast level of 970,000 tonnes, and to apply national emission standards to new vehicles and major new stationary sources based on the best available technologies which are economically feasible. Parties are also required to introduce pollution control measures for major existing stationary sources.

1991 Geneva VOC Protocol (Not ratified by Canada)

The Geneva Protocol required either:

- a 30% nation wide reduction in emissions of VOCs by 1999. Reductions are measured from a base year between 1984 and 1990.

- a 30% reduction by 1999 within a Tropospheric Ozone Management Area (TOMA) specified in an annex to the Protocol. Reductions are measured from a base year between 1984 and 1990. National emissions must not exceed 1988 levels. (The Lower Fraser Valley and the Windsor-Quebec Corridor are specified as Tropospheric Ozone Management Areas for Canada, as is a 1988 base year); or

- if emissions in 1988 were below specified levels, stabilization at that level of emission by 1999.

2000 Ozone Annex

The December 2000 Ozone Annex commits both Canada and the United States to control and reduce emissions of Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) over major regions in Eastern North America. The commitments only apply to a specified Pollution Emission Management Area (PEMA). In Canada, this includes central and southern Ontario and southern Quebec. In the US, the PEMA includes 18 states and the District of Columbia.

The Annex's overall goal is to achieve ambient ozone objectives - the Canada Wide Standard (CWS) in Canada and the National Ambient Air Quality Standards in the US) in the long term. By coordinating actions in the US and Canada the agreement ensures that both countries benefit from each other's action. The Annex generally confirms a number of previously made commitments, for instance, development of a comprehensive plan to meet the previously agreed Canada Wide Standard for ozone and particulate, implementing emission reduction regulations aligned with US regulations for motor vehicles, small engines, diesel engines and fuel standards.

In addition, annual caps of 39 kilotons of NOx emissions from fossil fuel power plants in central and southern Ontario and five kilotons of NOx in southern Quebec are to be reached by 2007. The various measures are expected to reduce NOx emissions from 1990 levels 39% by 2007 and 44% by 2010 and annual VOC emissions from 1990 levels by 18% in 2007 and 20% in 2010. Given that national NOx emissions have been stable or grown slightly since 1980 levels, this is a significant improvement. These caps require significant adjustments in emissions and energy generation in the PEMA. For example, to help meet the cap, agreement has been reached in the Ontario government that the provincially owned Lakeview generating plant, the oldest fossil fuel plant in Ontario, will be taken off coal and converted to natural gas by the year 2005. Other coal burning facilities in the Ontario PEMA area will likely have to undergo some similar changes. There has been considerable debate as to how effective these measures will be in achieving reductions as discussions and plans are still in flux. In Quebec, it is questionable how reductions will be achieved as, unlike Ontario's coal burning facilities, there is no obvious target for reductions.[96]

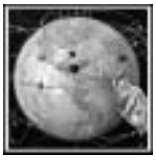
The US is required to implement *Clean Air Act* provisions that would lead to an estimated reduction in summertime NOx emissions in the US transboundary region by about 35 percent in 2007.

The Parties agree to assess in 2004 progress in implementing the obligations in the Annex and agree to discuss, at the request of either Party, the possibility of amending the Annex to designate additional emission management areas.

CANADIAN EFFORTS TO REDUCE SMOG AND ACID RAIN

What is Being Done?

In the last thirty years, Canada has made progress in reducing the most acute smog levels and most acute concentrations of acid rain. However, the geographic extent of smog has



[96] Personal Communication with Mark Winfield, Pembina Institute, August 8, 2001

extended and average ozone concentrations are generally higher, acid rain remains a problem, and new understandings show that smog levels need to be reduced to much lower levels to protect human health.

Acid Rain

To meet commitments under the 1985 Helsinki Sulphur Protocol, the federal government signed agreements with various provincial governments from 1985 to 1987, setting emission caps for the various provinces. Further reductions were required under the Canada-US Air Quality Agreement. The provinces met these primarily through regulation of power plants and smelters. Canada achieved a 50% reduction in SO_2 emissions from 1980 levels by 2000, well ahead of the 2000 limit.

However, Canada has more work to achieve the goals of the 1994 Oslo Sulphur Protocol. A study of 152 lakes in south eastern Canada indicates that only 41% are less acidic today than they were 20 years ago, 50% have not changed, and 9% are more acidic. Combined with other stresses such as dry summers due to climate change, possible disruption of reproductive capacity due to persistent organic pollutants, numbers of loons successfully reproducing in eastern Canadian Lakes has declined. A 1997 federal government report recommends further SO_2 emission reductions of up to 75% from current commitments in targeted regions of eastern Canada and the United States is needed to prevent critical loads for acidic deposition from being exceeded across eastern Canada.

In 1998, federal and provincial/territorial Ministers of Energy and Environment agreed to a Canada-wide Acid Rain Strategy for Post-2000. The Strategy calls for a number of actions, including: pursuing further emission reduction commitments from the US, and establishing new SO_2 emission reduction targets in Ontario, Quebec, New Brunswick and Nova Scotia. So far, three of the four provinces have stated new targets. Ontario has committed to a 50% reduction in SO_2 by the year 2015, Quebec has committed to a 40% reduction by 2002 and a 50% reduction by 2010, and New Brunswick has committed to a 30% reduction by 2005 and a 50% reduction by 2010. Nova Scotia is expected to announce their SO2 targets before the end of the year 2001.

Smog[97]

In 1990, the Canadian Council of Ministers of Environment adopted the 1990 NOx/VOC Management Plan. The 1990 Plan set out national air quality objective for ozone (82 parts per billion (ppb)) and outlined the first of three phases aimed at "fully resolving ground-level ozone problems in Canada by the year 2005." To achieve this goal would require reductions of at least 50% and even deeper cuts are required to fully protect human life. However, Phase 1 of the Plan was only expected to offset the impact of growth. Subsequent phases were to be implemented through federal provincial agreements that set out interim targets for reductions in NOx and VOC emissions for 1995 and 2005. Subsequent phases would also set up the responsibilities and commitments of the different jurisdictions.

---

[97] This section is based largely on *Smog: Our Health at Risk*, Canadian Commissioner of the Environment and Sustainable Development, (2000), chapter 4.

Although some negotiations took place, no subsequent agreements were made. Nor were there any agreements on monitoring or review of commitments. In the absence of signed agreements, the federal and provincial governments never defined specific responsibilities or commitments or what would occur if jurisdictions failed to act. No mechanism was established by which to assess progress toward the ultimate goal.

Progress that was sporadic at best. In many cases, regulatory initiatives were discussed but never implemented. For instance, the federal government and the Canadian Council of Ministers of the Environment developed national Codes of Practice or Guidelines that were to form the basis of regulations or voluntary commitments. However, there was no formal mechanism were put in place to determine whether the guidelines are followed and reductions achieved. In at least one case, it appears that codes of practice were never implemented in any location in any jurisdiction.[98]

The Greater Vancouver Regional District published an Air Quality Management Plan in 1994 and Ontario announced a plan in 1998. The GVRD plan was not clearly linked to the highest priority pollutants, and has suffered from tardy implementation of many of the measures included in it. By the mid-1990's, the 1990 NOx/VOC Management Plan and the targets set by it were largely ignored.

Nonetheless, vehicle emission standards, better industrial smoke stack controls and removal of lead in gasoline have all helped improve or maintain air quality in the last twenty years. Average concentrations of NOx in Canadian urban areas have decreased by 26 percent between 1989 and 1996, and VOC has not increased. Trends in SO_2 and CO showed a marked decrease between 1974 and 1992, but since then reductions have slowed. There appears to have been some improvements in fine particulate levels in the last decade, but data is sketchy and concentration may be increasing in some areas. In some areas smog is a growing problem.

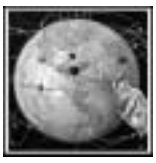
Environment Canada expects that air quality in general will continue to deteriorate and emissions of key pollutants to rise after 2010 unless governments, industry and individual Canadians make a concerted effort to reduce smog. Moreover, scientists have learned that ozone at concentrations much lower than the current national objective causes adverse health effects.

In the latter half of the 1990s government reacted to growing scientific recognition of the health impacts of fine particulate and smog.

On May 27, 2000 the federal government proposed that PM10 be declared toxic under the *Canadian Environmental Protection Act*. This declaration reflects a finding that fine particulate are causing harm to human health, and gives the federal government the ability to regulate in areas where it would not otherwise have jurisdiction.[99] Emission

[98] Environmental Code of Practice for Vapour Recovery During Vehicle Refueling at Service Stations and Other Gasoline Dispensing Stations (Stage 2). Note that delay in implementing the Code resulted in it being cost ineffective to implement.

[99] Notice Concerning the Assessment of the Priority Substance Respirable Particulate Matter Less than or Equal to 10 Microns Under the Canadian Environmental Protection Act. C. Gaz. 1999. I. 1345. (Department of Environment, Department of Health).



reduction strategies with timetables will be developed by key industrial sectors to meet targeted emission levels.

In the mid 1990s, BC and the federal government insisted on vehicle manufacturers extending the American National Low-Emissions Vehicle program to Canada. In 2000, the federal government committed to harmonizing Canada's vehicle standards with US regulatory standards that come into force in 2004. BC introduced standards for sulphur in gasoline in 1996, and the federal government subsequently introduced more stringent standards for sulphur in gasoline and diesel starting in 2005 and 2006 respectively (preceded by interim standards). These will have an immediate effect on air quality.[100]

In June 2000, the Government of Canada, the provinces and the territories, except Quebec, adopted new Canada-Wide Standards (CWS) for PM and Ozone. These standards set ambient air quality concentration targets for ground-level ozone and fine particulate matter for the year 2010. Environment Canada is working with provinces and territories to develop comprehensive emission reduction strategies for a number of major industrial sectors in Canada. Other measures focusing largely on existing commercial and industrial sources are being undertaken by provinces and territories to ensure that the new PM and ozone standards will be met by 2010. Since the adoption of the CWS there has been a list of "Joint Initial Actions" released, these actions are mostly commitments to develop new strategies and do not specify any deadlines for implementation. The lack of clear responsibilities to take necessary actions, and lack of consequences for failing to take action, could lead to difficulty achieving ambient targets for ozone and PM.

In 2002, Ontario commenced an emission trading program to reduce emissions from industry in Ontario. The program is described as being designed to meet the NOx cap agreed to under the Ozone Annex. Although emissions trading programs combined with legal limits on emissions can be a cost effective way of achieving very significant reductions, the Ontario Plan has been criticized by the US Environmental Protection Agency and Canadian federal officials as being loophole ridden and incapable of achieving the required reductions.

It remains to be seen whether the new Canada-Wide Standards process will prove more effective at obtaining co-operation among the various levels of government and achieving results. To be effective the new process will need to establish clear accountability for results. Plans need to be assessed for their likely effectiveness, and their implementation and effectiveness closely monitored. The federal government will need to act if Provinces fail to act.

---

[100] Regulations under CEPA include: The federal Sulphur in Gasoline Regulations (SOR/99-236) limit sulphur in gasoline to an average of 30 ppm with a maximum of 80 ppm. It is to be implemented in 2 phases, by 2002 a limit of 150 ppm and by 2005 a limit of 30ppm. The Government has also announced its intention to further reduce sulphur in diesel to 15 ppm by 2006 in line with similar requirements for diesel sold in the United States.

BC Cleaner Gas Regulations under the Waste Management Act enacted in 1996 require that there be no gasoline for sale in BC with a sulphur concentration greater than 0.025%, by January 1998 no gas for sale in Vancouver Island and the Lower Fraser Valley with a concentration greater than 0.015% sulphur, and by 2000, no gas for sale with a concentration greater than 0.02% sulphur in all areas except Vancouver Island and the Lower Fraser Valley.

NGO Information

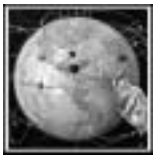
Many NGOs are active in issues to do with smog and acid rain. The most active groups include:

Toronto Environmental Alliance (TEA). http://www.torontoenvironment.org. TEA was established in Toronto to generate an activist perspective and voice on local environmental issues. Their ultimate objective is of a greener Toronto. The Alliance has six major campaigns, including the campaign on smog and climate change. TEA works with all levels of government to find ways improve air quality. They have a number of programs and focus areas, including the reduction of vehicle emissions, limiting of urban sprawl, promotion of the use of green energy and municipal smog plans.

Ontario Clean Air Alliance. http://www.cleanair.web.net/. The OCAA is a diverse, multi-stakeholder coalition of 78 organizations. Members include cities, health associations, environmental and public interest groups, public utilities, faith communities and individuals. The OCAA calls for new air pollution limits for the electricity sector that will reduce emissions from coal-fired power plants and facilitate a move to cleaner choices for electricity generation, such as natural gas and renewables.

Pollution Probe. http://www.pollutionprobe.org/. Pollution Probe is dedicated to addressing environmental problems through research, education and advocacy. In terms of smog and acid rain control, they promote stricter smog control, accurate and timely reporting of emissions, reduction of acid gas emissions, improvement of public transit and other alternative transportation and fuels.

West Coast Environmental Law Association (WCELA). www.wcel.org. WCELA is actively involved with air pollution issues, including means of reducing emissions from motor vehicles, greenhouse gases, emissions trading.



CHAPTER 6 – CONSERVATION OF ECOSYSTEMS AND BIOLOGICAL DIVERSITY TREATIES

Biological diversity, or biodiversity, means the whole spectrum of life on earth. It includes species diversity, genetic diversity and ecosystem diversity. The *Convention on Biological Diversity* defines biodiversity as: "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems". Biodiversity is in crisis: species extinctions have reached unprecedented rates. The chapter describes MEAs related to protection of biological diversity and is divided into three sections:

The first part discusses the comprehensive biodiversity treaty- the *Convention on Biological Diversity*.

The second part discusses treaties related to protection of specific groups or individual species of flora or fauna such as straddling stocks of fish or polar bears. It starts with a discussion of the *Convention on International Trade in Endangered Species of Wild Flora and Fauna* (CITES).

Finally, the last part discusses treaties related to key habitats and ecosystems, such as forests, deserts, polar regions, wetlands and oceans.

WHAT'S THE PROBLEM?

The protection of nature, whether represented by individual species of concern, such as whales, or by ecosystems in need of conservation, such as migratory bird habitat, is a critical challenge for international environmental law. The pace of species extinction and endangerment has accelerated, and the cause is human activities. The world's largest international conservation organization estimates that one in four mammal species and one in eight species of birds are facing a high risk of extinction in the near future, in almost all cases as a result of human activities.[101]

[101] IUCN – The World Conservation Union, 2000 IUCN Red List of Threatened Species. See the IUCN web site at http://www.iucn.org/redlist/2000/.

The reasons for concern about biodiversity loss range from the inherent value of species and ecosystems to the economic and other uses of biological resources, from food to medicines.

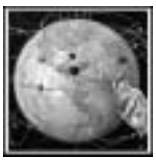
Protecting biodiversity is essential to maintaining nature's services, the conditions and processes through which natural ecosystems and species sustain and fulfill human life. Nature's services include not only the production of ecosystem goods such as seafood, plants, timber, fibre, pharmaceuticals, and industrial products but also essential life-support functions such as cleansing, recycling and renewal.[102] Freshwater purification, clean air, flood control, soil stability, pollination, climate regulation, and food security are "free" services provided by nature that are essential for human survival. Perhaps due to a failure to communicate this critical role to people, biodiversity is not a high political priority for most governments or the international community.

Symptoms of biodiversity stress include species declining to critical population levels; destruction, degradation and fragmentation of key habitats; and destabilization of ecosystems through climate change, pollution, invasive species, and direct human impacts.

Biodiversity protection is governed by a growing number of treaties. Prior to the 1992 comprehensive *Convention on Biological Diversity*, global treaties attempted to address the extinction crisis by:

- regulating a particular activity threatening the survival of some species such as trade in endangered species, through the *Convention on International Trade in Endangered Species* (CITES); or
- protecting a particular type of habitat, such as wetland habitats of birds, through the *Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat*; or
- protecting a particular type of species, such as migratory species, through the *Bonn Convention on the Conservation of Migratory Species of Wild Animals*; or
- protecting an individual species, such as polar bears, seals or whales.

[102] Gretchen Daily, "What are Ecosystem Services?" in Dailey, ed. *Nature's Services – Societal Dependence on Natural Ecosystems* (Washington, DC: Island Press) 1997.



BIODIVERSITY: THE CONVENTION ON BIOLOGICAL DIVERSITY AND THE BIOSAFETY (CARTAGENA) PROTOCOL

CONVENTION ON BIOLOGICAL DIVERSITY	**Link to the text:**	http://www.biodiv.org/doc/legal/cbd-en.pdf
	Signed by Canada:	June 11, 1992.
	Ratified by Canada:	December 4, 1992.
	International Status:	In force December 29, 1993.
	In Force in Canada:	In force December 29, 1993
	Amendments:	None
	Guides:	Sustaining Life on Earth: How the Convention on Biological Diversity Promotes Nature and Human Well-being http://www.biodiv.org/doc/publications/guide.asp. CBD Handbook http://www.biodiv.org/handbook/.
	Biodiversity Secretariat:	http://www.biodiv.org/ The secretariat is located in Montreal, Canada.
	Implementing Legislation in Canada:	There is no specific implementing legislation. Canada prepared a Canadian Biodiversity Strategy in 1995.
	Canada's Biodiversity Convention Office:	http://www.bco.ec.gc.ca/
BIOSAFETY PROTOCOL ("CARTEGENA PROTOCOL")	**Link to the text:**	http://www.biodiv.org/biosafety/
	Signed by Canada:	April 19, 2001.
	Ratified by Canada:	Not yet ratified.
	International Status::	Will come into force 90days after the deposit of the 50th instrument of ratification.
	In Force in Canada:	Not in force in Canada.

The *Convention on Biological Diversity* (CBD) or *Biodiversity Convention* is the international legal response to the world's diminishing biodiversity. It originated when the IUCN, the

world's largest conservation organization made up of both governments and NGOs, launched the World Conservation Strategy in 1980. UNEP took the lead in convening an expert legal group in 1987 to convert the Strategy into a treaty. Negotiation of the Convention started in 1991 and was swiftly accomplished, meeting UNEP's goal of producing a final draft in time for the 1992 *Rio Earth Summit*. Originally conceived as an umbrella convention which would consolidate the existing wildlife and habitat treaties, when this proved politically impossible, the CBD ended up focussing on national strategies for biodiversity.

From its inception, the CBD was not limited to conservation alone. The developing world used its position as the storehouse of much of the world's biological resources as a bargaining chip to obtain key provisions like the promise of financial and technological transfers, recognition of the indigenous role in biodiversity protection, regulation of biotechnology, and most importantly, access and benefit-sharing provisions.

One of the central obligations the treaty imposes on Parties is to develop national biodiversity strategies, plans or programs and to integrate "as far as possible and as appropriate" the conservation and sustainable use of biodiversity into sectoral and cross-sectoral plans, programs and policies. The CBD affirms that conservation of biodiversity is a 'common concern of humankind', weaker language than 'common heritage of mankind', but strong enough to justify international rules for a topic historically solely within national jurisdiction.

The *Convention* has three interdependent objectives:

1. conservation of biodiversity,

2. sustainable use of biological resources, and

3. equitable sharing of benefits derived from the use of biological resources.

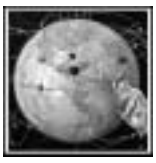
CONSERVATION

The CBD breaks its definition of 'conservation' into two parts:

Ex-situ conservation" means the conservation of components of biological diversity outside their natural habitats.

"In-situ conservation" means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.

The *Convention* takes a holistic approach, and requires conservation of genes, species and ecosystems. Conservation of species in their native habitat (in-situ) is given priority, but species outside their native habitat (ex-situ) in zoos, gene banks, museums and research institutions is also required. Protection of habitat (the place or type of site where an organism or population naturally occurs) is recognized as an essential precondition of biodiversity protection, and Parties are required to designate a full range of protected areas.



Article 3 affirms the sovereign right of states to exploit their own resources subject to the responsibility not to cause damage to the environment of other states. This right must be read together with the duty to conserve biodiversity within each state's jurisdiction.

Conservation obligations include obligations to regulate or manage biological resources important for the conservation of biological diversity; rehabilitate and restore degraded ecosystems; and endeavour to provide the conditions needed for compatibility between present uses and the conservation and sustainable use of biodiversity. Parties must "develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations." Conservation also includes addressing threats to biodiversity such as exotic and alien species – international guidelines have been developed and a Protocol may one day be developed as well.

SUSTAINABLE USE

The second CBD objective is the sustainable use of the components of biodiversity, defined as the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. The components of biodiversity are "biological resources" defined as ' genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity' or in other words, those parts of biodiversity with economic value.

Commitments regarding sustainable use include:

- integrating consideration of the conservation and sustainable use of biological resources in national decisions making ;
- adopting measures relating to the use of biological resources to avoid or minimize adverse impacts on biodiversity;
- supporting local populations taking remedial actions; and
- providing "economically and socially sound" incentive measures for the use of biological resources.

Though sustainable use can be a way to conserve biological diversity, the sustainable use obligations are separate from the conservation obligations.

ACCESS TO GENETIC RESOURCES AND SHARING OF BENEFITS

Before the CBD, a system of free access to biological resources prevailed, in contrast to highly controlled national systems of access to other resources such as minerals and timber. The CBD changed this system, through its provisions on access and benefit-sharing, and seeks

> "fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate

transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding".

The CBD recognizes a party's sovereign rights over its genetic resources, authorizing Parties to limit access to these resources. If access is granted, Parties must provide access according to principles of prior informed consent, and on 'mutually agreed terms'.

Any benefits derived from access to another Party's genetic resources, including financial compensation, samples of the resources collected, training of national researchers, transfer of biotechnologies and knowledge, or a share in the profits from the use of the resources are to be shared in a fair and equitable way.

The CBD established an Expert Panel and later an Ad Hoc Open-Ended Working Group on access and benefit- sharing and in 2002, COP VI of the CBD adopted the Bonn Guidelines on access to genetic resources and the fair and equitable sharing of the benefits arising from their utilization.

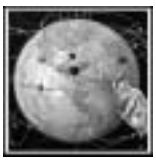
Since the CBD was adopted, over forty countries have adopted legislation regarding access to genetic resources.

INDIGENOUS PEOPLES AND BIODIVERSITY

Indigenous peoples often possess valuable knowledge regarding uses for animals and particularly plants, as medicines and as food sources. Prior to the CBD, intellectual property laws did not protect this knowledge. Tensions grew between 'bio-prospectors' who relied on local and indigenous knowledge to locate new commercially valuable and patentable uses for species, and those who believed this prospecting should more properly be called 'biopiracy' as it involves the illegal use of genetic resources or information. One of the purposes of the CBD was to attempt to resolve these tensions, and though no final resolution has been achieved, the treaty has raised awareness about the issues. A number of international bodies are now involved in looking at the protection and application of traditional knowledge, in addition to the CBD's working group on Art. 8(j), including the World Intellectual Property Organization (WIPO), the UN Food and Agriculture Organization (FAO), the Trade Related Intellectual Property Rights Agreement (TRIPS -one of the WTO Agreements), the UN Forum on Forests, the UN Commission on Human Rights Working Group on Indigenous Populations, and the UN Conference on Trade and Development (UNCTAD).

Article 8(j) of the Convention requires governments to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices. Prior informed consent of knowledge-holders must be attained before others can use their knowledge.

Article 10 of the Convention requires countries to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements; and support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced.



Canada took a lead role in convening and supporting the working group on Article 8(j), and continues to work on developing international consensus on this issue.

CBD IMPLEMENTATION AND ENFORCEMENT

The CBD establishes a Conference of the Parties, a financial mechanism to promote compliance and enforcement (the Global Environment Facility), a Secretariat located in Montreal, and a scientific advisory body, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) which meets regularly to assess the state of biodiversity and review scientific research. Other advisory groups that have been formed under the CBD include the Open-Ended Working Group on Article 8(j) on the protection of indigenous knowledge related to biodiversity, and a Panel of Experts on access and benefit sharing.

Enforcement mechanisms available under the *Biodiversity Convention* include the usual seldom used standard MEA provisions: a graduated procedure of negotiation, mediation, arbitration and finally submission of disputes to the International Court of Justice. No state-to-state disputes have yet arisen under the CBD.

No trade remedies are available under this treaty, though they are available under its subsidiary *Biosafety Protocol*.

However, the *Convention* contains a system of implementation review centred on the national reports submitted to the Conference of the Parties. The format of the report is a long multiple-choice questionnaire, and these national reports are available on the CBD web site: http://www.biodiv.org/world/reports.asp.

The *Convention* sets no explicit international targets and schedules. To enhance developing country participation in the Convention, developed country Parties are required to share knowledge, transfer technology, and provide additional financial resources, but these provisions have not yet been fully implemented.

ASSESSMENT OF THE CBD

The CBD has not been a complete success to date. Comments that it has achieved little of substance, and has some way to go in finding its role illustrate its stature in the world of MEAs.[103] Its lack of impact has been attributed to many causes: minimal political commitment to the treaty; a mandate that is too overwhelming, too vague and overlaps with too many other treaties; a tendency for CBD meetings to generate mountains of text rather than concrete actions; a switching of focus from year to year with little follow-up; "recycling" decisions already taken in other fora; and failure to prioritize the key actions required for global biodiversity protection. As the CBD does not list key ecosystems or species in need of protection as originally planned due to concerns of encroachment on national sovereignty, its effectiveness was limited from the start.

---

[103] See Chris Wold, *The Futility, Utility and Future of the Biodiversity Convention* vol. 9 [1998] Colo. J. Int'l Envt'l L. & Policy, and Joy Hyvarinen, *The Convention on Biological Diversity: Future Issues* (UK: RSPB) 2001.

The most recent COP agreed to expand work on forest biodiversity; continue with the preparation of guidelines on access and benefit sharing; and adopt a strategic plan to guide its work until 2010. It also made recommendations on incorporating biodiversity concerns more fully into environmental impact assessments.

Prescriptions to strengthen the CBD include dividing its tasks into more manageable segments; limiting its agenda and programme of work; and focussing attention on specific tasks such as, for example, generating principles for conservation and sustainable use which could be adapted regionally.

The adoption of the *Biosafety Protocol* is recognized as one of the key achievements of the CBD. The development of other Protocols could be a way for the CBD to achieve a greater impact on conservation of biological diversity.

CANADA AND THE BIODIVERSITY TREATY: INTERNATIONAL LEADERSHIP AND DOMESTIC IMPLEMENTATION.

Canada is a strong proponent of international action to conserve ecosystems and biodiversity, particularly in relation to certain individual treaties significant to Canada, such as those on polar bears and the Arctic regime.

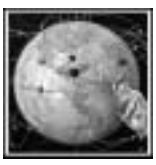
Domestically, implementation of the CBD, the key biodiversity MEA, has been mixed. Canadian support for the *Biodiversity Convention* started off strong in 1992. When US President George Bush announced that the US would not sign the Convention, Prime Minister Brian Mulroney helped to prevent a landslide of countries withdrawing support by making a speech demonstrating Canada's unequivocal support of the Convention.[104]

Fulfillment of all the CBD's requirements has stalled at home, though the government continues to support international biodiversity work by:

- hosting the CBD Secretariat in Montreal;
- providing extra financial support for the Secretariat, for biosafety and implementation meetings; and
- leading work on the protection of indigenous knowledge related to biodiversity.

The federal government has already fulfilled one of the key obligations of the Convention by preparing a national biodiversity conservation strategy, completed in 1995, available on the Biodiversity Convention Office web site: http://www.bco.ec.gc.ca/. The strategy describes actions required to prevent destruction of Canada's biodiversity. However, public interest environmental law groups from across the country criticized the strategy

[104] E. May, "Chapter 15: Conservation of Biological Diversity and the Convention on Biodiversity" *Canada and Agenda 21* (Winnipeg: IISD, Project de société, 1995); online: The International Institute for Sustainable Development <http://iisd.ca/worldsd/canada/project/c15.htm>.



on the basis that it did not address law reforms needed to implement the goals of the Convention.[105]

One prominent legal gap for many years was the failure to pass a federal endangered species law, though this major gap was finally filled late in 2002. The number of species on the national species at risk list has jumped from 231 to 380 since 1992.[106] The *Species At Risk Act* has been criticized because of its weak habitat protection provisions, its limited application to federal land and its failure to adequately protect species that migrate across international boundaries. However, since it is very recent, its effectiveness has yet to be demonstrated.

The federal government has also not completed Canada's network of national parks as it had pledged to do by 2000. Funding for establishing new parks dropped by 25% in 2000. But Canada's park agencies have added over 24 million hectares to the various systems of protected areas since 1992, an area approximately the size of the UK.[107] And the province of BC has placed approximately 11.4% (10.77 million hectares) of its land area under some form of protected area status as of 1999.

In 1998, the Commissioner for Sustainable Development's annual report to Parliament noted the need for a federal implementation plan as a tool to achieve national goals set out in the national Biodiversity Strategy. However, since 1998, the implementation plan has stalled. The Commissioner stated in his 2000 annual audit report to Parliament that implementation is slower than projected and deadlines have been missed.

The biodiversity implementation plan involves three federal departments: Agriculture and Agri-Food Canada, Natural Resources Canada, and Environment Canada, coordinated by the Biodiversity Convention Office (BCO). Four federal reports on implementation of the Strategy have been produced to date.[108]

Problems with the four individual plans include: lack of time frames, resource allocation, expected results or performance indicators; failure to set priorities; minimal involvement from other government agencies and non-governmental organizations; few links to overall departmental operations such as sustainable development strategies; and failure to address issues such as indigenous participation, biosafety, and international cooperation.

The federal Biodiversity Convention Office prepares national reports to the COP and implementation of Canada's biodiversity commitments can be gauged by the information

---

[105] *A Legal and Policy Response to Draft Canadian Biodiversity Strategy*, Canadian Institute of Environmental Law and Policy on behalf of six environmental organizations, September 1994.

[106] Figures from Committee on the Status of Endangered Wildlife in Canada, COSEWIC, online at "Status and Trends in Species at Risk": http://www.speciesatrisk.gc.ca/species/search/default_e.cfm.

[107] *Canada's National Report to the WSSD*, (Ottawa: Stratos), 2001.

[108] *Learning About Biodiversity: A First Look at the Theory and Practice of Biodiversity Education, Awareness and Training in Canada*, Environment Canada; *Conserving Wildlife Diversity: Implementing the Canadian Biodiversity Strategy* Environment Canada; *Biodiversity In Agriculture*: Agriculture and Agri-Food Canada; and *Biodiversity In the Forest:* Canadian Forest Service, Natural Resources Canada. All reports are available on the BCO website at http://www.bco.ec.gc.ca.

provided by these reports. The second report submitted in 2001 notes that although protection of biodiversity of Canada's inland waters, marine and coastal areas, agricultural land, and forests are all high priorities, the resources available to meet the CBD obligations within Canada are a limiting factor.

PROTOCOL ON BIOSAFETY

The CBD has been further developed by the adoption of the *Protocol on Biosafety* in 2000. The Protocol requires parties to control the use, transfer and release of living modified organisms to avoid negative impacts on biodiversity.[109] The Protocol, negotiated during the years 1996 to 2000, has not yet entered into force as of 2002. The agricultural export industries, particularly seed companies, and the world's major grain-exporting states led by Canada had a major influence on this Protocol.

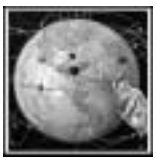
The Protocol establishes an advance informed agreement (AIA) procedure to ensure that countries are provided with the information necessary to make informed decisions before agreeing to the import of living modified organisms (LMOs) into their territory. Under the Protocol, governments will signal whether or not they are willing to accept imports of commodities that include LMOs by communicating their decisions through an internet-based Biosafety Clearing House Mechanism. A stricter advance informed agreement procedure will apply to seeds, live fish, and other LMOs that are to be transported across national borders and intentionally introduced into the environment. In these cases, the exporter must provide detailed information to each importing country in advance of the first shipment, and the importer must then authorize the shipment.

This *Protocol* is discussed in more detail in chapter 8 on trade and the environment.

TREATIES RELATED TO FAUNA

In addition to the major comprehensive biodiversity treaty described above, there are a myriad of other treaties related to fauna, flora, single species, and ecosystem protection. Biodiversity treaties make up the greatest share of all MEAs. Outlined below are some of the major treaties in each of these fields, emphasizing those of most interest to Canada.

[109] See *Biosafety Protocol* home page, www.biodiv.org/biosafety; the Canadian Biodiversity Convention Office *Biosafety Protocol* website at http://www.bco.gov.ca/biosafety. For a NGO analysis of the Protocol, see M. Swenarchuk, *The Biosafety Protocol* (Toronto, CELA), 1999.



THE CONVENTION ON THE INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES)

CONVENTION ON THE INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES)	**Link to the text:**	http://www.cites.org/eng/disc/text.shtml
	Signed by Canada:	March 3, 1973
	Ratified by Canada:	April 10, 1975
	International Status:	In force July 1, 1975
	In Force in Canada:	In force July 1, 1975
	Amendments:	Amendment to the Convention (art. XI) Date in Force in Canada: 04/13/87 Amendment to the Convention (art. XXI)
	Protocols:	None
	CITES Secretariat:	http://www.cites.org/
	CITES office in Canada:	Environment Canada coordinates the issuance of export/import permits and enforcement with Customs and RCMP.
	Implementing legislation in Canada:	*Wild Animal and Plant Protection and Regulation of International and Inter-provincial Trade Act*
	Guide:	CITES Handbook, not available on line, but by order through the CITES web site.

The international wildlife trade, worth billions of dollars annually, has caused significant declines in the numbers of many species of animals and plants. Smuggling and poaching of elephant tusks, tiger bones, bear gall bladders, rhino horns, sturgeon eggs, parrots, orchids and other species is lucrative. The scale of over-exploitation of some species involved in this trade aroused such concern for their survival that an international treaty was drawn up in 1973: the *Convention on International Trade in Endangered Species* (CITES). CITES establishes a world-wide system of controls on international trade in threatened wildlife and wildlife products by stipulating that government permits are required for this trade. It applies to live and dead specimens, as well as their parts and derivations.

CITES provides for three levels of protection depending on the pressure on the wildlife species, set out in three lists or Appendices. The most endangered species are listed in

Appendix I and include all species threatened with extinction which are or may be affected by trade. Close to 700 species are on this Appendix, including rhinos, tigers, sea turtles and great apes. All whales covered by the IWC whaling moratorium are listed as Appendix I species. Trade in these species is almost entirely prohibited. Any transaction involving an Appendix I listed species requires an export permit from the country of origin and an import permit from the recipient country, which will be granted only if the species in question will not be used primarily for commercial purposes, and the purpose of importing is not detrimental to its survival.

Other species at serious risk are listed in Appendix II, those species which could be threatened with extinction unless trade is strictly regulated. Limited commercial trade in these species is allowed. No import permit is required, though the country of origin must still issue export permits. This Appendix numbers over 25,000 species and includes all parrots, cats, crocodilians, orchids and cacti not listed in Appendix I. Examples of Canadian species on Appendix II are the polar bear, narwhal, lynx, bobcat, cougar, river otter and burrowing owl.

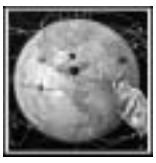
Appendix III protects "all species which any party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other parties in the control of trade." This Appendix is for native species threatened in their native country. Canada has listed the walrus as an Appendix III species. As with Appendix II, export permits are required if a species or specimen leaves the country.

Exemptions to CITES controls are allowed for:

- specimens in transit or being transhipped;
- specimens that were acquired before CITES provisions applied to them (known as pre-Convention specimens);
- specimens that are personal or household effects;
- animals that were bred in captivity
- plants that were artificially propagated
- specimens that are destined for scientific research; and
- animals or plants forming part of a travelling collection or exhibition, such as a circus.

Altogether, the appendices list over 30,000 species of animals and plants. These Appendices are incorporated directly into the Canadian implementing legislation through regulations. Most export permits in Canada are for black bears, a species listed for "look-alike" reasons, as other bear species are at risk.

Decisions on listing, de-listing, and changing species from one Appendix to another are made at the Conference of the Parties. Listing decisions are made by a two-thirds majority vote of the Parties. Political listing decisions can be highly visible in the public eye and in the media. One well known example was the 1989 ban on trade in ivory influenced by



Kenya's unilateral action. A Kenyan domestic ban was announced with great fanfare at a press conference where Kenyan president Daniel Arap Moi started a huge bonfire of stockpiled ivory at a football stadium. The ban has since been partially lifted.[110] Other high profile CITES species disputes have been over whales and seals. Canada successfully opposed listing of the hooded seal in 1985, and has defended aboriginal interests in the sustainable use of seals and other species.

NGOs have played a key role in monitoring illegal wildlife traffic throughout the life of the treaty. CITES provides for NGO participation in ongoing research, monitoring, and collection of information.

The UNEP World Conservation Monitoring Centre was established in 2000 as UNEP's key biodiversity information and assessment centre, and also plays a key role in CITES.

CITES Implementation and Enforcement

The CITES Secretariat, located in Geneva, Switzerland, oversees implementation of CITES. The Secretariat organizes meetings of the Conference of the Parties held every two and a half years to discuss implementation issues and review and amend the three Appendices.

The Convention requires Parties to designate a Management and Scientific Authority to administer the export/import system and submit reports on enforcement to the CITES Secretariat. The requirement to report permit statistics has improved treaty enforcement. Discrepancies between import and export statistics for the same species from different countries have helped uncover illegal trade practices.[111] Enforcement of CITES is heavily dependent on customs officers around the world who intercept illegal wildlife products at the border.

To enforce the treaty, Parties may refuse to issue import permits to or accept export permits from Parties that have not taken positive steps to develop legislation that meets the requirements for implementing CITES. For example, if Parties do not submit annual reports detailing controlled wildlife trade in their country for three consecutive years, other Parties may suspend trade in specimens of CITES-listed species with the non-compliant states. In 2002, the Secretariat notified Parties not to authorize any trade in specimens of CITES-listed species with Afghanistan, Bangladesh, Djibouti, Dominica, Liberia, Rwanda, Somalia and Vanuatu, until further notice due to these countries' failure to submit national reports.

Compliance receives an increasing amount of attention from the Parties, who have allocated more resources to training programs and regional enforcement networks. An Infractions Report listing CITES violations published at each Conference of the Parties promotes increased compliance.

---

[110] For a full discussion of the history of this issue, see David Harland, *Killing Game- International Law and the African Elephant* (Westport, Conn,: Praeger), 1994.

[111] C. Embree, *Multilateral Environmental Treaties, Conventions and Agreements: Implementation and Compliance in Canada*, (Toronto: York University), 1990.

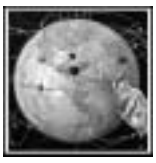
The success of the treaty depends on the adequacy of domestic legislation to implement the treaty and the extent of enforcement in individual states. Without effective implementing legislation, CITES will not work. Yet, only a quarter of the Parties have adopted the minimum legislation to implement CITES. To address the problem of inadequate domestic legislation, in 1992 the Parties undertook a National Legislation Project to identify Parties with inadequate domestic legislation. In 2000, this strategy was changed to focus on supporting the Parties in developing legislation rather than critically reviewing existing laws.

Assessment of CITES

As the number of endangered species continues to rise, and the traffic in endangered species persists, CITES cannot be acclaimed as a total success, though it is generally recognized as one of the more effective MEAs. An assessment of the most recent meeting listed the achievements of a hard-won compromise on trade in African Elephant products, the detailed examination of persistent illegal trade in tiger products, greater engagement with resource security issues such as bush meat and medicinal plant trade balanced by two major disappointments: "the complete lack of progress in clarifying the niche of CITES in addressing unsustainable trade from marine fisheries; and the failure of the Parties to match their ever more ambitious conservation goals under the Convention with a significant increase in their commitment of financial resources to the CITES budget."[112] Additional administrative problems included late submission and poor quality of national reports and the practice of exceeding export quotas, problems that seriously undermine the effectiveness of the Convention.

CITES' narrow focus on trade in endangered species is both a blessing and a failure. Controlling the threat to species posed by trade is a concrete achievement but as the treaty has no provisions for habitat protection, and places no restrictions on harvest of endangered species, the chief threats to species around the world, its reach is limited.

[112] "The 11th Meeting of the Conference of the Parties to CITES", Traffic Bulletin vol. 18 No. 3, December 2000.



CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS	**Link to the text:**	http://www.wcmc.org.uk/cms/
	Signed by Canada:	Not signed by Canada
	Ratified by Canada:	Not ratified by Canada
	International Status:	In force.
	In Force in Canada:	Not in force in Canada
	Amendments:	None
	CMS Secretariat:	http://www.wcmc.org.uk/cms/
	Implementing Legislation in Canada:	None
	Guide to Convention:	http://www.wcmc.org.uk/cms/pdf/CMS_Guide_Jan02_en.pdf

The *Convention on the Conservation of Migratory Species of Wild Animals* (also known as CMS or the Bonn Convention) aims to conserve terrestrial, marine and avian migratory species throughout their range. It entered into force in 1983 and has 80 Parties as of 2002.

Like CITES, it operates through Appendices listing species at risk. Appendix 1 lists migratory species in danger of extinction throughout all or part of their range and requires Parties to adopt strict conservation measures, including prohibiting taking of these species and conserving and restoring their critical habitats. There are about 85 species on this list. Examples include the Siberian crane and hawksbill turtle.

Appendix II lists migratory species with an unfavourable conservation status or which would benefit significantly from international cooperation. This Appendix of the CMS has fostered eleven independent regional treaties concerned with the conservation of seals in the Wadden Sea, small cetaceans of the Baltic and North Seas, cetaceans in the Mediterranean and Black seas, European bats, African Eurasian migratory waterbirds, Siberian Cranes, Slender-billed curlew, marine turtles, great Bustard in central Europe and Southern hemisphere albatrosses and petrels.

FISHERIES

Global marine fish production has increased six fold since 1950. Almost 70 percent of the world's major fisheries are fully fished or overfished, and fishing fleets have the capacity to catch many more fish than the maximum sustainable yield.[113]

Consistent with the troubling trends in most of the world, an increasing proportion of fish stocks have been exploited beyond maximum sustainable yield levels in the North Atlantic and the North Pacific.[114] The collapse of the northern cod fishery and the fishing moratorium on certain species imposed by the federal government in 1992 devastated Newfoundland and Labrador.

Fisheries management raises a host of environmental and sustainability issues, such as overfishing and species endangerment, the ability of fishing technology to exceed the productive capacity of the seas, bycatch of non-target species of fish, birds and marine mammals, and contamination of fish through bioaccumulation of POPs.

The international legal regime for fisheries has improved (at least on paper) since the comprehensive *UN Convention on the Law of the Sea* (UNCLOS) was concluded in 1982 and the *UN Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks* clarified its part on fisheries in 2001. UNCLOS consolidated the international rules related to the seas and all their uses. UNCLOS came into force in 1994.

Control over fisheries has traditionally rested with the coastal state, up to legally defined limits. Traditionally, a state's territorial sea extended three nautical miles. Gradually this limit was extended. UNCLOS confirmed that all states have complete coastal control within the 12-mile territorial sea limit. UNCLOS also provides that coastal states have the sovereign right to exploit, conserve and manage the natural resources of their waters within the 200 nautical mile exclusive economic zone (EEZ) limit. Once fish move outside the EEZ, the coastal state no longer has the jurisdiction to regulate.

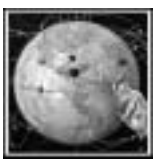
Fisheries in the high seas, beyond the limits of any nation's jurisdiction, are available to whoever captures them. UNCLOS codified freedom of the high seas, which includes freedom of fishing, subject to the obligation to conserve the marine environment. Yet conservation measures imposed by a coastal state are of little value if the stock is overfished once it leaves that state's jurisdictional control. Treaties on fisheries must balance the rights of coastal states and 'distant water' fishing states (those with no fisheries resources of their own but with fishing fleets) who rely on high seas fisheries, and the necessity of fish conservation and biodiversity preservation.

Fisheries treaties are numerous. Canada is a Party to the following treaties, among others:

- *Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries*, the treaty that created the Northwest Atlantic Fisheries Organization (NAFO);

[113] *World Resources Report 2000-2001– People and Ecosystems: The Fraying Web of Life* (Washington: WRI) 2001.

[114] FAO, *The State of the World's Fisheries and Aquaculture*, (Rome: FAO) 2000.



- *Convention for the Conservation of Salmon in the North Atlantic Ocean*;
- *International Convention for the Conservation of Atlantic Tunas*;
- *Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean*;
- *UN Fish Agreement* (UNFA), the common name for the *UN Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks*, discussed below, and
- many bilateral treaties, such as the *Pacific Salmon Treaty* and the *Great Lakes Fisheries Convention*, both between Canada and the US.

Regional fisheries treaties usually set catch limits (often called 'Total Allowable Catch' or TAC) which are then allocated between the states who are members of the regional fisheries organizations. These treaties may also impose other restrictions on fishing particular species, such as size limits, closed and open seasons, net size or type or other technological regulations.

Other soft law statements have been developed for fisheries such as the UN Food and Agriculture (FAO)'s *Code of Conduct for Responsible Fisheries*, and *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*.

THE UN FISH AGREEMENT (UNFA)

UN FISH AGREEMENT (UNFA) – THE UNITED NATIONS AGREEMENT FOR THE IMPLEMENTATION OF THE PROVISIONS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA OF 10 DECEMBER 1982 RELATING TO THE CONSERVATION AND MANAGEMENT OF STRADDLING FISH STOCKS AND HIGHLY MIGRATORY FISH STOCKS

Link to the text:	http://www.un.org/Depts/los/convention_agreements/texts/fish_stocks_agreement/CONF164_37.htm
Signed by Canada:	August 3, 1999
Ratified by Canada:	August 3, 1999
International Status:	In force, December 11, 2001
In Force in Canada:	In force, December 11, 2001
Amendments:	None
UNFA Secretariat:	UN Division of Ocean Affairs and the Law of the Sea http://www.un.org/Depts/los/index.htm

Implementing Legislation in Canada: *Coastal Fisheries Protection Act*

The goal of the *UN Convention on Straddling Stocks and Highly Migratory Stocks* also known as the UN Fish Agreement (UNFA) is to establish a management system for migratory fish stocks and stocks whose range "straddles" different jurisdictions. Many fish migrate long distances and spend part of their life on the high seas and part inside a country's territorial sea limits. The Convention provides a framework for the conservation and management of these fish stocks in high seas areas regulated by regional fisheries organizations. The treaty incorporates the precautionary approach and the ecosystem approach for fisheries management on the high seas, and obligates states to minimize pollution, waste and discards of fish. It also includes monitoring and inspection provisions, under which one Party can inspect vessels of other Parties, to verify compliance with internationally agreed fishing rules. This is an important exception to the flag state's almost exclusive jurisdiction on the high seas.

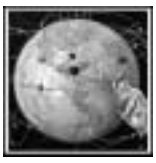
UNFA is meant to ensure that actions taken outside the limits of a state's territorial sea do not jeopardize conservation rules applied inside the limit. Article 7 provides that Parties must ensure that conservation measures are compatible throughout the species' entire range.

The treaty applies to the high seas but some crucial sections on principles, the precautionary approach and compatibility of conservation measures apply equally to areas within national territorial sea limits.

UNFA also tries to beef up enforcement by extending the range of actions that a state can take against a fishing vessel where its flag state has refused to act.

This agreement was negotiated to fill in the gaps left by UNCLOS on fisheries, as the Convention's full name reflects. Many parts of UNFA strengthen and elaborate on the more general fisheries obligations in UNCLOS. Significant differences introduced by UNFA include:

- Incorporation of the precautionary approach;
- Compatibility of conservation measures throughout the full range of fish; and
- Enhanced enforcement cooperation.



Curbing Overfishing: Canada, NAFO and the Straddling Stocks Convention

Bordering three oceans, with the longest coastline in the world and a history and culture bound with fishing, Canada has a strong stake in prudent fisheries management. International cooperation and regulation are essential pieces of fisheries management, and Canada has played a leading role in the development of fish and oceans treaties. Yet even the most concerted diplomatic efforts resulting in the adoption of a new treaty have not solved the problem of overfishing outside the Canadian territorial sea limits on the Continental Shelf off Newfoundland and Labrador.

When the world's ocean charter, UNCLOS, was developed, the subject of fisheries was covered only in general terms as the resource appeared abundant, and seemingly inexhaustible. Overfishing and overcapacity were left out of UNCLOS and migratory fish were covered in general terms. (UNCLOS' gaps in regulating high seas and straddling stocks fisheries in fact were one major reason for Canada's refusal to ratify UNCLOS).

And UNCLOS may have contributed to overfishing. By extending EEZs to 200 miles, non-coastal states flocked to the high seas in greater numbers. Straddling stocks, or fish whose habitat straddles one or more EEZs and the high seas, suffered. Problems with international fisheries laws were identified in Agenda 21 and UNCED called for a conference to address these problems. Negotiations on this unfinished chapter of UNCLOS were underway when the 'turbot wars' arose between Canada and Spain in 1995.

Overfishing had reached crisis proportions off George's Bank and the Grand Banks in the mid-1990s. These areas of the North Atlantic around Newfoundland had been a rich fishing ground for thousands of years, and had been fished by Spain, Portugal and other distant water fishing fleets in addition to Canada. Illegal capture threatened turbot to the point where a repeat of the cod fishery collapse seemed imminent. Canada was determined to show the world it would not stand by idly while overfishing occurred. This resolve was demonstrated when Canadian inspectors attempted to examine the catch of a Spanish trawler, the *Estai*, suspected of catching too many or the wrong kind of fish. The dramatic capture of this trawler involved the fleeing Spanish ship cutting its nets loose, gunshots fired across the bow of the ship, and the eventual arrest of the ship's captain and detention of the ship in a Newfoundland harbour, leading to a diplomatic uproar between Canada, Spain and the EU. The EU vehemently denied that Spain had committed any wrongdoing, labelling Canada's actions acts of piracy. But when the net that had been cut from the *Estai* was captured and put on display outside the negotiations for UNFA at the UN in New York, the evidence was clear. The net had a smaller mesh size than permitted, allowing smaller fish to be captured, and was also equipped with a liner, making escape of even smaller fish impossible.

The turbot wars occurred despite the existence of a regional fisheries treaty which included conservation obligations and a regional organization which set quotas and enforcement rules. All the fishing nations active in the Grand Banks participate in the Northwest Atlantic Fisheries Organization (NAFO). But NAFO, headquartered in Nova Scotia and financially supported by Canada, has not been able to solve overfishing in the region. A 2002 House of Commons Standing Committee on Fisheries and Oceans Report called NAFO "ineffective". The treaty has been plagued by weak implementation and minimal enforcement. Though NAFO's Fisheries Commission decides catch levels and quotas for each species for each Party by scientific methods, because any member State can file an "Objection" to its quota it is free to set its share higher. No state can be bound by decisions it has objected to; thus the existence of the objection

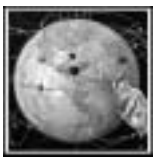
procedure. EU states routinely object to their national allocations, and then ignore even the quotas they allocate to themselves by overfishing.

UNFA was likely strengthened by this dispute between Canada and Spain and its publicization at the UNFA negotiations. Canada's determined pursuit of better international fisheries laws was a key factor in the adoption of UNFA. In addition to filling UNCLOS's holes relating to overfishing, another of Canada's objectives for UNFA was to reverse NAFO's failures, particularly the objection procedure, weak inspection provisions and slow scientific management decisions. Will UNFA solve the problem? As the new treaty came into force only in late 2001, time will tell. Initial signs are not encouraging. As late as 2002, NAFO approved a turbot quota that was 6,000 tonnes higher than its own Scientific Council had recommended.

The EU has still not ratified UNFA, and so Canada is powerless to take legal action against the chief culprits in the overfishing crisis off the coast of Newfoundland and Labrador. Though the required number of 30 states have ratified UNFA and brought it into force, only 5 out of the 18 member states of NAFO are in this group (Canada, the US, Iceland, Norway and Russia). And as UNFA leaves enforcement action up to the flag state (the nationality of the fishing boat committing the violation), full enforcement of the new international rules seems far away. The recent case of the Russian factory freezer trawler *Olga* demonstrates the problem. Though convicted in Newfoundland court in 2001 of pollution offences, the fishing violations that were also detected and reported at that time remain unpunished, as Russia has not taken any enforcement action. However, changes requiring the use of on board observers and vessels to be equipped with a satellite tracking device are steps in the right direction.

Canada's options are limited. It can continue to make diplomatic protests. Unilateral extension of its EEZ to cover the critical areas of the Continental Shelf would fly in the face of all its efforts to secure international agreement on 200 mile EEZs. The House of Commons Standing Committee on Fisheries and Oceans recommended a middle ground: custodial management, under which Canada would bypass NAFO and establish and enforce a management system for the area under dispute. This would entail significantly higher costs, but have more chance of achieving UNFA's goal of consistent and comprehensive conservation of fish, no matter where in the ocean they are located.

A new regional fish treaty signed by Canada has been adopted since UNFA but is not yet in force: the 2000 *Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean*. The objective of the Convention is to ensure the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the UNCLOS and UNFA.



WHALES

THE INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING

INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING	**Link to the text:**	http://ourworld.compuserve.com/homepages/iwcoffice/Convention.htm
	Signed by Canada:	December 2, 1946
	Ratified by Canada:	February 25, 1949
	International Status:	In force
	In Force in Canada:	No longer in force. Canada withdrew from this convention but still participates in its scientific advisory committee.
	Amendments:	None
	International Whaling Commission Secretariat:	http://www.iwcoffice.org
	Implementing Legislation in Canada:	*Fisheries Act*, Marine Mammal Regulations.

The traditional occupation of whaling dates back as far as 4,000 years but remained unregulated due to freedom of the high seas until the 20th century. The need for an international agreement became apparent when these highly migratory marine mammals became threatened by technological developments allowing excessive catches. In 1946, the *International Convention for the Regulation of Whaling* (ICRW) was adopted, administered by the new organization created by the treaty, the International Whaling Commission (IWC). The ICRW allocated harvesting quotas to whaling nations to allow whale consumption to continue while maintaining viable populations. The treaty applies to "all waters in which whaling is prosecuted by such factory ships, land stations and whale catchers." The Schedule to the Convention sets out regulations for each whale species, and is amended by the IWC during its annual meetings.

The regulation of whaling has changed since the ICRW was first adopted and the IWC now acts as the chief regulator of the prohibition on whaling agreed to by IWC members in 1982. The IWC accomplished the ban by establishing a catch limit of zero for all commercial whaling. Whaling still occurs under provisions allowing scientific research and aboriginal subsistence. Catch limits for aboriginal subsistence whaling are relatively small: in 2000, the catch limits for bowhead whales, Eastern North Pacific grey whales,

West Greenland fin whales, West and East Greenland minke whales totalled about 300.[115] The IWC examines the legitimacy of scientific research permits, as there have been allegations that some nations, such as Japan, use these permits as a ruse to continue commercial whaling.

The ICRW allowed any state to sign on as a Party, expecting that only countries with whaling industries would participate. However, many non-whaling states are members and wield considerable influence over the proceedings. Nations that favour resumption of commercial whaling have turned to the North Atlantic Marine Mammals Commission as an alternative to the IWC. The NAMMCO Agreement, which was signed in 1992 by Norway, Iceland, Greenland and the Faroe Islands, provides a mechanism for cooperation on conservation and management for all species of cetaceans (whales and dolphins) and pinnipeds (seals and walruses) in the region.[116]

POLAR BEARS

THE AGREEMENT ON THE CONSERVATION OF POLAR BEARS

AGREEMENT ON THE CONSERVATION OF POLAR BEARS	**Link to the text:**	http://sedac.ciesin.org/entri/register/reg-073.rrr.html
	Signed by Canada:	November 15, 1973
	Ratified by Canada:	December 14, 1974
	International Status:	In force May 26, 1976
	In Force in Canada:	In force May 26, 1976
	Amendments:	None
	Secretariat:	None
	Implementing Legislation in Canada: None	

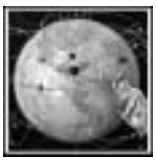
Over half of the world's approximately 22,000 and 27,000 polar bears are found in Canada, with the reminder divided between Russia, Greenland, the United States and Norway.[117]

---

[115] 52nd Annual Meeting of the International Whaling Commission, July 2000, at IWC web site.

[116] NAMMCO's web site is at http://www.nammco.no/Default.htm.

[117] *Making International and Environmental Agreements Work: the Canadian Arctic Experience*, 1999 report of the Commissioner of the Environment and Sustainable Development, Chapter 6, Exhibit 6.3 – Polar Bear Facts.



The *Agreement on the Conservation of Polar Bears and Their Habitats* was signed in 1973, during the height of the cold war tension, by Canada, the United States, Denmark, Norway and the former Union of Soviet Socialist Republics. The Agreement prohibits hunting and killing of polar bears, except for cases of bona-fide scientific purposes, conservation purposes, preventing serious disturbances of the management of other living resources, and by indigenous people using traditional methods of hunting. Two of the signatory states, Norway and Russia, have completely banned polar bear hunting, while the remaining states allow limited aboriginal hunts. In practice, very few polar bears are hunted even with these exceptions. Aircraft and large motorized vehicles may not be used for the taking of polar bears.

Parties are required to take appropriate action to "protect the eco-system of which polar bears are a part, with special attention to habitat component such as denning and feeding sites and migration patterns." In general, polar bear populations across the Arctic are stable. However, additional threats to polar bears have arisen in recent years, aside from hunting. Climate change, industrial and tourism development, and pollution all cause stress for polar bears. The Agreement covers none of these subjects.

The Parties occasionally meet, but each state generally has achieved the objectives of the agreement using its own domestic laws, policies and programs. Though it lacks a secretariat, an enforcement mechanism, and annual meetings and gives wide freedom to the five signatory states to set their own polar bear management regimes, the Agreement is generally considered to be very successful.[118]

Caribou. Caribou are an important Arctic species. In 1987, an agreement between Canada and the United States on the conservation of one segment of the caribou population, the Porcupine caribou herd, was concluded. The purpose of this agreement is to facilitate cooperation and coordination among wildlife management agencies, users of the herd and other land-users and landowners in the herd's range. The parties commit to conserving the herd and its habitat. This agreement establishes an international management body, the International Porcupine Caribou Board which has the power to make recommendations only. The stability of this agreement is currently an issue, due to renewed calls for oil and gas development in the Arctic National Wildlife Refuge, home of this caribou herd.

Seals. A treaty between Canada, the US and other parties governed sealing, but that treaty is no longer in force. The 1911 *Convention on the Preservation and Protection of Fur Seals*, was not extended in 1984 due to refusal from the United States. Seals are also protected in the Antarctic pursuant to the *Convention for the Conservation of Antarctic Seals*, 1972.

Dolphins. The international laws to protect dolphins are the laws which regulate the capture of yellowfin tuna, since these tuna are known to swim beneath schools of dolphin in the eastern tropical Pacific Ocean. The tuna fishing industry developed the practice of capturing the visible school of dolphins to catch the tuna underneath, a lethal practice for dolphins who could not escape the nets. The International Commission for the

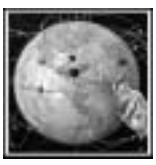
[118] Simon Lyster: *International Wildlife Law* (Cambridge, 1985), 55. Cited in Donald Rothwell, *The Polar Regions and the Development of International Law*, (Cambridge: Cambridge University Press), 1996 at 216.

Conservation of Atlantic Tunas regulates tuna fishing pursuant to the *International Convention for the Conservation of Atlantic Tunas*. A protracted series of US public interest lawsuits to enforce its *Marine Mammal Protection Act*, coupled with trade disputes under GATT related to the trade-neutrality of the US law resulted in an international soft law agreement to better conserve dolphins through 'dolphin-friendly' fishing methods: the 1995 Declaration of Panama. Canada has not signed this Convention but has adhered to it pursuant to article XIV of the Convention.[119]

Sea Turtles. A regional agreement to conserve sea turtles was signed in 1996, but is not yet in force. The *Inter-American Convention for the Protection and Conservation of Sea Turtles* sets standards for the conservation of endangered sea turtles and their habitats. It requires ratification from 8 American states, defined as " the States of North, Central and South America and the Caribbean Sea, as well as other States that have continental or insular territories in this region." It applies to the land territory in the Americas of each of the Parties, as well as the maritime areas of the Atlantic Ocean, the Caribbean Sea and the Pacific Ocean, with respect to which each of the Parties exercises sovereignty, sovereign rights or jurisdiction over living marine resources in accordance with international law, as reflected in the United Nations Convention on the Law of the Sea.[120]

[119] Hunter, Salzman et al *International Environmental Law and Policy*, (NY: Foundation Press, 1998) 1026-1035 has a full description of the events leading up to this Declaration.

[120] For more information see http://www.seaturtle.org/iac/intro.shtml.



THE CONVENTION FOR THE PROTECTION OF MIGRATORY BIRDS IN THE US AND CANADA

CONVENTION FOR THE PROTECTION OF MIGRATORY BIRDS IN THE US AND CANADA

Link to the text: http://sedac.ciesin.org/entri/texts/protection.of.birds.1950.html

Signed by Canada: August 8, 1916

Ratified by Canada: December 16, 1916

International Status: In force December 7, 1916

In Force in Canada: December 16, 1916

Amendments: Protocol December 14, 1995

Canada's Migratory Birds Convention Office: Canadian Wildlife Service, Environment Canada; http://www1.ec.gc.ca/ncws/mbirds.html

Implementing Legislation in Canada: *Migratory Birds Convention Act 1994*

The *Migratory Birds Convention* was signed in 1916 between Britain, on behalf of Canada, and the United States, to protect migratory birds through all parts of their life cycle. The Convention requires Parties to protect migratory birds such as ducks and geese, their eggs, nests and habitat, by establishing hunting seasons, closed seasons and prohibiting hunting of some non-game migratory species. Permits to 'take' (i.e., kill) these species may be issued. To fulfil its obligations under this Convention, Canada designated 99 migratory bird sanctuaries in regulations under its domestic implementing law, on federal and provincial Crown land and even on private property in some cases. These sanctuaries proved inadequate to fully protect these areas of bird habitat. The *Canada Wildlife Act* was passed in 1960, establishing National Wildlife Areas, which also provide habitat for migratory birds. Of the 45 Areas established, 90% of the total land area is located on Bathurst Island, NWT.[121]

A Protocol amending and supplementing this early Convention was signed by the two countries in 1995 and came into force in 2000. The Protocol clarifies some parts of the Convention, such as aboriginal rights to take migratory birds.

[121] C. Embree, *Multilateral Environmental Treaties, Conventions and Agreement: Implementation and Compliance in Canada*, (Toronto: York University), 1990.

AGRICULTURAL BIOLOGICAL DIVERSITY

According to the UN Food and Agriculture Organization (FAO), the international Conventions and codes of conduct on biodiversity relevant to food and agriculture are the *Biodiversity Convention*, the *Code of Conduct for Plant Germplasm Collecting and Transfer*, the *Code of Conduct on Responsible Fisheries*, and two plant protection treaties, the *International Treaty on Plant Genetic Resources for Food and Agriculture* and the *International Plant Protection Convention*, described below.

Though experts estimate that 10 000 species have been used for human food and agriculture, only about 150 plant species make up the diets of the majority of the world's population. Of these, just 12 species provide over 70 percent of food, while four — rice, maize, wheat and potatoes — make up over 50 per cent of the food supply. Most of the world's plant genetic diversity is found in the tropical and subtropical regions. In spite of their vital importance for human survival, genetic resources are being lost at an alarming rate due to the lack of incentives to continue developing and conserving them. A new treaty attempts to ensure better use of plant genetic diversity for food security and biodiversity protection.[122]

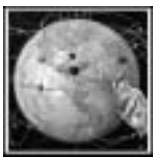
THE INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE	**Link to the text:**	ftp://ext-ftp.fao.org/waicent/pub/cgrfa8/iu/ITPGRe.pdf
	Signed by Canada:	June 6, 2002
	Ratified by Canada:	June 6, 2002
	International Status:	Not yet in force, requires 40 ratifications.
	In Force in Canada:	Not yet in force
	Amendments:	None
	IPCC Secretariat:	The FAO Commission on Genetic Resources for Food and Agriculture will act as the Interim Committee for the Treaty until the treaty comes into force. http://www.fao.org/ag/cgrfa/.

Canada's Plant Genetic Resources Office: Agriculture Canada

Implementing Legislation in Canada: *Plant Breeders' Rights Act*

[122] This information is adapted from the FAO web site on the treaty: http://www.fao.org/ag/cgrfa/itpgr.htm.



The *International Treaty on Plant Genetic Resources for Food and Agriculture*, finalized in Rome in 2001 recognizes the distinct characteristics and problems of agro-biodiversity. It revises the FAO's 1983 *International Undertaking on Plant Genetic Resources* so it conforms with the three themes of the *Biodiversity Convention*: conservation, sustainable use and sharing of benefits.

The new treaty is intended to conserve and sustainably use the genetic diversity of plant genetic resources for food and agriculture (PGRFA) for the benefit of all nations. The treaty establishes a Multilateral System of Access and Benefit Sharing, which will apply to an initial list of about 40 food crops and about 40 forages, established on the basis of interdependence and food security. Benefit sharing provisions include capacity-building, the transfer of technology and the payment of an equitable share of the monetary and other benefits of commercialisation of products incorporating material accessed from the Multilateral System.

The issue of 'farmers' rights' was prominent during the treaty negotiations. Maintaining existing farmers' traditional crop varieties is essential for protection of plant genetic resources. The treaty recognizes the contribution that local and indigenous communities and farmers make and encourages national governments to safeguard and promote farmers' rights. through:

- the protection of relevant traditional knowledge,
- equitable participation in sharing benefits derived from the use of plant genetic resources for food and agriculture,
- participation in national decision-making related to their conservation and sustainable use.

The *International Treaty on Plant Genetic Resources* also facilitates access to PGRFA in national collections for research, breeding and education. The provisions of the Treaty apply only to PGRFA, not to the genetic resources of any other sector.

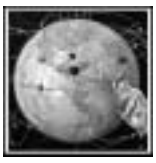
THE INTERNATIONAL PLANT PROTECTION CONVENTION

INTERNATIONAL PLANT PROTECTION CONVENTION	**Link to the text:**	http://www.ippc.int/servlet/BinaryDownloaderServlet?filename=/publications/13742.New_Revised_Text_of_the_International_Plant_Protection_Convention.2001-3-26.pdf&refID=13742
	Signed by Canada:	December 6, 1951
	Ratified by Canada:	July 10, 1953
	International Status:	In force March 4, 1952
	In Force in Canada:	In force July 10, 1953
	Amendments:	None
	IPCC Secretariat:	The IPPC Secretariat is located in FAO's International Phytosanitary Portal (IPP) at http://www.ippc.int/IPP/En/default.htm
	Canada's IPPC Office:	Agriculture Canada
	Implementing Legislation in Canada:	*Plant Protection Act*

The *International Plant Protection Convention* (IPPC) was developed to prevent the spread of pests and diseases of plants and plant products across national boundaries. It requires Parties to put in place measures to prevent the introduction and spread of these pests and diseases, both domestically and by means of controls over exports and imports. Actions to be taken include inspecting areas under cultivation and consignments of plants in international traffic for the existence or outbreak of plant pests or diseases. The UN Food and Agriculture Organization (FAO) administer the Convention. The IPPC is also important for trade as it is recognized by the World Trade Organization in the *Agreement on the Application of Sanitary and Phytosanitary Measures (the WTO-SPS Agreement)* as the source for international standards for the phytosanitary measures (ISPMs) affecting trade.

ECOSYSTEM AND SITE PROTECTION

Both the *World Heritage Convention* and the *Ramsar Convention* address protection of sites within a state's boundaries for the common interest of the world. These treaties are discussed next, followed by a description of the two regional environmental legal regimes which govern the Arctic and Antarctic. Then, the section reviews MEAs which address



protection of specific ecosystems, such as tropical forests, deserts, oceans, and rivers and lakes.

WETLANDS TREATIES (RAMSAR)

WETLANDS: THE RAMSAR CONVENTION

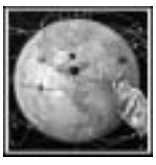
CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE (RAMSAR)	**Link to the text:**	http://www.ramsar.org/key_conv_e.htm
	Signed by Canada:	February 2, 1971
	Acceded to by Canada:	January 15, 1981
	International Status:	In force December 21, 1975
	In Force in Canada:	In force May 15, 1981
	Amendments:	Protocol to amend the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Date in Force in Canada: 10/01/1986 Regina amendments. Date in Force in Canada: 05/01/1994
	Ramsar Secretariat:	http://www.ramsar.org/
	Canada's Ramsar Office:	Canadian Wildlife Service, Environment Canada, http://www.cws-scf.ec.gc.ca/birds/lb_ot_e.cfm.
	Implementing Legislation in Canada:	the federal implementing laws, the Canada Wildlife Act and the Migratory Birds Convention Act and numerous provincial and municipal laws govern Ramsar sites in Canada.

Often the most productive lands for agriculture, wetlands historically have been undervalued and have been drained, filled, dammed and destroyed throughout the world. The ***Convention on Wetlands of International Importance especially as Waterfowl Habitat,* also known as the *Ramsar Convention,* was** signed in Ramsar, Iran, in 1971. The purpose of this treaty is to prevent wetlands loss, and to encourage countries to recognize the full range of economic, cultural, scientific and recreational wetland values. Wetlands are defined by the treaty as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

The *Ramsar Convention* requires Parties to designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance. The responsible Party in whose jurisdiction the site is located must nominate sites. There are presently 130 Contracting Parties to this treaty, with 1109 sites designated on the List of Wetlands of International Importance with a total surface area of 87,254,670 hectares.

The treaty requires Parties to promote the conservation of the wetlands included in the List, and as far as possible promote the wise use of wetlands in their territory. The term "wise use" has been further defined in *Guidelines for the Implementation of the Wise Use Concept*. Other legal obligations are to implement planning to promote the conservation of listed sites.

As Canada has the longest coastline of any nation in the world, wetlands are an important part of its natural heritage. In Canada, there are 36 designated Ramsar sites. Management plans as recommended by the treaty are in place for 28 of the 36 sites. The federal and provincial governments have agreed on national procedures for designating Ramsar sites, and have published a procedures booklet, *Strategy Overview and Recommendations for Expansion of the National Program*.



HERITAGE: THE CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE	**Link to the text:**	http://www.unesco.org/whc/nwhc/pages/doc/main.htm
	Signed by Canada:	November 23, 1972
	Acceded to by Canada:	July 23, 1976
	International Status:	In force December 17, 1975
	In Force in Canada:	In force October, 23, 1976
	Amendments:	None
	World Heritage Secretariat:	http://www.unesco.org/whc
	Canada's World Heritage Office:	Parks Canada, Department of Canadian Heritage
	Implementing Legislation in Canada:	Natural sites designated under the *World Heritage Convention* are protected in Canada under the *Canada National Parks Act*. No specific additional implementing legislation has been adopted.
	Operational Guidelines for the Implementation of the World Heritage Convention:	http://www.unesco.org/whc/opgulist.htm

The United Nations Educational, Scientific and Cultural Organization (UNESCO) adopted the *Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention)* in 1972. The *World Heritage Convention* establishes a system of collective protection for cultural and natural heritage of outstanding universal value. "Natural heritage" includes natural features, geological formations and areas that constitute the habitat of threatened species and natural sites, of universal, aesthetic, scientific or conservation value.

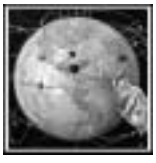
Under this treaty, Parties designate cultural and natural heritage sites within their territories and agree to take measures for their protection, preservation and presentation.

The treaty establishes a World Heritage Committee as a decision-making body; a World Heritage List of Sites designated under the Convention and a World Heritage Fund financed by the Parties, which grants financial assistance for heritage protection.

The *Convention* defines the kind of natural or cultural sites which can be considered for inscription on the *World Heritage List*, and sets out the duties of Parties in identifying potential sites and their role in protecting and preserving them. As with the *Ramsar Convention*, sites must be nominated by the Party in whose jurisdiction the site is located in order to be eligible for inclusion on the list. A site in Ethiopia, for example, must be nominated by Ethiopia. By signing the *Convention*, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. Parties are encouraged to integrate the protection of the cultural and natural heritage into regional planning programmes and adopt measures which give this heritage a function in the day-to-day life of the community.

Threatened World Heritage Sites may be put on the Danger List by a decision of the World Heritage Committee if there is a case of 'urgent need'. Threats may arise from war, natural disasters, ecological deterioration or proposed industrial or resource extraction activities. After inscription on the Danger List, these Sites become eligible for emergency assistance and conservation action. Sites may be listed without the support of the host country. Everglades National Park was placed on the Danger List without support of the US. There are currently 33 Sites on this List, including five national parks in the Democratic Republic of the Congo, and both the Everglades and Yellowstone National Park in the US.

In Canada, there are 10 World Heritage Sites. Of this number, 6 have been designated to protect the natural environment. These sites are: Kluane National Park in the Yukon; Nahanni National Park, NWT; Dinosaur Provincial Park, Alberta; Wood Buffalo National Park, Alberta; Canadian Rocky Mountain Parks; and Gros Morne National Park, Newfoundland. No Canadian site is on the List of the World Heritage Sites in Danger.



THE ANTARCTIC TREATY AND THE PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY

ANTARCTIC TREATY	**Link to the text:**	http://www.icair.iac.org.nz/Subfolder/treaty/treaty/treaty.html
	Signed by Canada:	December 1, 1959
	Acceded to by Canada:	May 4, 1988
	International Status:	In force June 23, 1961
	In Force in Canada:	In force May 4, 1988
	Amendments:	None
PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY	**Link to Text of Protocol:**	http://www.antdiv.gov.au/environment/protocol/protocoltxt.asp
	Signed by Canada:	October 4, 1991
	Ratified by Canada:	Not yet ratified
	International Status:	In force January 14, 1998
	In Force in Canada:	Not yet in force
	Antarctic Treaty Secretariat:	None
	Canada's Antarctic Office:	Environment Canada, Department of Foreign Affairs and International Trade – Office of Circumpolar Affairs.
	Implementing legislation in Canada:	None

The uninhabited Antarctic, like the Arctic, is vital for the Earth's health, and is an untouched wilderness that is home to numerous exceptional species, including large numbers of penguins. The Antarctic Treaty System (ATS) is a unique set of international agreements designed for ecosystem preservation and is the only international legal regime that governs a whole continent. The Parties to the original 1961 Antarctic Treaty cooperatively manage regulation of all activities that take place in the Antarctic. The ATS comprises:

1. The *Antarctic Treaty*, 1961,

2. The *Convention for the Conservation of Antarctic Seals*,

3. The *Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR*), and

4. The *Protocol on Environmental Protection to the Antarctic Treaty* (also known as the "Madrid Protocol").

The objectives of the Antarctic Treaty are to:

- freeze sovereignty claims;

- prohibit military activity and ensure that the Antarctic is used for peaceful purposes only, and

- provide for freedom to carry out scientific research.

Canada acceded to the treaty because it supports keeping the continent non-militarized, non-proliferation of nuclear weapons, is a leader in polar scientific research and technology, and by participating in Antarctic conservation, can learn more about parallel measures for the Arctic.[123]

The 1991 *Protocol on Environmental Protection* entered into force in 1998, and completed the transformation of the Antarctic Treaty System from an antimilitary, research focussed regime to one devoted almost entirely to environmental protection. The Protocol has five Annexes with detailed rules on environmental impact assessment; conservation of Antarctic flora and fauna; waste disposal and waste management; prevention of marine pollution; and area protection and management. The *Protocol* also prohibits mining in Antarctica for a period of at least fifty years from the date the *Protocol* entered into force.

ARCTIC ENVIRONMENTAL LEGAL REGIME

The Arctic Council Agreement is not a treaty, but a soft law statement by the eight Arctic nations, which created the Council, an intergovernmental regional body. The Council supersedes and incorporates the *Arctic Environmental Protection Strategy*, which was signed in 1991.[124]

[123] C. Embree, *Multilateral Environmental Treaties, Conventions and Agreement: Implementation and Compliance in Canada*, (Toronto: York University), 1990.

[124] For more information , see Linda Nowlan, *The Arctic Legal Regime for Environmental Protection* (Bonn: IUCN) 2001.

ARCTIC: DECLARATION ON THE ESTABLISHMENT OF THE ARCTIC COUNCIL

DECLARATION ON THE ESTABLISHMENT OF THE ARCTIC COUNCIL	**Link to the text:**	http://www.arctic-council.org/establ.asp
	Signed by Canada:	September 19, 1996
	Arctic Council Secretariat:	http://www/arctic-council.org. The Chair of the Arctic Council rotates among the member states every two years. The chair provides secretariat functions.
	Canada's Arctic Council Office:	Canada appointed an Ambassador for Circumpolar Affairs who is Canada's Senior Arctic Official to the Arctic Council.
	Implementing legislation in Canada:	None

The Arctic contains the largest remaining wilderness areas in the northern hemisphere, and is an important area for scientific and environmental research, as it is still relatively pristine. It is a vast, under-populated region, home to approximately nine million people, of which about one-fifth are native indigenous peoples. With a landmass exceeding 25 million square kilometres, the Arctic is one of the world's largest geographical regions. It has extreme climatic conditions, and plays a key role in regulating global climate and the oceans. The Arctic supports many unique marine and terrestrial species, such as narwhals, polar bears, and reindeer, and is a major nursery and breeding ground for migratory birds and marine mammals.

The Arctic legal regime consists of a series of 'soft law" agreements, starting with the 1991 *Declaration on Protection of the Arctic Environment* and the Arctic Environmental Protection Strategy (AEPS), proceeding to the 1996 *Declaration on the Establishment of the Arctic Council*, signed by eight Arctic states (Canada, Denmark/Greenland, Finland, Iceland, Sweden, Norway, Russia and the USA).

The regime's guiding body, the Arctic Council, is not an international organization with legal personality, but instead a "high-level forum intended to provide a means for promoting cooperation among Arctic states . . . on common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic".

The Council has sponsored the creation of Guidelines on subjects such as Arctic environmental impact assessment, offshore oil and gas, and protected areas. It has also produced a comprehensive *State of the Arctic Environment* report.

Indigenous groups are involved in the Council as Permanent Participants, a status almost equivalent to state participation.

Cumulative environmental threats to species – Arctic examples

Global warming is adversely affecting two arctic animals – the Peary Caribou and the Polar Bear. In 1993, 3,000 Peary Caribou lived in the High Arctic. Four years later, only 75 remained. Peary Caribou survive the winter by digging under the snow to feed on vegetation. Global warming models predict that with heavier snowfalls and more freezing rain, more caribou will be lost. Climate change is also causing problems for polar bears. A recent study predicts that the thinning ice on Hudson Bay will lead to the demise of Canada's southernmost population of polar bears within 40 years.[125]

FORESTS

Opinion on the need for a global treaty on forests remains divided, after many years of debate.

One of the products from the 1992 *Rio Earth Summit* was to be a legally-binding Convention to curb deforestation, protect forest biodiversity and address the threats to the world's forests. But nations could not agree as many were reluctant to accept limitations on their sovereign right to exploit their forest resources. Instead only a voluntary *Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests*, also known as the *Forest Principles* was adopted.

The *Principles* emphasize the rights of nations to exploit forest resources in accordance with their own environmental policies, but also recognize their responsibilities to ensure that their activities do not damage the environment beyond their borders. The *Principles* recognize that forests are needed for wood, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, and carbon sinks and reservoirs. They call for governments to take measures to protect forests from pollution, fires, pests and diseases, and to create national plans to protect old forests and to support the rights of indigenous people.[126]

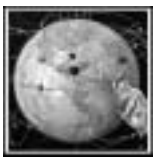
Several MEAs closely relate to forest resources, particularly the *Biodiversity Convention* and its work programme on forest biodiversity, the *Climate Change Convention* which treats forests as carbon sinks and reservoirs and *CITES* which protects endangered tree species such as mahogany. Reviews of the sufficiency of the existing global legal framework to protect forests have been undertaken in recent years by governments, academic and non-governmental organizations.[127]

---

[125] Ottawa Citizen, December 2, 2000.

[126] (1992), 31 ILM 881. *Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests* is available at http://www.igc.org/habitat/agenda21/forest.html.

[127] D. VanderZwaag and P. Saunders (eds), *Global Forests and International Environmental Law* (London: Kluwer) 1996; Richard G. Tarasofsky, ed. *Assessing the International Forest Regime*, (Bonn: IUCN). 1999.



Forests are valuable as ecosystems and as economic engines in Canada. Canada is a strong proponent of a Forests Convention, and continues to press for the launch of a new treaty.

Forests Convention Remains Priority for Canada

In Canada's view, an international forest convention is needed to:

- provide a common understanding of sustainable forest management;
- deal with all forests and all forest values in a balanced and holistic way;
- achieve effective governance of a common forest agenda with clarification of rights, obligations and national reporting requirements;
- facilitate trade by demonstrating compliance with sustainable forest management;
- provide an effective means for open, inclusive and transparent decision-making;
- establish an appropriate framework to support developing countries; and
- obtain a higher level of commitment from governments. [128]

Since the *Forest Principles* were developed in 1992, nations have continued to meet to discuss forest issues, first in the Intergovernmental Panel on Forests (IPF) which turned into the Intergovernmental Forum on Forests (IFF) and in 2000 became the UN Forum on Forests (UNFF), a subsidiary body of the UN Economic and Social Council (ECOSOC). One of its functions is to consider by 2005 "the parameters of a mandate for developing a legal framework on all types of forests."[129]

All the international attention to forests has had benefits. Strides in sustainable forest management (SFM) have been made since Rio, in areas such as entrenchment of public participation in forest planning, greater agreement both on the elements of SFM and on the need to ensure sustainable management of forests.

Consensus on a Forests Convention does not appear imminent. In the absence of state-to-state agreement, NGOs founded the Forest Stewardship Council (FSC) in 1993, an intriguing global forest initiative. The FSC supports environmentally appropriate, socially beneficial and economically viable management of the world's forests, and has developed an international certification system, implemented at the local level. Like the *International Tropical Timber Agreement* (ITTA) (which is the only existing treaty for forests with some characteristics of a MEA), the FSC involves both producer and consumer states, but its broader membership also includes forest companies, NGOs, and indigenous groups. And unlike the ITTA, the FSC has produced detailed standards for sustainable forestry.

[128] From the Foreign Affairs web site at http://www.dfait-maeci.gc.ca/sustain/EnvironIssu/forest/forest-en.asp.

[129] The website for the UNFF is: http://www.un.org/esa/sustdev/forests.htm.

TROPICAL FORESTS: THE INTERNATIONAL TROPICAL TIMBER AGREEMENT

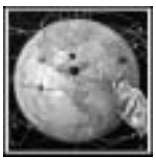
INTERNATIONAL TROPICAL TIMBER AGREEMENT (ITTA) 1994	**Link to the text:**	http://www.itto.or.jp/inside/agreement.html.
	Signed by Canada:	May 3, 1995
	Ratified by Canada:	May 3, 1996
	International Status:	In force January 1, 1997
	In Force in Canada:	In force January 1, 1997
	Amendments:	None
	Protocols:	None
	ITTA Secretariat:	http://www.itto.or.jp/Index.html, Yokohama, Japan
	Implementing legislation in Canada: None	

The *International Tropical Timber Agreement* (ITTA) is a commodity agreement designed to facilitate the trade in tropical timber negotiated under the auspices of the UN Conference on Trade and Development (UNCTAD). The ITTA involves both producers and consumers, has no price regulation mechanisms or market intervention provisions, and accords equal importance to trade and conservation.

Since it is the only international legally binding agreement which concerns forest management (though limited to tropical forests) it provides an important forum for forest conservation discussions. The treaty encourages the development of conservation policies for tropical forests. It brings together producers and consumers of tropical timber to achieve the treaty's objectives which are:

- To provide an effective framework for cooperation and consultation between countries producing and consuming tropical timber,
- to promote the expansion and diversification of international trade in tropical timber and the improvement of structural conditions in the tropical timber market,
- to promote and support research and development with a view to improving forest management and wood utilization, and
- to encourage the development of national policies aimed at sustainable utilization and conservation of tropical forests and their genetic resources, and at maintaining the ecological balance in the regions concerned.

Its underlying concept is to promote and improve tropical timber trade while its other management goals recognize that conservation and sustainable use are needed for trade to continue.



The ITTA establishes the International Tropical Timber Organization (ITTO) and subsidiary Committees. The ITTO 's Year 2000 Objective is that all tropical timber products traded internationally by Member States shall originate from sustainably managed forests by 2000. In 1998 ITTO prepared and published the *Criteria and Indicators for Sustainable Management of Natural Tropical Forests* to assist with the ongoing definition of sustainable forest management. Conservation issues tackled by the ITTO include forest certification and illegal logging. The ITTO also funds development projects related to trade in tropical timber products, though the funding is relatively minor compared to large international financial institutions.

OCEANS: LAW OF THE SEA CONVENTION

LAW OF THE SEA CONVENTION	**Link to the text:**	http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindxAgree.htm.
	Signed by Canada:	Yes
	Ratified by Canada:	Not ratified
	International Status:	In force November 16, 1994
	In Force in Canada:	Not in force in Canada
	Amendments:	None
	Protocols:	Agreement relating to the Implementation of Part XI of the Convention 07/20/1994 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks
	Law of the Sea Secretariat:	Legal Affairs of the United Nations serves as the Secretariat of the Convention on the Law of the Sea www.un.org/Depts/los/
	Canada's Law of the Sea Convention Office:	None at this time. Responsibility for oceans rests with Fisheries and Oceans Canada and the Department of Foreign Affairs and International Trade.
	Implementing legislation in Canada:	No specific implementing legislation. The commitments in UNCLOS are given effect by federal laws: the *Canada Shipping Act*; the *Arctic Waters Pollution Prevention Act*; the ocean dumping chapter of the *Canadian Environmental Protection Act* and the *Oceans Act*.

The seas do not belong to any one nation. International rules governing navigation and fishing developed over hundreds of years of practice of ocean going vessels. Nations

decided to codify and consolidate this body of international law starting in 1958. The most important legal principle which had developed was the 'freedom of the high seas', allowing states to travel and exploit the seas as they see fit. This freedom is restricted by the rights of coastal states to control part of their adjacent seas and is increasingly even more restricted by international legal controls on shipping, fishing and marine pollution.

The final set of UNCLOS negotiations began in 1973 and concluded in 1982. The resulting *UN Convention on the Law of the Sea* (UNCLOS) was signed in 1982 and came into force in 1994. By the time UNCLOS was signed its provisions already constituted customary international law in the eyes of most countries.

The purpose of the Convention is to establish rules to govern all uses of the ocean and ocean resources. As this Convention's environmental provisions relate to both conservation and pollution control, it is also discussed in chapter 7, on pollution.

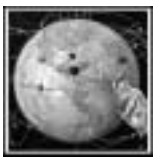
The legal limits established by UNCLOS (also known as the Law of the Sea Convention or LOSC) include:

- internal waters,
- a 12-nautical mile territorial sea,
- a 24-nautical mile contiguous zone and
- a 200-nautical mile exclusive economic zone (EEZ).

States have different degrees of responsibility and power depending on which territorial zone activities take place in. Within a state's internal waters, a coastal state has absolute sovereignty. Within the territorial sea zone, no farther than 12 nautical miles from the baseline, a coastal state still retains complete sovereignty but must allow innocent right-of-passage to foreign ships. Wilful and serious marine pollution and unauthorized fishing are acts inconsistent with innocent passage.

Within a contiguous zone, a state still retains sovereignty and exercises powers over customs, physical immigration or sanitary laws and regulations. And within the exclusive economic zone, a coastal state has sovereign rights for the purposes of exploring, exploiting, conserving and managing both living and non-living natural resources of the seabed, its sub-soil and the waters above it and with regard to other activities for the economic exploitation and exploration of the zone. Within the EEZ, the coastal state determines allowable catch of living resources and harvest limits, if any, for these resources. Any other state which is allowed to harvest marine living resources must abide by any laws and regulations adopted by the coastal state.

Additional legal provisions under UNCLOS apply to the continental shelf, the high seas, and the deep seabed area. UNCLOS established two new international organizations, the International Seabed Authority which organizes and controls activities in the seabed area, and the International Tribunal for the Law of the Sea, established to settle disputes.



Part XII of UNCLOS addresses protection and preservation of the marine environment and applies to the entire marine environment. All states are obligated to take measures

necessary to prevent pollution from any source and all maritime areas. In addition, all signatory states are to take measures necessary to ensure that activities under their jurisdictions are controlled and are conducted so as not to cause damage by pollution to other states and their environment. Pollution from a variety of sources is regulated by UNCLOS. States are to adopt domestic laws controlling marine pollution resulting from land-based activities, vessels, and ocean-dumping. Article 234 of UNCLOS on the prevention, reduction and control of marine pollution from vessels in ice-covered areas within a state's exclusive economic zone, is found in this Part. Canada has passed a domestic law, the *Arctic Waters Pollution Prevention Act*, in accordance with this part.

Though the UNCLOS pollution control and fisheries legal regime will help preserve ocean biodiversity, the treaty does not contain detailed legal obligations with respect to this issue. Article 61 provides that Parties must ensure that within the EEZ 'the maintenance of the living resources... is not endangered by overexploitation". On the high seas, Parties are obligated to negotiate agreements to conserve living resources that more than one Party exploits.

Canadian diplomats played a major role in negotiating UNCLOS. However the treaty has not yet been ratified by Canada. The government intends to ratify once an effective fisheries enforcement regime is in place, including implementation of UNFA. The lack of an effective fisheries regime, and dissatisfaction with the treaty's provisions on deep seabed mining were Canada's two main reasons for not ratifying UNCLOS. Both objections have now been addressed by two subsequent agreements which form part of UNCLOS. The *Agreement relating to the Implementation of Part XI of the Convention* modifying the deep seabed mining provisions is discussed in chapter 11, under the section on Sustainable Use of Natural Resources- Mining and the *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* is discussed in this chapter under the heading of Fisheries.

REGIONAL SEAS CONVENTIONS

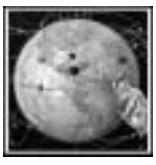
Another part of the international legal regime for the oceans relates to regional seas. Since 1974, UNEP has worked on expansion of its regional seas programme, which now covers more than 140 of the world's coastal countries. The regional seas conventions and protocols have adopted ecosystem-based management and links to the newer programmes of action on land-based sources of pollution. The most recent addition to this programme is the *Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the North-East Pacific*.

RIVERS AND LAKES

International drainage basins are the subject of a treaty, the 1997 *Convention on the Non-Navigational Uses of International Watercourses* which includes environmental obligations. This treaty presents a global set of principles on the equitable uses of shared watercourses, outlines obligations to prevent harm to states with shared watercourses, and requires protection of watercourse ecosystems. The aim of this treaty is to guide states who choose to negotiate individual watercourse agreements. It attempts to balance the rights and

obligations of upstream and downstream riparian states. Canada is not a Party to this treaty.

Canada has signed and concluded a number of treaties regarding rivers and lakes with the US, including the *Canada-United States Agreement on the Souris River Basin*, *Canada-United States Convention and Protocol on the Lake of the Woods*, *Canada-United States Skagit River Treaty*, *Convention between Canada and the United States on Great Lakes Fisheries*, *Convention between Canada and the United States on the Level of Rainy Lake* and the *Columbia River Treaty*. Two key treaties in this area are the *Boundary Waters Treaty*, and *Great Lakes Water Quality Agreement*, discussed in more detail below.



RIVERS AND LAKES: THE BOUNDARY WATERS TREATY AND THE GREAT LAKES WATER QUALITY AGREEMENT

BOUNDARY WATERS TREATY	**Link to the text:**	http://www.ijc.org/ijcweb-e.html
	Signed by Canada:	November 1, 1909
	Ratified by Canada:	November 1, 1909
	International Status:	In force May 5, 1910
	In Force in Canada:	In force May 5, 1910
	Amendments:	None
	Protocols:	None
	Secretariat:	International Joint Commission: http://www.ijc.org/
	Implementing legislation in Canada:	*International Boundary Waters Treaty Act*
GREAT LAKES WATER QUALITY AGREEMENT	**Link to the text:**	http://www.ijc.org/agree/quality.html
	Signed by Canada:	November 22, 1978
	Ratified by Canada:	November 22, 1978
	International Status:	In force November 22, 1978
	In Force in Canada:	In force November 22, 1978
	Amendments:	Agreement supplementing Annex III of the 1978 Agreement re Phosphorous Load Reductions 10/16/198 Protocol amending the 1978 Agreement between the United States of America and Canada on Great Lakes Water Quality, as amended on October 16, 1983
	Secretariat:	http://www.ijc.org
	Implementing legislation in Canada:	None

The 1909 *Boundary Waters Treaty*, formally known as the *Treaty Between the United States and Great Britain Relating to Boundary Waters, and Questions Arising Between the United States and Canada* established one of the most important Canada-US institutions for environmental protection, the International Joint Commission (IJC). The IJC is a judicial tribunal which has binding decision-making powers on a range of issues including

transboundary pollution. It has set up more than 20 boards, made up of experts from the United States and Canada, to help carry out its responsibilities.[130] The *Boundary Waters Treaty* allows freedom of navigation and gives each Party exclusive control of shared water on its side of the border.

The IJC also has responsibility for the *Great Lakes Water Quality Agreement*.[131] The Great Lakes are vulnerable because the depth and size of the lakes cause water to be retained for long periods of time, with little fresh water recharge. Canada and the United States, recognizing the effect of pollutants on the Great Lakes signed this *Agreement* in 1972. The agreement was amended in 1978 and 1987 to require stricter control of a range of toxic chemicals. The 1997 Great Lakes Binational Toxics Strategy renewed and extended the countries' commitment to manage and control toxic and persistent toxic substances in the Great Lakes Basin. Current estimates predict the elimination of many substances from the Great Lakes will occur within 50 years with continuing restrictions on their use.[132]

SOILS: UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

Link to the text: http://www.unccd.int/convention/text/convention.php

Signed by Canada: October 14, 1994

Ratified by Canada: December 1, 1995

International Status: In Force December 26, 1996

In Force in Canada: In Force December 26, 1996

Amendments: None

Protocols: None

Desertification Secretariat: Bonn, Germany, http://www.unccd.int/secretariat/secretariat.php

Implementing legislation in Canada: None

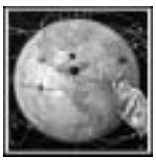
Desertification office in Canada: Desertification Convention Office, CIDA

Guide to Convention: http://www.unccd.int/publicinfo/downtoearth/downtoearth-eng.pdf

[130] International Joint Commission web site: http://www.ijc.org/.

[131] http://www.ijc.org/ijcweb-e.html

[132] www.ec.gc/ca/press/2001/010509_f_e.htm



The only soils-related Convention concerns desertification. The Convention focuses on drylands in developing countries, particularly in Africa. CIDA is the Canadian government lead agency because its development assistance programmes involves desertification. The Canadian International Development Research Centre is also active on this MEA. Chapter 10, Environment and Poverty, contains a case study on this Convention.

NGO INFORMATION

There are a multitude of NGOS who work on biodiversity conservation. Here are only a select few of those NGOs:

CANADA

World Wildlife Fund. www.wwfcanada.org. WWF's National Conservation Program helps protect Canada's wildlife and wild places by supporting field research, community initiatives and activities related to the establishment of new protected areas and the reduction of toxic contamination.

Canadian Nature Federation. http://www.cnf.ca. The mission of the CNF is to protect nature, its diversity and the processes that sustain it. The CNF works on endangered species, bird conservation and a wildlands campaign to establish new national parks and marine conservation areas, and to protect existing parks from inappropriate development.

Ducks Unlimited. www.ducks.ca. Ducks Unlimited conserves, restores and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people.

Sierra Club of Canada. www.sierraclub.ca. The Sierra Club works to protect the integrity of global ecosystems.

Canadian Environmental Law Association. www.cela.ca. CELA's objectives include: To advocate for comprehensive laws, standards and policies that will protect and enhance environmental quality in Ontario and throughout Canada; and To protect ecosystem and public health by preventing degradation from pollution, destruction of natural areas and resource extraction and misuse;

West Coast Environmental Law Association. www.wcel.org. West Coast Environmental Law empowers citizens to participate in forming policy for, and making decisions about, protecting our environment. Areas of concentration include sustainable forestry and resource use, protection of endangered species, fish and critical ecosystems such as wetlands.

INTERNATIONAL

World Conservation Union (IUCN). www.iucn.org. Founded in 1948, The World Conservation Union brings together States, government agencies and a diverse range of non-governmental organizations in a unique world partnership: over 980 members in all,

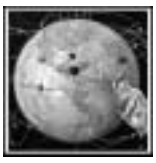
spread across some 140 countries. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

Worldwide Fund for Nature (WWF). www.panda.org. WWF is a global conservation organization with programmes on forests for life, living waters, endangered seas, and species, among others.

Greenpeace. www.greenpeace.org. Greenpeace is an independent, campaigning organisation that uses non-violent, creative confrontation to expose global environmental problems, and force solutions for a green and peaceful future. Greenpeace's goal is to ensure the ability of the Earth to nurture life in all its diversity.

The **Forest Stewardship Council** web site is at http://www.fscoax.org. FSC encourages the development of national and/or regionally specific standards, and it accredits independent certifiers, organizations who actually apply the standards in the field to determine if a forest manager will be certified. FSC certification verifies that on the ground forest practices are meeting standards for ecologically and socially responsible forest use, not just that the proponent has a management system.

One of the most active NGOs on endangered species trade is **the Trade Records Analysis of Fauna and Flora in Commerce (TRAFFIC)** – a joint conservation programme of WWF and the IUCN, founded in the mid-1970s to assist in the implementation of CITES. It works from a global network of 22 offices in eight regional programmes around the world. http://www.traffic.org/.



CHAPTER 7 – MANAGEMENT OF POLLUTION, WASTE AND HAZARDOUS SUBSTANCES

The publication of *Silent Spring* by Rachel Carson in 1972 awoke the world to the potential damaging effects of many common chemicals. Scientific evidence of this damage grew over the next twenty years. In 1996, in the book, *Our Stolen Future*, Theo Colborn painted another troubling picture of the effects of chemicals in the environment: deformed wildlife, malfunctioning reproductive systems, and a host of other problems which she labelled "endocrine disruptors".

In Canada, toxic chemicals affect residents in the seemingly most pristine landscapes of the far north. Arctic residents, traditionally dependent on "country foods" – marine mammals and fish that have a tendency to bioaccumulate toxic substances in their fatty flesh – have experienced significant negative health impacts from toxic substances. Levels of PCBs in the breast milk of Inuit women are among the highest recorded in the world.[133] DDT has been found to be, on average, four times higher in the blood of women in northern Quebec compared with women of southern Quebec. The fatty tissue of Arctic species such as polar bears and beluga whales is also highly contaminated.

The international community has responded with a series of "chemicals" conventions, many only recently signed or developed. Countries have focused on the transboundary movement and disposal of hazardous waste, in the *Basel Convention*; on the production, use and eventual phase-out of particularly harmful substances, persistent organic pollutants (POPs) or the "Dirty Dozen" as the worst twelve are sometimes known, in the Stockholm *POPs Convention*; and on the control of trade of select dangerous chemical substances through a system of prior informed consent (PIC), the *Rotterdam PIC Convention*. This chapter discusses MEAs related to POPs; heavy metals; transboundary shipment of hazardous waste; and oil and chemical spills.

PERSISTENT ORGANIC POLLUTANTS

Persistent Organic Pollutants (POPs) are toxic substances released into the environment through a variety of human activities and include pesticides for pest and insect control, chemicals released intentionally or unintentionally from burning waste, combustion and industrial activities. As chemical compounds, POPs are very stable, lasting in the

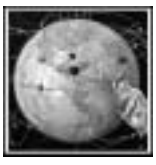
[133] www.ec.gc.ca/press/2001/010509-3_b_e.htm

environment for years or decades. They are absorbed easily by living tissue and bio-accumulate, meaning they can concentrate in living organisms and accumulate up the food chain through fish, predatory birds, mammals and humans.

Scientific evidence indicates that POPs have significant adverse effects on the health of ecosystems, wildlife and people. They are suspected to potentially cause cancer, tumours, birth defects, hormonal disruptions and impair immune systems.

POPs can travel at low concentrations in ocean currents or in the air currents, travelling to areas where they have never been used. If the toxins don't break down they can travel up the food chain, increasing in concentration. This makes the elimination and control of POPs a global concern.

POPs are of particular concern to Canada. They have been shown to concentrate in colder climates such as Canada's North and also in the Great Lakes Basin and the St. Lawrence River. Canada is at risk because global weather patterns tend to push pollution toward the north.



PERSISTENT ORGANIC POLLUTANTS: THE AARHUS AND STOCKHOLM CONVENTIONS

THE 1998 AARHUS PROTOCOL ON PERSISTENT ORGANIC POLLUTANTS	**Link to the text:**	http://www.unece.org/env/lrtap/pops_h1.htm.
	Signed by Canada:	June 24, 1998
	Ratified by Canada:	December 18, 1998
	International Status:	Not yet in force
	National Status:	Not yet in force
	Amendments:	None
	Protocols:	None
	Secretariat:	UNECE
	Implementing legislation in Canada: None	
STOCKHOLM PERSISTENT ORGANIC POLLUTANTS CONVENTION	**Link to the text:**	http://www.chem.unep.ch/pops/POPs_Inc/dipcon/meetingdocs/25june2001/conf4_finalact/en/FINALACT-English.PDF
	Signed by Canada:	May 23, 2001
	Ratified by Canada:	May 23, 2001
	International Status:	Not in force
	National Status:	Not in force
	Amendments:	None
	Protocols:	None
	Secretariat:	Not yet established – Interim secretariat UNEP Chemicals.
	Implementing legislation in Canada: None	

The 1998 *Aarhus Protocol on POPs* was adopted in 1998 under the *Convention on Long-Range Transboundary Air Pollution*, a MEA described in chapter 5, Atmosphere. The United Nations Economic Commission developed the Convention and Protocols for Europe (UNECE), which includes Canada, the United States, countries in Eastern and Western Europe and Russia. It focuses on an agreed list of 16 substances: eleven pesticides, two industrial chemicals and three by-products/contaminants. The ultimate objective of the Protocol is to eliminate discharges, emissions and losses of POPs. As of August 2001, 7 states had ratified the Protocol. The Protocol requires ratification by 16 Parties in order to come into force.

The *Protocol* bans the production and use of aldrin, chlordane, chlordecone, dieldrin, endrin, hexabromobiphenyl, mirex and toxaphene. As one of the Basic Obligations, the Parties agree to ensure that these substances will be destroyed or disposed of in an environmentally sound manner, and to endeavour to ensure that the disposal of these substances is carried out domestically.

DDT. Production of DDT is to be eliminated, within one year of consensus by the Parties that suitable alternatives are available to protect public health from diseases such as malaria and encephalitis. No later than one year after the Protocol has come into force, the Parties will consult with the World Health Organization, the Food and Agriculture Organization of the United Nations and the United Nations Environment Programme, to review the availability and feasibility of alternatives.

Heptachlor. The use of Heptachlor will still be permitted by certified personnel for the control of fire ants in closed industrial electrical junction boxes. This use will be re-evaluated within two years after the date of entry into force of the Protocol.

Hexachlorobenzene. Countries with economies in transition would be allowed to continue to produce and manufacture hexachlorobenzene.

PCBs. Countries with economies in transition would be allowed to continue to produce PCBs until December 31, 2005, with safe decontamination of equipment containing the chemicals by 2020.

Exemptions from the restrictions are allowed for laboratory-scale research.

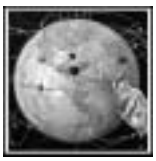
Under the Protocol, Parties are obliged to reduce their emissions of dioxins, furans, PAHs and HCB below their levels in 1990, or an alternative year between 1985 and 1995. The Parties will achieve this using best available techniques. The Protocol also obliges the Parties to exchange information and technology.

The UNEP global initiative which produced the *Stockholm POPs Convention* complements the earlier regional *Protocol on POPs* discussed above.

The *Stockholm POPs Convention* introduces control measures for the production, use, import, export, and disposal of POPs. The treaty was formally adopted and signed in Stockholm in May 2001, and will enter into force upon the 50th ratification. This is expected to be achieved by 2004 as most industrial nations have already phased out the use of the chemicals on the list.

The *Convention* requires Parties to eliminate and/or take legal and administrative measures necessary to eliminate the production and use of twelve chemicals and to regulate their import, export and disposal. The chemicals covered by the Convention are among the most harmful substances to human health and the environment. They fall into three broad categories:

- Pesticides – DDT, chlordane, toxaphene, mirex, aldrin, dieldrin, endrin, heptachlor;
- Industrial chemicals – PCBs, hexachlorobenzene;



- By-products and contaminants – dioxins and furans.

Its first goal is to end the release and use of the pesticides endrin and toxaphere. Next all Parties must stop producing the pesticides aldrins, dieldrin and heptachlor. Exemptions are required to use remaining stockpiles of these chemicals. The remaining pesticides on the initial list also require exemptions for production and use. The Convention requires Parties to minimize and ultimately eliminate the release of dioxins, furans, hexa chlorobenzene and PCBs.

Under the agreement, DDT use will be permitted in areas where malaria is a problem but only until a safer alternative is found. It requires countries to promote, and in some cases implement, the best available technologies and practices for emissions of POPs from industrial processes, and provides a process for adding other POPs to the Convention in the future. Finally, it includes a requirement aimed at preventing the development of new POPs.

A POPs Review Committee will regularly review additional substances for potential addition to the Annexes. Any Party can propose a new listing. Parties are to develop national action plans to reduce the total releases of POPs formed and released unintentionally from anthropogenic sources with the ultimate goal of elimination. The action plans are to include, the use of substitute or modified materials, products and processes to prevent the formation and release of POPs, as well as the promotion of best available technologies and practices for replacing existing POPs and preventing the development of new ones.

The precautionary principle is an important part of the Convention, found in the Preamble, objective and section on listing of new POPs.

As is common with most modern MEAs, the developed country Parties agree to provide new and additional financial and technical assistance to developing countries to reduce the POPs, eliminate them over time, and find more environmentally acceptable substitutes.

Though the Convention does not call for a liability Protocol, the issues of compensation and liability for environmental damage caused by POPs were discussed near the end of negotiations for the Stockholm Convention and the COPs will continue these discussions.

CANADIAN RESPONSE

Canada took a leading role in lobbying for the *Stockholm Convention*, emphasizing the needs of indigenous peoples and Arctic regions. The agreement contains a preambular paragraph acknowledging the vulnerability of Arctic ecosystems, and especially indigenous communities which are particularly at risk because of the biomagnification of POPs, and contamination of traditional foods. This paragraph is based on suggestions by Canada, supported by the US.[134]

---

[134] Earth Negotiations Bulletin, Summary of the Fifth Session of the Inter-governmental Negotiating Committee for an International Legally Binding Instrument for Implementing International

Canada is a leader in the science of identifying and assessing past and current sources of POPs, and in predicting global movement through the atmosphere. Canadian scientists have improved the ability to detect POPs in rain and snow and to track their accumulation.

The scientific work undertaken by Canada on POPs was key to having it put on the international agenda. Canada co-sponsored the first international meeting on POPs with the Philippines in Vancouver in the early 1990s and lobbied to have the UNECE LRTAP take up work on POPs which eventually resulted in the conclusion of the Aarhus Protocol in 1996. The International Forum on Chemical Safety (another outcome from Rio) took up work on POPs, chaired by Canada's Dr. John Bucinni. His report to UNEP prepared the ground for the UNEP resolution that launched negotiations on a global convention. Canada hosted and paid all the expenses of the first global POPs negotiating meeting in Montreal and Dr. Bucinni chaired the negotiations throughout. The Inuit Circumpolar Conference was particularly active in bringing the impact of POPs on the Arctic to the attention of the global community.

Canada was the first country to sign and ratify the *Stockholm POPs Convention*, doing both at the May 2001 meeting in Stockholm at which the Convention was adopted.

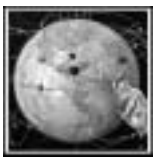
In March 2000, Canada became the first country to make a specific funding commitment, $20 million, for POPs capacity building in developing countries and countries with economies in transition. The Canada POPs Fund will be allocated by the World Bank, UNEP, and the Global Environment Facility (GEF) to fund POPs projects that meet criteria agreed to by Canada.

Canada has also developed regional action plans with Mexico and the United States on chlordane, DDT and PCBs under the North American Free Trade Agreement's Commission on Environmental Cooperation. Regional action plans are being considered for lindane as well as for dioxins, furans and hexachlorobenzene.

The Government of Canada is reducing POPs under the Toxic Substances Management Policy (TSMP). Toxic substances that are determined to be persistent, bioaccumulative and resulting primarily from human activity are known as Track 1 substances, and targeted for virtual elimination from the environment. The twelve substances subject to the POPs Convention are being managed under the TSMP. The key pieces of federal legislation used to implement the objectives outlined in the TSMP include the *Canadian Environmental Protection Act* (CEPA), the *Pest Control Products Act*, the *Fisheries Act* and the *Hazardous Products Act*. Other government programmes related to POPs are the Northern Contaminants Program (NCP), and the Arctic Monitoring and Assessment Program (AMAP), the circumpolar environmental monitoring activity of the Arctic Council.

Information generated by the NCP and AMAP was used in alerting the international community about the POPs issue and compelling other countries to take part in the negotiations leading to the global POPs agreement.

Arctic on Certain Persistent Organic Pollutants (IISD: Winnipeg), 2000.
http://www.iisd.ca/linkages/download/asc/enb1554e.txt



HEAVY METALS

Heavy metals are a group of toxic metallic elements and their compounds. Although many metals, in the right concentrations, are essential to life and have several important functions in the biological processes, they can also be poisonous. Heavy metals in emissions can be transported in the air over wide areas and deposited far from their source. Some of the emissions can travel great distances, touching down on oceans and freshwater bodies. They then volatize or evaporate into the atmosphere once again and travel to touch down in another location. They ultimately gather in the colder climates. This is known as the grasshopper effect.

Threats that have been identified are associated with mercury, cadmium and lead. Cadmium has accumulated in agricultural soils and been taken up by crops. This can affect consumers who then suffer from high levels of cadmium in their kidneys. It has been observed that fish in the lakes in Nordic countries and North America have an above average content of methyl mercury. Methyl mercury can damage the central nervous system, with the greatest risk to foetuses. The damage takes the form of impaired neurological functions in children below school age. Children are also particularly at risk from locally elevated levels of lead. They can ingest lead from soils and street dust. The on-going accumulation of heavy metals is also a stress factor to forest ecosystems and affects tree vitality. Canada is a net receiver of heavy metals from foreign sources.

The main sources of mercury and cadmium emissions are coal combustion in power stations and heating plants, production of non-ferrous metals like copper and lead, domestic waste incineration and chlorine production. The major sources of lead emissions are metal production and leaded gas.

THE 1998 AARHUS PROTOCOL ON HEAVY METALS

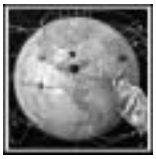
THE 1998 AARHUS PROTOCOL ON HEAVY METALS	**Link to the text:**	http://www.unece.org/env/lrtap/hm_h1.htm
	Signed by Canada:	June 24, 1998
	Ratified by Canada:	December 18, 1998
	International Status:	Not yet in force
	National Status:	Not yet in force
	Amendments:	None
	Protocols:	None
	Secretariat:	UNECE
	Implementing legislation in Canada:	CEPA 1999

The *Aarhus* Protocol on Heavy Metals targets the reduction of cadmium, lead and mercury emissions. It was adopted in 1998, under the UNECE *Convention on Long-Range Transboundary Air Pollution*. As of August 2001, 10 states had ratified the Protocol. The Protocol requires ratification by 16 Parties in order to come into force.

Under the basic obligations of the Protocol, Parties will reduce their emissions for the three metals to below their levels in 1990 or an alternative year between 1985 and 1995. The Protocol aims to cut emissions from industrial sources, such as the iron and steel industry and non-ferrous metal industry, combustion processes, including power generation and road transport, and waste incineration.

The Protocol includes stringent limit values for emissions from stationary sources and suggests detailed best available techniques for these sources such as special filters or scrubbers for combustion sources or mercury-free processes. New plants, which are constructed or substantially modified after two years from the date of entry into force, within designated industrial sectors will be required to use best available techniques, such as using clean fuels and mercury-free processes. For existing structures, the time frame for emission reduction is eight years from entry into force of the Protocol. Designated industries include: utility and industrial boilers; primary and secondary iron and steel industries; iron foundries; cement industry; glass industry chlor-alkali industry; and, municipal, medical and hazardous waste incineration.

The Protocol requires Parties to phase out leaded petroleum.



Measures are included to lower heavy metal emissions from other products, such as mercury in batteries, and proposes the introduction of management measures for other mercury-containing products, such as electrical components (thermostats, switches), measuring devices (thermometers, manometers, barometers), fluorescent lamps, dental amalgam, pesticides and paint.

CANADIAN RESPONSE

Canada has taken measures to control emissions on lead, mercury and cadmium. The key piece of legislation used to implement the controls is the *Canadian Environmental Protection Act, 1999* (CEPA). The Canadian Council of Ministers of the Environment (CCME) has also proposed a Canada-wide standard for mercury, annexed to CEPA. The *CCME Policy for the Management of Toxic Substances* identifies that mercury will be managed throughout its lifecycle to minimize releases. Three industries were targeted: base metal smelters, waste incinerators and coal-fired electricity generators. New emission standards were developed for the targeted industries. Canada has also developed trilateral action plans with Mexico and the United States for mercury under the North America Free Trade Agreement (NAFTA) Commission on Environmental Cooperation.

TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE

Although the legal definition of "hazardous waste" varies from country to country, the United Nations Environment Programme (UNEP) estimates that over 400 million tonnes of hazardous waste is generated annually worldwide.

Worldwide generation of hazardous waste has increased approximately 60 times since WWII.[135] According to Environment Canada, Canada produces approximately 6 million tonnes of hazardous waste yearly. Canadian imports of hazardous waste in 1999 increased by 18% over the previous year, to 650,000 tonnes.[136] Only 40% of the hazardous waste was recycled, down from 60% in 1998. In 1994, 72% of Canada's imports and 56% of Canada's exports of hazardous waste were destined for environmentally sound recycling operations. Canada's biggest waste trading partner is the United States, accounting for almost all imports and exports annually.

The percentage of waste that crosses international borders is small but still represents a significant volume. There are inherent risks involved with moving wastes. The greater the hauling distance, the greater the risk. International signage and labelling is required; however, there is the risk that waste containers will be mislabelled either accidentally or, in the case of illegal transfer of wastes, on purpose.

Hazardous waste trafficking between northern industrialized countries and southern, generally developing, countries as well as Eastern Europe to take advantage of lower

---

[135] *International Environmental Law and Policy*, David Hunter, J. Salzman and D. Zaelke, Foundation Press, New York, 1998, p. 857.

[136] "Environment Minister Issues Call to Action to Better Management of Hazardous Waste Imports" (July 27, 2000), online: Environment Canada www.ec.gc.ca/press/00727-2_n_e.htm.

disposal costs is an ongoing problem. Disposal costs are often considerably lower in developing countries. Labelled "toxic colonialism", several highly publicized incidents such as the epic voyage of the *Khian Sea*, a ship that roamed the seas for years unable to offload its cargo of hazardous waste of tons of ash from incinerated household garbage have illustrated the dangers associated with this practice.[137] Greenpeace estimated that 5.2 million tones of hazardous waste were exported from industrialized nations to Eastern Europe and developing countries between 1986 and 1990, and that many transfers were illegal.[138]

TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE TREATY

BASEL CONVENTION

Link to the text: http://www.basel.int/text/text.html

Signed by Canada: March 22, 1989

Ratified by Canada: August 28, 1992

International Status: In force May 5, 1992

National Status: In force November 26, 1992

Amendments: Decision III/1 – Amendment to the Convention to Prohibit Exports of Hazardous Waste from Annex VII countries to non-Annex VII countries 09/18/95

Decision IV/9 – Amendment of Annex I and adoption of Annex VIII (hazardous wastes covered by the Convention) and Annex IX (wastes not covered by the Convention) 02/23/98

Protocols: *Protocol on Liability and Compensation*, 1999

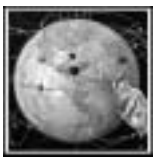
Secretariat: http://www.basel.int/

Guide to Convention: *A Short Introduction to the Basel* Convention at http://www.basel.int/about.html#basic

Implementing legislation in Canada: Export and Import of Hazardous Wastes Regulations, *Canadian Environmental Protection Act,* 1999

[137] For more information about this voyage and about trade in hazardous waste in general, see the web site of the Basel Action Network at < http://www.ban.org/>..

[138] K. Kummer, *International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules* (Oxford: Clarendon Press, 1995) at 7.



The *Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal* entered into force in 1992, to respond to the growing transfer of hazardous wastes to developing countries and Eastern Europe. The convention comes under the auspices of the UNEP and as of May 31, 2001, 145 states and the European Community were parties to the convention.[139] Unfortunately, the United States, a generator of a large amount of hazardous waste, has not ratified the convention. While not a party to Basel, the USA tends to follow many of its provisions in practice.

One of the treaty's guiding principles is that hazardous wastes should be dealt with as close to where they are produced as possible.

The *Basel Convention* establishes a global notification and consent system for the transboundary shipments of hazardous and other wastes among parties. Each shipment of hazardous waste must be accompanied by a movement document from the point at which a trans-boundary movement begins to the point of disposal. Hazardous waste shipments made without such documents are illegal. In addition, there are outright bans on the export of these wastes to certain countries. Trans-boundary movements can take place, however, if the state of export does not have the capability of managing or disposing of the hazardous waste in an environmentally sound manner.[140]

It also prohibits parties from trading in covered wastes with non-Parties. If the transboundary movement is subject to another appropriate bilateral, multilateral or regional agreement then the Convention does allow for the movement of wastes between Parties and non-Parties.

In 1995, the Parties agreed to amend the Convention to ban the shipment of wastes, (the "Basel ban") for any purpose, destined for final disposal from a proposed list of countries (OECD, EU and Liechtenstein) to developing countries not on the list. Canada does not plan to ratify the Basel ban which appears unlikely to come into force in the near future (only 34 of the required 62 ratifications to bring the ban into force have been made as of 2002) possibly because some countries are having second thoughts about the wisdom of such a ban.

Canada, along with several other developed countries argues that the Ban does not promote environmentally sound management but merely prohibits hazardous waste exports, and believes that OECD countries should be permitted to export hazardous waste to non-OECD countries that have adequate and environmentally sound hazardous waste management practices. The ban also has the potential to interfere with ongoing exports of wastes intended for recycling facilities in developing countries, like metal scrap going to metal smelters. Others such as the EU who support the ban say that eliminating OECD countries' ability to dispose of hazardous waste developing countries creates an incentive

[139] Secretariat of *Basel Convention* www.basel.int/ratif/ratif.html.

[140] The text of the treaty and explanatory Guides can be found on the web site at http://www.basel.int.

for these countries to minimize hazardous waste generation, which is the root of the problem, and pursue cleaner production. [141]

A binding OECD decision on hazardous wastes destined for recycling was concluded after Basel to facilitate movements of hazardous wastes intended for recycling between OECD states because of the failure of Basel to distinguish between hazardous wastes intended for final disposal and for recycling.

The Convention states that the Parties consider that illegal traffic in hazardous wastes or other wastes is criminal. The exporters of illegal waste are required to take the wastes back for proper disposal within 30 days. The Convention, however, does not contain enforcement provisions. There is no practical way that the Convention could enforce criminal sanctions on illegal traffic in hazardous wastes as it would have to take actions against private parties and not states. Only State Parties are in a position to enforce such sanctions. Parties are obligated to take appropriate domestic legal, administrative and other measures to enforce the Convention. In December 1999, the *Protocol on Liability and Compensation* was adopted; this protocol establishes the rules on liability and compensation for damages caused by accidental spills during the transport of hazardous wastes.

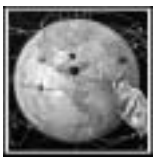
Issues that remain to be finally resolved by the Convention include a more thorough definition of environmentally sound management of wastes as this term is left vague (defined by the Convention as "means taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes;"); and clarification of which wastes are covered by the Convention. The Convention defines wastes as "substances or objects which are disposed of by the provisions of national law". Disposal includes disposal operations and recovery and recycling operations. The definition of hazardous is broad in the convention, and is characterized both by the industry that created the waste and by its explosive, flammable, toxic and corrosive properties. In 1998, the Parties agreed on a list of hazardous and non-hazardous wastes to clarify the Convention.

AGREEMENT BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA CONCERNING THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE

A treaty exists between Canada and the United States to regulate the movement of hazardous wastes. This 1986 Agreement ensures that the transboundary movement of hazardous waste is handled safely and that the wastes are shipped to facilities that are authorized by the importing jurisdiction.

Wastes are considered hazardous if they are defined as such by the legislation of the exporting country. In Canada, hazardous wastes are defined in the *Export and Import of*

[141] The latest information on the Ban is from the summary of Basel COP-6 prepared by the ENB at http://www.iisd.ca/linkages/vol20/enb2012e.html.



Hazardous Wastes Regulations made pursuant to the *Canadian Environmental Protection Act* (CEPA) and the federal *Transportation of Dangerous Goods Act* (TDGA) and Regulations.

Detailed information from the waste generator is submitted for review to the designated authority in the exporting country, who notifies the designated authority in the importing country. Environment Canada is the designated authority in Canada. As each province has the jurisdiction over hazardous waste management within its borders, Environment Canada forwards the notice for review to the appropriate province. The importing country has 30 days to review the request and object and consent to the proposed transfer. Countries of transit also have to be notified. Transportation within the importing country is governed by domestic laws. Domestic enforcement agencies in each country are responsible for ensuring compliance.

A criticism of both the Basel and bilateral Canada-US treaties is that wastes destined for recycling are not in a separate category and are treated as wastes destined for permanent disposal. The underlying principles of waste transfer should encourage the recycling of wastes. Canada should also treat the disposal of hazardous waste as a national concern and have an integrated approach that focuses on prevention and recycling.

CANADIAN RESPONSE

Hazardous waste management is regulated at both the federal and provincial/territorial levels in Canada. Provincial and territorial governments establish requirements for waste generation, transportation, recycling and disposal within their borders. The federal government is responsible for controlling the international and inter-provincial movement of hazardous wastes.

The *Export and Import of Hazardous Wastes Regulations* made pursuant to CEPA set out the conditions that must be met before any international shipment of hazardous waste can occur. Key requirements include: written notification and consent, a waste manifest describing the contents of the shipment as well as any handling, storage and disposal requirements. The parties involved must be insured, have a signed contract and a certificate from the disposal/recycling firm to ensure the hazardous waste was treated as per the notification. Environment Canada found that compliance by exporters was lower than by importers. A 1998 inspection by Environment Canada of 19 facilities in British Columbia found two facilities did not give advance notification of shipment.[142]

The *Canadian Environmental Protection Act,* 1999, contains new provisions regarding the import and export of wastes. The updated *Act* includes more detail on permitting, import, export and transit publication requirements, reduction of export, sanctions and movement within Canada.

Shipments must be packaged, labelled and handled according to the *Transportation of Dangerous Goods Regulations*.

[142] www.pyr.ec.gc.ca/ep/enforcement/98hazard.htm.

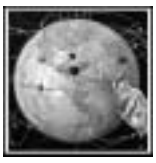
A report released in May 2001 by the Texas Center for Policy Studies, titled *The Generation and Management of Hazardous Wastes and Transboundary Hazardous Waste Shipments between Mexico, Canada and the United States*, identified a dramatic growth in US waste exports to Canada, particularly to Quebec and Ontario.[143] Less stringent Canadian standards are the key factor for the increase. The report also noted that there are significant gaps in the systems for tracking hazardous waste generation and disposal. This report recommended that Canada establish regular waste generation and disposal reporting requirements for hazardous waste generators, as well as a system to make the information available to the public.

PRIOR INFORMED CONSENT (PIC) CONVENTION

The Rotterdam *Prior Informed Consent* or PIC treaty is an outgrowth of two earlier voluntary Guidelines: The 1985 FAO *International Code of Conduct on the Distribution and Use of Pesticides*, which required pesticide producers to follow standards on manufacturing, distributing, and labelling and the 1987 *London Guidelines for the Exchange of Information on Chemicals in International Trade*, concerning public information on hazardous industrial chemicals, and its companion document, the Prior Informed Consent (PIC) procedure. The principle of PIC says exports of dangerous substances should not proceed unless explicitly agreed by the importing country, after receiving and reviewing full information from the exporter.

PRIOR INFORMED CONSENT (PIC) CONVENTION

PRIOR INFORMED CONSENT (PIC) CONVENTION	**Link to the text:**	http://www.pic.int/
	Signed by Canada:	Not applicable
	Accession by Canada:	August 26, 2002
	International Status:	Not yet in force (requires 50 ratifications or accessions).
	National Status:	Not yet in force
	Amendments:	None
	Protocols:	None
	Secretariat:	UNEP and FAO are jointly providing the interim secretariat during the period between the adoption of the Convention and its entry into force.
	Implementing legislation in Canada:	No specific implementing legislation. CEPA is Canada's law controlling toxic chemicals.



[143] www.texascenter.org (Texas Center for Policy Studies).

The PIC treaty was negotiated under the joint auspices of UNEP and FAO. Its purpose is to allow nations to make informed choices about which chemicals and pesticides to import and to set a procedure for Parties to refuse to import these products if they are banned or restricted

The Convention has a long list of exemptions. It applies to banned or severely restricted chemicals; and severely hazardous pesticide formulations, but does not apply to:

(a) Narcotic drugs and psychotropic substances;

(b) Radioactive materials;

(c) Wastes;

(d) Chemical weapons;

(e) Pharmaceuticals, including human and veterinary drugs;

(f) Chemicals used as food additives;

(g) Food;

(h) Chemicals in quantities not likely to affect human health or the environment provided they are imported:

    (i) For the purpose of research or analysis; or

    (ii) By an individual for his or her own personal use in quantities reasonable for such use.

Like other MEAs, it operates with an Appendix listing the chemicals that will be subject to its provisions. This Appendix now lists 22 chemicals and 5 industrial chemicals. The Convention provides for a Scientific Review Committee to recommend additional chemicals to be listed in the Appendix to be subject to the prior informed consent procedure in the future.

Parties must make trade neutral decisions regarding refusal to import dangerous substances – they cannot produce the same substance domestically or import it from another country who is not a Party to the Convention.

The Convention is not yet in force. As of 2002, 30 countries had ratified it but 50 ratifications are required to bring it into force.

OIL AND CHEMICAL SPILLS CONVENTIONS

International laws governing marine oil and chemical spills include treaties on dumping wastes at sea, pollution from ships and response to and compensation for oil pollution damage. Oil is the most pervasive pollutant discharged from ships. Oil is both physically and chemically hazardous. Physically oil can coat and clog biological structures such as

feathers and gills that are adapted to cope with water. Chemically, oil contains toxins that can either poison living organisms directly or build up slowly in lower concentrations disrupting biochemistry. Organisms at the top of the food chain, including humans, are the most vulnerable to chronic pollution since the chemical toxins are not readily broken down and can bioaccumulate.

Over 3,200 tankers cross the world's ocean every day. Bilge and ballast water regularly discharged at sea, is often contaminated with oil, solvents and other chemicals. Although large oil spills by oil tankers are more well publicized, oil released from operational discharges and minor spills pose as great an environmental threat. In 1989, the Exxon Valdez ran aground off the coast of Alaska and spilled over 10 million gallons of oil into the pristine coastal waters. The oil created a 3000 square mile oil slick and affected 1,100 miles of shoreline.

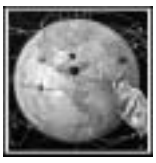
Increased public pressure has forced national and international organizations to set up the legal framework to effectively protect marine and coastal waters from oil and chemical pollution. As with other marine treaties, the oil and chemical spill treaties must balance the rights of coastal states to protect their marine environment with the rights of shipping states of freedom of navigation and innocent passage.

Marine pollution occurs from the routine operations and accidents of ships; from deliberate dumping or ocean disposal; and most prominently from land based sources. Each of these sources of pollution is governed by treaties.

Ship or vessel source pollution controls in treaties are extensive, and include:

- the 1973 *Convention for the Prevention of Pollution from Ships*, and its 1978 Protocol, and its six Annexes which together are know as MARPOL, short for Marine Pollution;
- other marine pollution prevention treaties such as the 1972 *London Dumping Convention;*
- the 1982 *Law of the Sea Convention* (LOSC), a comprehensive code regulating jurisdictional limits, ocean management and pollution control;
- all of the 13 regional seas conventions developed by UNEP to promote integrated oceans and coastal management;
- all of the treaties dealing with compensation and liability for marine pollution.

Prior to UNCLOS, nations were not required by international law to comprehensively regulate ocean pollution. Treaties existed for pollution from ships, dumping at sea and liability for some types of marine pollution. Some important States where ships were registered were not Parties to these earlier conventions and adopted their own lower national regulations. Pollution from pipelines and seabed operations were also not stringently regulated and land spills affecting waters were not covered. The legal regime needed altering. Coastal states could only regulate the operation of ships within limited areas of their territorial sea and for seabed operations on the continental shelf. Beyond the limited zones of coastal state authority, the flag state or state of nationality of ships retained sole jurisdiction over their ships.



The 1972 Stockholm Conference pointed out the need for a more thorough legal regime to protect the marine environment. The UN reconvened the Law of the Sea Conference in 1974 (earlier similar conferences had met in the 50s and 60s but did not focus on the environment) and negotiators produced a long and comprehensive "constitution for the oceans", the UN Convention on the Law of the Sea, UNCLOS, in 1982. The Convention creates a general duty to regulate all sources of marine pollution, part of a general obligation to protect and preserve the marine environment. This duty is qualified by Article 193 of UNCLOS which confirms the sovereign right of nations to exploit their natural resources. UNCLOS redistributed and redefined the balance of prescriptive powers and duties between coastal and flag states, giving more power to coastal states, and also shifted national maritime power more towards shared global responsibility for the seas.

UNCLOS deals with all sources of pollution of the marine environment including preventing intentional and unintentional pollution from vessels and seabed installations. UNCLOS also addresses land-based marine pollution sources.[144]

[144] See box with details of UNCLOS in chapter 6.

POLLUTION FROM SHIPS: THE MARPOL CONVENTION

MARPOL 73/78

Link to the text: http://www.imo.org/Conventions/contents.asp?doc_id=678&topic_id=258

Signed by Canada: N/A

Acceded to Canada: November 16, 1992

International Status: In force October 2, 1983

In Force in Canada: February 16, 1993

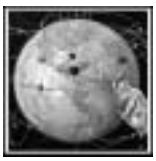
Amendments: See Below

Protocols: None

Secretariat: http://www.imo.org/

Implementing legislation in Canada: *Canada Shipping Act*

Amendments	Adopted	Date in Force
Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships	02/16/93	11/16/92
Amendments to Annex I (1984)	02/16/93	
Amendments to Annex II and Protocol (1985)	02/16/93	
Amendments to Annex I (1987)	02/16/93	
Amendments to the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC), the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH), and Annex II (1989)	02/16/93	
Amendments to Annexes I and V (1990)	02/16/93	
Amendments to Annex I and Annex V (1991)	04/04/93	
Amendments to Annex I (1992)		



The *International Convention for the Prevention of Pollution from Ships* (MARPOL) entered into force in 1973 and is augmented by a 1978 Protocol which entered into force in 1983. This Convention, like other marine conventions, is administered by the International Maritime Organization (IMO), an international organization originally formed to control shipping and now responsible for administering more than 40 conventions and agreements.

This convention provides a comprehensive framework to regulate the operational discharge and unintentional release of pollutants including oil and chemicals.

MARPOL's chief controls are on vessel discharges. MARPOL is a framework convention regulating different types of pollutants in Annexes. The annexes are:

1. the prevention of pollution by oil (Annex I);

2. the control of pollution by noxious liquid substances in bulk (Annex II);

3. the prevention of pollution by harmful substances in package forms (Annex III);

4. the prevention of pollution by sewage from ships (Annex IV) (not yet in force);

5. the prevention of pollution by garbage from ships (Annex V); and

6. the prevention of air pollution from ships (Annex VI) (not yet in force).

MARPOL outlines construction, design, equipment and manning specifications that reduce the chance for spills to occur. These include design specifications such as requiring new tankers to be built with double hulls and wing tanks extending the full depth of the ship's sides. To reduce the impact of pollution and spills, restrictions are placed on ships passing through designated ecologically sensitive areas. Governments with coastal areas in these regions are required to have adequate facilities for the reception and treatment of oil water and noxious liquid substances at port facilities.

Compliance is ensured through documentation requirements including record books, discharge data and certificates.

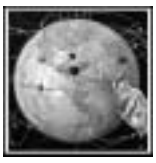
Despite these requirements, inspection, enforcement and punishment remain a challenge due to the separation of flag States, coastal States and port States. MARPOL depends on flag States to enforce its measures and punish violations. Shipowners often register their ships in countries with weak enforcement regimes or which are not parties to law of the sea agreements. Approximately 30% of the world's shipping tonnage is carried by ships operating under these "flags of convenience." Port states, however, can detain foreign ships if they fail inspections or threaten to cause pollution to their coast or waters.

Nonetheless, MARPOL is generally considered to be a successful convention. Ship-generated pollution has fallen since it was adopted – from approximately 35% of global marine pollution sources in the early 70's to approximately 10% by the early 90's.[145]

MARINE POLLUTION: THE LONDON DUMPING CONVENTION

CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTER, 1972 (THE "LONDON DUMPING CONVENTION")	**Link to the text:**	http://www.londonconvention.org/
	Signed by Canada:	December 29, 1972
	Ratified by Canada:	November 13, 1975
	International Status:	In force August 30,1975
	In Force in Canada:	December 13, 1975
	Amendments:	This Convention has had a number of amendments, not listed here. The 1996 consolidates all amendments and is intended to replace the 1972 Convention when it comes into force.
	Protocols:	1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. Accepted by Canada, May 15,2000. Not yet in force.
	Secretariat:	http://www.imo.org/
	Guide: *A Brief Description of the London 1972 Convention and the 1996 Protocol* at http://www.londonconvention.org/.	
	Implementing legislation in Canada: *Canadian Environmental Protection Act (CEPA).*	
INTERNATIONAL CONVENTION ON OIL POLLUTION PREPAREDNESS, RESPONSE AND COOPERATION	**Link to the text:**	http://sedac.ciesin.org/entri/register/reg-160.rrr.html
	Signed by Canada:	November 30, 1990
	Ratified by Canada:	March 7, 1994.
	International Status:	In force internationally May 13, 1995
	In Force in Canada:	In force May 13, 1995
	Amendments:	None
	Protocols:	Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (HNS Protocol) – 15/3/2000
	Secretariat:	http://www.imo.org/
	Implementing legislation in Canada: *Canada Shipping Act 2001*	

[145] Donald R. Rothwell, "Global Environmental Protection Instruments" in Davor Vidas, ed. *Protecting the Polar Marine Environment – Law and Policy for Pollution Prevention* (Cambridge: Cambridge University Press), 2000, 60.



International ocean dumping is subject to the 1972 *Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter,* also known as *the London Dumping Convention* and its subsequent 1996 Protocol which, when in force, will supersede the terms of the Convention. Deliberate ocean dumping is now virtually prohibited, with very limited exceptions. The treaty adopts a reverse listing approach - all dumping is prohibited unless an exemption appears in an Appendix allowing the dumping of the listed substance.

At-sea incineration and ocean disposal of radioactive materials is prohibited. The *London Convention* never permitted dumping of high level radioactive waste and completely banned dumping of all such waste in 1994.

The *Protocol,* not yet in force, adopts both the precautionary principle and the polluter pays principle. This approach means that the *Protocol* seeks finding solutions for land-based sources of marine pollution and encourages waste prevention, reflecting the relative contribution of dumping to the overall input of potential pollutants in the oceans , estimated at 10%. The main sources of marine pollution are: run-off and land-based discharges (44%), land-based discharges through the atmosphere (33%), followed by maritime transportation (12%).[146]

The prevention of marine pollution treaties also include the *International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC*) which requires Parties to establish measures for dealing with pollution incidents, such as requiring ships to carry a shipboard oil pollution emergency plan. Operators of offshore units under the jurisdiction of Parties are also required to have oil pollution emergency plans or similar arrangements which must be co-ordinated with national systems for responding promptly and effectively to oil pollution incidents. The Convention was expanded recently with a *Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances*, 2000 (HNS Protocol), adopted in London in March 2000. The Protocol will apply to all non-military ships and require them to carry a shipboard pollution emergency plan to deal specifically with hazardous and noxious substances. Liability and compensation regimes are also established. The Protocol is not yet in force and will enter into force when more than 15 member states ratify it. Another marine prevention pollution treaty negotiated under the auspices of the IMO is the *International Convention on the Control of Harmful Anti-fouling Systems on Ships* adopted in October 2001 and not yet in force. For more information on these treaties see the IMO web site at http://www.imo.org.

MARINE ENVIRONMENTAL COMPENSATION AND LIABILITY TREATIES

Concern over large oil spills from tankers led to the creation of treaties to establish liability rules for spills and rules for compensation for pollution damage.

---

[146] *A Brief Description of the London 1972 Convention and the 1996 Protocol* at http://www.londonconvention.org/.

MARINE ENVIRONMENTAL COMPENSATION AND LIABILITY TREATIES

INTERNATIONAL CONVENTION OF CIVIL LIABILITY FOR OIL POLLUTION DAMAGE

Link to the text: http://www.imo.org/Conventions/mainframe.asp?topic_id=256&doc_id=660

Signed by Canada: November 26, 1992

Ratified by Canada: January 24, 1989

International Status: In force internationally June 19, 1975

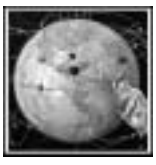
National Status: In force April 24, 1989

Amendments: See below

Protocols: None

Secretariat: http://www.imo.org/

AMENDMENTS	Date Signed	Date in Force	Ratified
1976 Protocol to the International Convention on Civil Liability for Oil Pollution Damage	11/19/76	04/24/89	01/24/89
1984 Protocol to the International Convention on Civil Liability for Oil Pollution Damage	05/25/84		
1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage			



INTERNATIONAL CONVENTION ON THE ESTABLISHMENT OF AN INTERNATIONAL FUND FOR COMPENSATION FOR OIL POLLUTION DAMAGE	**Link to the text:**	http://www.imo.org/Conventions/mainframe.asp?topic_id=256&doc_id=661
	Signed by Canada:	N/A
	Acceded to by Canada:	December 24, 1989
	International Status:	In force internationally October 16, 1978
	In Force in Canada:	In Force April 24, 2002
	Amendments:	Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage
	Protocols:	None
	Secretariat:	http://www.imo.org/

The *International Convention on Civil Liability for Oil Pollution Damage* was first adopted in 1969 to compensate victims of oil pollution and ensure that the shipowner was liable to pay the compensation. It sets uniform international rules and procedures for determining liability and compensation where damage is caused by pollution resulting from the escape or discharge of oil from ships. The Convention applies only to pollution damage caused in the territorial sea of a Party and applies to measures taken after the incident to prevent or minimize the damage.

The initial liability limits under this Convention were found to be too low, leading to more treaties on liability for pollution from ships.

The *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage* 1978 establishes the International Oil Pollution Compensation Fund to provide compensation for pollution damage resulting from the escape or discharge of oil from ships. The Convention also gives relief to ship owners from the additional burden imposed on them by the *Civil Liability* convention mentioned above. Relief is granted subject to conditions designed to ensure compliance with safety at sea and other conventions. The Convention outlines conditions under which the Fund will compensate oil pollution victims, especially where there is inadequate compensation under the *Civil Liability* convention.

This treaty was followed by two further treaties on compensation for spills of hazardous and noxious substances pollution from bunker oil, both of which are not yet in force. The *International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001* was adopted to ensure that adequate, prompt, and effective compensation is available to persons who suffer damage caused by spills of oil, when carried as fuel in ships' bunkers. And the *International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996* performs the same functions for hazardous chemical spills.

CONTROL OF LAND-BASED MARINE POLLUTION

Though catastrophic oil spills are the public image of marine pollution, more than 80% of pollution in the seas comes from land-based sources. The basic obligation found in Article 207 of UNCLOS for states to adopt laws at all levels to prevent, reduce and control pollution from these sources has been fleshed out in additional soft law documents, the 1995 *Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-Based Activities* and the 2001 *Montreal Guidelines to Implement the GPA*. The GPA requires states in agreement with its goals to prepare regional and National Programmes of Action (NPAs). Priority topics for action include combating harmful effects on the marine environment from sewage, persistent organic pollutants, radioactive substances, heavy metals, oils, litter, the physical alteration of timing, volume and quality of freshwater inflows with resulting changes to nutrient and sediment budgets and salinity regimes.

CANADIAN RESPONSE

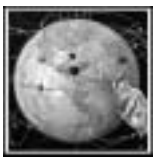
Although as of April 2001, 135 nations have ratified UNCLOS, Canada is not one of them. UNCLOS came into force internationally on November 16, 1994. Canada is a signatory to the Convention but has not ratified the Convention.

Canada is not a Party to the three optional annexes (III, IV and V) of MARPOL. Canada enforces MARPOL provisions primarily through Transport Canada. Compliance is ensured through inspections of ships. Disputes are settled through a binding and final arbitration tribunal.

Transport Canada is the lead government department to implement this group of treaties. Other departments that may be involved include CIDA, Department of Foreign Affairs and International Trade, Department of Justice Canada, Environment Canada, and DIAND.

Canada has not yet signed the HNS Protocol. The federal government has stated that ratification will be a matter of consultation with interested public and private sector parties.

In 2001, the *Canada Shipping Act 2001* came into force. The Act includes the requirements of MARPOL for ships to carry Oil Pollution Emergency Plans (OPEP) and imposes three additional requirements of the ship owner. Ship-owners have to show that they have an arrangement in place with a private sector-funded certified Response Organization, name every person authorized to implement the plan, and provide the name of the ship's insurer. Under the Act, regulations have been developed for the protection of the marine environment from oil and chemical spills. The two notable regulations are, *Oil Pollution Prevention Regulations* and *Dangerous Chemicals and Noxious Liquid Substances in Bulk Regulations*.



Canada has developed a National Programme of Action (NPA) to implement the *Montreal Guidelines for the Protection of the Marine Environment Against Land Based Sources of Pollution*, and the *Washington Global Programme of Action on Land Based Sources of Marine Pollution*.[147]

NGO INFORMATION

Greenpeace. www.greenpeace.org. Greenpeace is an independent, campaigning organization with non-violent, creative confrontation to expose global environmental problems, and force solutions for a green and peaceful future. Greenpeace's goal is to ensure the ability of the Earth to nurture life in all its diversity.

The International POPs Elimination Network (IPEN). www.ipen.org. IPEN is a global network of public interest non-governmental organisations united in support of a common POPs elimination goal. The mission of IPEN, achieved through its participating organizations, is to work for the global elimination of persistent organic pollutants, on an expedited yet socially equitable basis.

Basel Action Network. www.ban.org. The Basel Action Network (BAN) is a global network of toxics and development activist organizations that share a vision of international environmental justice. BAN seek to prevent all forms of "toxic trade" — in toxic wastes, toxic products and toxic technologies.

[147] The NPA is available on Environment Canada's website at http://www.ec.gc.ca/marine/npa-pan/index_e.htm.

CHAPTER 8 – ENVIRONMENT AND TRADE

Protests against globalization and unrestricted free trade, like the 1999 "Battle in Seattle", have focussed public attention on the links between trade and the environment. These links take a number of forms. Disagreements over the relationship between free trade and environmental protection persist.

Competing Views on Trade and Environment

Free trade supporters argue that trade helps developing countries obtain better technology and improve their economic performance which allows them to spend on stronger environmental protection. This view holds that while not all economic growth supports sustainable development:

"Sustainable development cannot be achieved-especially in the developing countries-without substantial economic growth and changed patterns of investment. Trade and foreign investment are important drivers to achieve the economic growth that could make sustainable development possible."[148]

Free trade opponents point to the direct impact of higher trade flows on the environment as a result of increased consumption, production, and transportation and argue that the current structure of the global economy is weighted against the environment. This view argues that although international rules are needed for key issues such as human rights and the protection of biodiversity, the success of strong free trade agreements has led away from sustainable development:

"If measured in terms of wealth distribution, environmental impacts, or economic stability, globalization appears to have exacerbated many of the problems it purported to solve…trade regimes have emerged as powerful new constraints on environmental law and policy. Moreover, the proliferation of trade disputes concerning environmental, conservation and public health measures – all of them successful – has underscored the need to develop a much more aggressive agenda for changing the WTO rules."[149]

[148] *IISD Statement on Trade and Sustainable Development*, available online at http://iisd1.iisd.ca/trade/statement.htm

[149] Steven Shrybman, *The World Trade Organization – A Citizen's Guide*, 2nd ed. (Toronto: James Lorimer and Co.), 2001, xv, 25.

Separate branches of international law govern trade and the environment. As each branch of law develops, opportunities for overlap and conflict expand. Environmental treaties increasingly affect economic relations. Trade restrictions or prohibitions in MEAs are only a small part of how national economies can be affected by MEAs. And trade laws require countries to structure their national laws, including environmental laws, in certain ways.

Trade agreements such as the *General Agreement on Tariffs and Trade* (GATT) (now administered along with associated agreements by the World Trade Organization) and the *North American Free Trade Agreement* (NAFTA) place a number of restrictions on a country's ability to adopt environmental regulations without facing trade sanctions from affected countries. Environmental decisions are increasingly dictated by trade considerations.

For example, rulings by the WTO's dispute resolution bodies directly affect Canadian law. A ruling against Canada on France's ban on imports of asbestos is under appeal. The lack of participation rights for non-states in these trade dispute resolution processes which involve significant matters of public interest has been criticized.

The Chapter 11 NAFTA investor-state dispute provisions have been particularly controversial. Critics charge that this investment chapter of NAFTA requires governments in some cases to compensate polluters when they have been ordered to stop polluting, in a secretive and undemocratic procedure. Examples of problematic cases include *Ethyl Corp. v. Canada*, in which Canada paid a US company $13 million for costs and lost profits related to a Canadian law which banned the import of the gasoline additive MMT into Canada for health and environmental reasons and *S.D. Myers v. Canada*, in which a NAFTA Tribunal held that Canada acted illegally by imposing a temporary ban on the export of PCB wastes to the US for environmental reasons, despite provisions to the contrary in both NAFTA and a Canada-US treaty on hazardous waste.

This set of treaties also has the potential to conflict with MEAs, though no dispute has yet materialized. Environmentalists can be envious of the power of these trade treaties – governments pay no equivalent level of attention to MEAs nor do they devote similar resources or enforcement to MEAs.

Trade and environment legal cases are complex and involve a host of lengthy and often impenetrable regional and international agreements.[150] A full discussion of these issues is beyond the scope of this report. This chapter briefly discusses the chief interactions between trade treaties and MEAS, which are:

- Global trade agreements, such as the set of treaties administered by the World Trade Organization (WTO) contain provisions related to the environment, which can be used to justify or overturn domestic environmental laws. A significant number of trade disputes in recent years have involved conflicts between trade rules and environmental laws.

[150] For a fuller description of these issues, see *Environment and Trade: A Handbook* (Winnipeg: IISD and UNEP), 2000.

- Regional trade agreements also contain environmental sections. For Canada, the *Free Trade Agreement* (FTA), and *North American Free Trade Agreement* (NAFTA) are the most important. The *North American Agreement on Environmental Cooperation*, a regional environmental agreement, was signed to alleviate public concerns about the impacts of these free trade agreements.

- Several MEAs prohibit trade with non-Parties or use trade restrictions or prior informed consent procedures to address a particular environmental problem.

The chapter then examines a case study of a MEA which illustrates some of the issues in the trade-environment debate: the *Biosafety Protocol*.

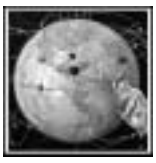
GLOBAL TRADE TREATIES

GLOBAL TRADE TREATIES: WTO & GATT

THE GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT) AND THE WORLD TRADE ORGANIZATION (WTO)	**Link to the text:**	http://www.wto.org/english/docs_e/legal_e/06-gatt.pdf
	Signed by Canada:	April 15, 1994
	Ratified by Canada:	November 30, 1994
	International Status:	In force January 1, 1995
	National Status:	In force January 1, 1995
	Amendments:	None
	Protocols:	None
	Secretariat:	www.wto.org
	Implementing legislation in Canada:	*World Trade Organization Agreement Implementation Act*

THE WORLD TRADE ORGANIZATION (WTO) AND WTO AGREEMENTS

The General Agreement on Tariffs and Trade (GATT), founded in 1947, started as both a legal agreement and as an international organization to support the agreement. In 1994, GATT was replaced by the World Trade Organization (WTO). The WTO administers a



number of agreements in addition to the updated 1994 version of GATT.[151] The WTO exists to oversee this set of agreements, administer the dispute settlement procedures, and further develop trade law.

First GATT and now the WTO obligate Parties to generally strive to eliminate tariffs as well as non-tariff barriers to achieve the goal of freer trade. All the WTO agreements are governed by one set of rules, including: non-discrimination ("most-favoured-nation" treatment and "national" treatment), predictable policies, encouraging competition, and extra provisions for less developed countries

Disputes arising under any of the WTO agreements are heard by a Dispute Settlement Body which has the authority to issue binding decisions, which are automatically adopted unless there is a consensus that the decisions should not be adopted. An Appellate Body may hear appeals. States can choose to ignore decisions requiring them to change their laws, but must then pay compensation to the aggrieved state or must face the consequences of trade sanctions.

To date, almost all the environment and trade disputes heard by the WTO's Dispute Settlement Body (DSB) (or its predecessor), in which countries had attempted to justify national laws the GATT 'environmental exceptions' (described below) have failed.[152] GATT Panels, and subsequently DSB decisions and Appellate Body decisions, have rejected claims that laws were passed to protect the environment, instead finding that their true intent was to restrict trade. Examples of environmental regulations that the WTO has ruled against include:

- a regulation under the US *Clean Air Act*,
- the sea turtle protections under the US *Endangered Species Act*, and
- a European ban on beef produced with growth hormones.[153]

These cases have fuelled criticism of the WTO by environmental groups. In the sea turtle dispute, though again the US law in question was found to breach trade rules and was not

---

[151] Some of the most significant from an environmental viewpoint are the new *General Agreement on Trade in Services* (GATS), the *Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPS), the *Agreement on Technical Barriers to Trade* (TBT), the *Agreement on Agriculture*, *the Agreement on Government Procurement*, the *Agreement on Trade-Related Investment Measures* (TRIMS) and the *Agreement on Sanitary and Phytosanitary Measures* (SPS). For a description of these agreements, see the WTO web site at http://www.wto.org.

[152] The exception related to the protection of health was recently upheld in a case involving Canada. Canada challenged France's ban on importing asbestos, and the WTO ruled that the ban was not a disguised trade restriction, but a valid restriction designed to address health risks arising from asbestos (the use of which is mostly banned in Canada).

[153] These cases are discussed and analyzed in Martin Wagner and Patti Goldman, *The Case for Rethinking the WTO, The full story behind the WTO's environment and health cases*, Earthjustice Legal Defense Fund, November 1999, available online at http://www.earthjustice.org/work/intl_index.html.

justified under these exceptions, the Appellate Body clarified the circumstances in which environmental laws might be upheld as legitimate exceptions to trade rules.[154]

THE GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT)

Parties who are GATT signatories are generally prohibited from imposing restrictions other than duties, taxes or other charges on the importation, exportation or sale for export of any product. GATT provides that any laws, charges or regulatory requirements applicable to imported products must also be applied to domestically produced products.[155] Quantitative restrictions on imports and exports are generally contrary to GATT.[156]

When a country's laws violate the trade rules contained in GATT, the offending country should withdraw or amend the law. There are some exceptions to the obligation to amend laws that are inconsistent with trade rules allowed by Article XX of GATT. Two exceptions relate to the environment:

"Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be constructed to prevent the adoption or enforcement by any contracting party of measures:

(b) necessary to protect human, animal plant life or health; [...]

(g) relating to the conservation of exhaustive natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption."[157]

These provisions are the main basis for upholding environmental protection measures that have negative trade effects. Article XX provides that restrictions on trade justified under paragraph XX(b) and XX(g) must not be "arbitrary or unjustifiable."

Both the earlier GATT decisions and the more recent WTO decisions involving conflicts between environmental and trade rules have sided in favour of trade.

An example of how a GATT decision can affect environmental protection and resource conservation in Canada comes from a case involving fisheries in BC. In 1987, the US federal trade representative initiated a complaint under GATT about the Canadian regulations that prohibited the export of unprocessed salmon and herring.[158] A GATT

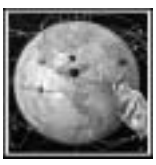
[154] See discussion of this case in Chapter 4.

[155] Article III, see also Julian Lew & Clive Stanbrook, *International Trade: Law and Practice*, Vol. II (1990).

[156] Article XI. This is subject to a number of exceptions in Article XI as well as those Article XX exceptions discussed below.

[157] At the time GATT was drafted, protection of the environment was not a matter of international concern and consequently no specific mention is made of the environment.

[158] The regulations were the *Pacific Commercial Salmon Fishery Regulations*, C.R.C. 1978, c. 823, s.6 and the *Pacific Herring Fishery Regulations*, SOR/84-324.



panel struck down these BC export restrictions. Justification for Canadian export regulations had been based in part on Canada's conservation obligations but the GATT panel dismissed these concerns.[159] The regulations were drafted to protect processing jobs in Canada and were found to constitute a trade barrier.

THE NORTH AMERICAN FREE TRADE AGEEMENT (NAFTA)

THE NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA)	**Link to the text:**	http://www.nafta-sec-alena.org/english/index.htm?nafta/nafta.htm
	Signed by Canada:	December 17, 1992
	Ratified by Canada:	June 23, 1993
	International Status:	In force January 1, 1994
	In Force in Canada:	In force January 1, 1994
	Amendments:	Annex 401: Specific Rules of Origin, Section A - General Interpretative Note
		Annex 403.1: List of Tariff Provisions for Article 403(1)
	Protocols:	None
	Secretariat:	www.nafta-sec-alena.org
	Implementing legislation in Canada:	*North American Free Trade Implementation Act*

The Canada-United States Free Trade Agreement (the FTA) preserves the general obligations of Article III of GATT. Since the North American Free Trade Agreement (NAFTA) duplicates much of the FTA, the FTA has been suspended during the time that NAFTA is in force by agreement between Canada and the United States.[160]

The North American Free Trade Agreement (NAFTA) also incorporates GATT obligations and exceptions. NAFTA is a trade agreement between Canada, Mexico and the United States, which entered into force January 1, 1994.

---

[159] *Canada – Measures Affecting Exports of Unprocessed Herring and Salmon, Report of the Panel* adopted on March 22, 1988, GATT, BISD, 35th sup. (Geneva, 1989) 1 Canada Trade and Sales Tax Cases 4191-4205.

[160] Barry Appleton, *Navigating NAFTA: A Concise User's Guide to the North American Free Trade Agreement*, (Carswell Thomson Professional Publishing: Toronto, 1994) at 21.

Article 104 of NAFTA provides that seven listed international environmental agreements take precedence over NAFTA if a conflict exists: the *Montreal Protocol*, the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* (when all three parties have ratified), *Convention on International Trade on Endangered Species*, the *Agreement between the US and Mexico on Co-operation for the Protection and Improvement on the Environment in the Border Area* and Canada-US and US-Mexico bilateral agreements on hazardous waste.

Article 1114 contains a qualified section which prohibits waiving environmental standards to attract investment. It states: "The Parties recognize that it is inappropriate to encourage investment by relaxing domestic health, safety or environmental measures. Accordingly, a Party should not waive or otherwise derogate from, or offer to waive or otherwise derogate from, such measures as an encouragement for the establishment, acquisition, expansion or retention in its territory of an investment of an investor."

Though no trade and environment disputes have yet arisen between the NAFTA Parties, there have been a number of cases involving investment disputes related to environmental laws. Article 1110 of NAFTA concerns expropriation and incorporates the international law rule that no expropriation can occur without compensation. Cases brought under this section have argued that new environmental regulations can constitute expropriation.[161]

Notorious "chapter 11" cases include the decided cases of:

- *Ethyl Corp. v. Canada*, in which Canada paid Ethyl $13 million for costs and lost profits related to a law temporarily in effect in Canada which banned the import of MMT, a suspected neurotoxin, manufactured by Ethyl, and

- *Metalclad v. Mexico*, in which a NAFTA tribunal awarded over $16 million in damages to Metalclad against the Mexican government for effectively prohibiting the completion of a hazardous waste landfill which Metalclad had started to build despite never having obtained a municipal permit for this construction. An appeal in the BC Supreme Court held that though the Tribunal had used an extremely broad definition of expropriation, it was not patently unreasonable, and reduced the award of damages to approximately US$15 million.

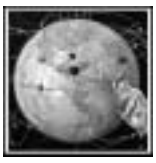
A controversial case which has not yet been decided is:

- *Sun Belt Water v. Canada*, in which Sun Belt is claiming $1.5-10 *billion* for damages allegedly suffered when the BC government imposed a moratorium on the issuance of any new licenses for bulk water exports, and suspended Sun Belt's existing license. This case has not been heard.[162]

---

[161] A full discussion of these cases is at Howard Mann, *Private Rights, Public Problems: A Guide to NAFTA's Chapter on Investor Rights*, (Winnipeg: IISD) 2001, online at http://iisd1.iisd.ca/trade/private_rights.htm.

[162] The legal documentation for all NAFTA chapter 11 claims to which Canada is a Party can be found at http://www.dfait-maeci.gc.ca/tna-nac/NAFTA-e.asp#11.



As a result of these and other claims, the NAFTA Parties through their Trade Ministers have agreed to a note to clarify the chapter 11 provisions. The note makes positive recommendations about transparency, but does not touch on what government actions are tantamount to expropriation, the most controversial aspect of chapter 11.[163]

NORTH AMERICAN AGREEMENT ON ENVIRONMENTAL COOPERATION (NAAEC)

THE NORTH AMERICAN AGREEMENT ON ENVIRONMENTAL COOPERATION (NAAEC)	**Link to the text:**	http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/index.cfm?varlan=english
	Signed by Canada:	September 14, 1993
	Ratified by Canada:	N/A
	International Status:	In Force January 1, 1994
	In Force in Canada:	January 1, 1994
	Amendments:	None
	Protocols:	None
	Secretariat:	Commission on Environmental Cooperation at http://www.cec.org/
	Implementing legislation in Canada: None	

The North American Agreement on Environmental Cooperation (NAAEC) complements NAFTA's environmental provisions. Negotiated as one of the "side agreements" to NAFTA, it addresses issues such as enforcement of domestic environmental laws and transboundary pollution. Article 8 of NAAEC establishes the Commission on Environmental Cooperation (CEC) composed of a Council, a Secretariat and a Joint Public Advisory Committee. The CEC plays a role in ensuring that domestic environmental laws are properly enforced through a unique public complaint mechanism regarding allegations of persistent non-enforcement of environmental laws, described in chapter 4. The CEC also monitors the environmental effects of NAFTA, and sponsors a research program on trade and the environment.

[163] **Notes of Interpretation of Certain Chapter 11 Provisions, at** http://www.dfait-maeci.gc.ca/tna-nac/NAFTA-Interpr-e.asp.

MEAS WITH TRADE PROVISIONS

Trade measures are used with some success in certain MEAs. More than twenty MEAs use trade restricting measures, which can be an important tool for compliance. The WTO Committee on Trade and Environment (CTE) examines the relationship between MEAs and trade rules.

One of the best-known examples is the 1975 *Convention on the International Trade in Endangered Species of Wild Flora and Fauna* (CITES) which establishes limits on wildlife trade and requires each Party to the treaty to take measures to penalize wildlife trade that contravenes CITES. Similarly, the *Montreal Protocol on Substances that Deplete the Ozone Layer* and the *Basel Convention on the Transboundary Movement of Hazardous Waste* employ a system of trade measures to achieve the treaty's goals.

There is some evidence that trade measures that have been used in the MEA context have increased effectiveness, though these measures have been more often threatened than used.[164]

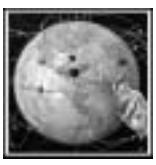
Three newer MEAs also employ trade measures. The *Prior Informed Consent (PIC) Convention* or *International Legally Binding Instrument for the Application of the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* allows importing country Parties to decide whether and how they will receive future shipments of certain chemicals and requires exporting Parties to abide by the procedures outlined in the Convention. The Convention covers twenty two pesticides and five industrial chemicals. Before trade of these listed substances occurs, notification, labelling and information procedures are followed.[165]

The *POPs Convention* also contains trade restricting measures.

The Cartagena *Protocol on Biosafety*, discussed below, also uses trade measures to achieve its goals. How the trade sections of this *Protocol* will work with existing trade rules is not yet clear.

[164] OECD, *Trade Measures in Multilateral Environmental Agreements: Synthesis Report of Three Case Studies*, (OECD: Paris) 1998.

[165] See the website for the Rotterdam PIC Convention at http://www.pic.int.



CASE STUDY: CARTEGENA PROTOCOL ON BIOSAFETY – AN ENVIRONMENT AND TRADE TREATY

> "A biosafety regime is badly needed to control, apart from mere transboundary shipments, the very science, business, market and economics of modifying living organisms itself, which are designed by multimillion dollar corporations to take over world agricultural production, replacing biological agriculture and traditional varieties through a myriad of questionable schemes, such as the use of genetic engineering to program the extermination of seeds in the second generation (which force farm workers to buy new seeds each year), the creation of dependency through the initial offering of cheap seeds and agrochemicals, until the farm workers lose their traditional systems of seed supply, soil fertilization and pest control, so that immediately afterwards, once the dependency is secured, prices are elevated that compensate for the previous subsidies involved in the low prices to hook them. Then, the corporations involved make the seeds more and more dependent on agrochemicals, which they sell, with adverse consequences for the environment."
>
> — Mexican environmental lawyer and Ambassador Alberto Szekeley's rationale for the *Biosafety Protocol* is one perspective on some of the controversies surrounding genetically modified organisms.

The successful conclusion in January 2000 of the *Cartagena Protocol on Biosafety*, a supplementary agreement to the *Convention on Biological Diversity* (CBD) integrates both trade and environment. The *Protocol* sets rules for the safe transfer, handling and use of living modified organisms (LMOs) that may have an adverse effect on biodiversity, taking into account human health, with a specific focus on transboundary movements. Coming so soon after the failed WTO talks in Seattle, the *Biosafety Protocol* showed that nations can successfully reach agreements that balance environmental and trade goals. Some noteworthy features of this MEA are its:

- treatment of the precautionary principle,
- recognition of developing country needs,
- mechanisms for risk assessment and risk management,
- establishment of a regime of "advance informed agreement" (AIA) for imports of LMOs which will be intentionally released into the environment, and
- ambiguous language on its relationship to trade law.

Background on Biosafety

The operation of the modern biotechnology industry creates dilemmas for trade and the environment which this *Protocol* attempts to resolve.

Genetically modified organisms (GMOs) have as yet unknown impacts on human health and the environment. A key unresolved issue is the extent to which GMOs may disrupt local ecosystems. The purpose of genetic modification is to improve shelf life, pesticide or

herbicide resistance, or to eliminate or add to other features of an existing natural organism.

Genetically modified food in particular is controversial. Many consumers advocate labelling of all genetically modified food, a practice now adopted by some food manufacturers, but with no common guidelines or regulations. These foods are becoming more common as crops such as canola, soy, corn, cotton, potatoes, and tomatoes are now frequently genetically modified. An area almost twice the size of the UK is now cultivated with GM crops, and seven per cent of that area is in Canada.[166]

The developing world's perspective generally is that as the benefits of biotechnology flow to industrialized countries, they also must pay for the risks caused by handling, transfer and use of Living Modified Organisms (LMOs) resulting from biotechnology. Liability and compensation are issues covered by the Protocol in summary form, to be fully resolved by future negotiations.

Agricultural trade is a key part of the global economy, and genetically modified grains, soy and cotton make up an increasing share of this trade. Some developing countries such as China and Argentina produce genetically modified crops for domestic production and are involved in biotechnology research. Agricultural trade, especially the export of grain, is a major economic activity in Canada. Canada's goal in these negotiations was to ensure that the *Protocol* was compatible with existing international trade rules. Protection of biodiversity was to be achieved while at the same time continuing trade of genetically modified plants, animals and micro-organisms. The bulk handling and transportation systems in Canada do not easily allow for the segregation of LMO and non-LMO varieties. The combined exports of shipments of crops like approved LMO varieties of canola, corn, soybeans and potatoes, along with the trade of "LMOs intended for introduction into the environment" (i.e. seed for planting, fish, saplings) which countries have already agreed to subject to the Protocol's regulatory approval procedures, was well over $3 billion in 1998.[167]

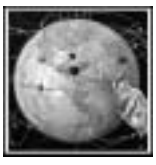
The ***Biosafety Protocol*** – Overview

The *Protocol's* objective is to protect biological diversity from the potential risks posed by LMOs resulting from modern biotechnology. In the *Biodiversity Convention*, the Parties agreed to consider the need for a Protocol setting out procedures in the field of the safe transfer, handling and use of living modified organisms that may have an adverse effect on biodiversity and its components.

Inclusion of a Biosafety Protocol was a key condition of the developing world's agreement to the entire *Biodiversity Convention*. As the storehouse of much of the world's biological diversity, particularly agricultural crop diversity, the South has the most to lose from the proliferation of Northern-produced genetically modified crops that could both replace

[166] Canadian Biotechnology Advisory Committee, Interim Report on Improving the Regulation of Genetically Modified Foods and Other Novel Foods in Canada, (Ottawa: CBAC) 2001.

[167] Biodiversity Convention Office, *The Biosafety Protocol & Agricultural Trade*, (Ottawa: Environment Canada), 2000, on line at http://www.bco.ec.gc.ca/en/activities/ProjectsBiosafe.cfm.



their chief exports and, if introduced in their countries, wreak havoc in unforeseen ways to their biodiversity.

Over 100 states are now signatories to the *Protocol*. Canada signed the *Protocol* in April 2001. Fifty ratifications are necessary for the *Protocol's* entry into force, but only six states had ratified it as of October 2001.

The *Protocol* sets up a consent procedure so that a country is provided with the information necessary to make an informed decision on whether to allow the import of seeds, live fish, and other LMOs destined for intentional introduction into its jurisdiction. The procedure does not apply to the import of LMOs destined for contained use, although the *Protocol* reaffirms the right of any country to subject all such LMOs to prior risk assessment and to set standards for contained use. These decisions will be communicated to the world community via an internet-based Biosafety Clearing House Mechanism which will facilitate the exchange of information on LMOs and assist countries in the implementation of the *Protocol*.

The major elements of the *Protocol*, are discussed below. A number of the Protocol's provisions have the potential to conflict with trade rules.

The ***Biosafety Protocol*** – Major Elements

A. Advance Informed Agreement (AIA)

The need for countries to demonstrate their consent to activities involving environmental risk is elaborated in several MEAs and is a feature in domestic environmental law. Consent is valid only if given freely and on the basis of full information. Rather than the more commonly used term "prior informed consent", the *Protocol* uses "Advance informed agreement" or "AIA". Transfers of LMOs that are to be intentionally released into the environment may not occur until the importing country has made a decision to permit the import; permit it only with conditions; prohibit it; or request further information prior to making a decision. The exporting party must notify and receive consent from an importing party prior to the first shipment of such LMOs. Documentation requirements, such as packaging, transport practices, identification, and handling could potentially have a significant effect on international trade practices, especially the requirements of the WTO *Technical Barriers to Trade Agreement* (TBT Agreement).

B. Precautionary Principle

The precautionary principle, which says that in cases involving threats of serious or irreversible damage, regulatory action may be taken in the absence of conclusive scientific evidence of environmental harm or risk, is a highlight of the *Protocol*. The phrase "precautionary approach" appears in the Protocol's preamble and in Article 10(6) which allows Parties to refuse LMO imports even if there is "lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse affects of a living modified organism on the conservation and sustainable use of biological diversity in the party of import". This part of the *Protocol* means that a Party's ability to regulate will not necessarily be hampered by the scientific uncertainties surrounding the potential impact of GMOs. However, as the *Protocol* is not supposed to affect trade rules, how Parties will take regulatory or other action without being accused of market restrictions remains to be seen.

C. Treatment of Non-Parties

The *Protocol* requires transboundary movements of living modified organisms between Parties and non-Parties to be consistent with its objective. The *Protocol* states that Parties may enter into bilateral, regional and multilateral agreements and arrangements with non-Parties regarding transboundary movements of LMOS.

D. Relationship to WTO

The final decision on the relationship of this *Protocol* to WTO rules has been described as a conflict postponed rather than a conflict avoided.[168]

There is no doubt that the *Protocol* has the potential to restrict trade. If a Party decides to ban imports of a particular type of genetically modified food, citing the precautionary principle as justification, exporters could claim a breach of the WTO rules, which are expressly not affected by the *Protocol*.

How the *Protocol* will be interpreted in the event of a dispute is open to question. The *Protocol* could be the agreed international standard for deciding whether a trade claim is justified, and as a more recently concluded treaty than the WTO set of agreements, could prevail according to the *Vienna Convention on the Law of Treaties*. Other parts of the *Protocol* could also guide future decision-makers – especially provisions on the precautionary principle, the inclusion of human health, and the shielding of domestic regulatory regimes. The section in the Preamble stating that this Protocol shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements, and that the Protocol is not intended to be subordinate to other international agreements, also may be used for interpretation in the event of a dispute.[169]

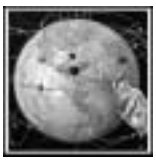
Conclusion

The *Biosafety Protocol* has been called a victory for the CBD, and a gain for the developing world, who had insisted on the need for such a Protocol and maintained this position throughout the prolonged and sometimes hostile negotiations. For many, the final conclusion of the *Protocol* demonstrated the ability of the international community to make progress on an issue combining deep public concern, economic importance, and environmental significance.

A contrary view is held by the expert quoted at the beginning of this chapter. For Ambassador Szekeley, there are many signs that the *Protocol* that favours the commercial interests of the largest and most powerful global corporations over the "social victims": the *Protocol* excludes pharmaceuticals for humans, the trade-environment dispute was handled in a "mischievous and tricky" fashion, a weaker regime was set up for foods and feed, and most importantly the AIA procedure is "meaningless, particularly when one takes into account the almost total lack of capacity, financial and human resources and

[168] Aaron Cosbey and Stas Burgiel, *The Cartagena Protocol on Biosafety: An analysis of results* (Winnipeg: IISD) 2000.

[169] Michelle Swenarchuk, *The Cartagena Biosafety Protocol: Opportunities and Limitations*, (Toronto: CELA) 2000 at http://www.cela.ca/international/biosafe.htm.



know-how in the vast majority of developing countries, which lack even the most elementary national laws and regulations."

SOURCES OF INFORMATION

IISD web site – IISD's Work on Investment and Sustainable Development is online at http://iisd1.iisd.ca/trade/investment_regime.htm. This comprehensive site contains these publications:

Environment and Trade: A Handbook, 2000, IISD and UNEP.

Private Rights, Public Problems: A Guide to NAFTA's Chapter on Investor Rights, 2001.

World Trade Organization website – ***TRADING INTO THE FUTURE:*** *INTRODUCTION TO THE WTO* on line at http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm0_e.htm.

Commission on Environmental Cooperation – has an Environment and Trade Series of reports on its web site at http://www.cec.org.

Steven Shrybman, *The World Trade Organization – A Citizen's Guide*, 2nd ed. (Toronto: James Lorimer and Co.), 2001.

NGO INFORMATION

WTO WATCH – The Trade Observatory on WTO, Globalization, Trade and Sustainable Development WTO Watch.org features an assortment of interactive web-based applications that allow visitors to dynamically contribute and retrieve content. http://www.wtowatch.org/.

Public Citizen is a national, non-profit consumer advocacy organization founded by Ralph Nader in 1971 to represent consumer interests in Congress, the executive branch and the courts. http://www.citizen.org/index.cfm.

The Council of Canadians, an independent, non-partisan citizens' interest group providing a critical and progressive voice on key national and international issues. http://www.canadians.org/.

The Sierra Club of Canada hosts the Canadian Alliance on Trade and Environment (CATE) representing a coalition of Canadian public interest and labour groups. The mission of CATE is twofold: 1) to represent common interests of its supporting organizations by advocating that governments and other institutions in Canada defend the environment and democratic rights on matters related to trade; 2) to bring about full access and input for civil society at the level of national and multilateral trade policy development. http://www.sierraclub.ca/national/trade-env/.

West Coast Environmental Law educates and informs on trade and environment issues: http://www.wcel.org/trade/.

The Canadian Environmental Law Association has many resources on this topic: http://www.cela.ca/international/internat_index.htm.

BIOSAFETY LINKS

The Biosafety Home page of the *Convention on Biological Diversity* is at http://www.biodiv.org/biosafety/.

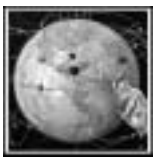
The **Canadian Biodiversity Convention Office of Environment Canada** maintains a page devoted to biosafety at http://www.bco.ec.gc.ca/en/activities/ProjectsBiosafe.cfm.

The **Canadian Biotechnology Advisory Council (CBAC)** was created to provide independent advice to the seven ministers of the Biotechnology Ministerial Coordinating Committee (BMCC), Ministers of Agriculture and Agri-Food, Environment, Fisheries & Oceans, Foreign Affairs & International Trade, Health, Industry and Natural Resources on a broad range of ethical, social, regulatory, economic, environmental and health issues related to the development and application of biotechnology. Website: http://www.cbac.gc.ca.

The **Institute for Agriculture and Trade Policy** promotes resilient family farms, rural communities and ecosystems around the world through research and education, science and technology, and advocacy. http://www.iatp.org/. The IATP has programs in: Environment & Agriculture, Food & Agriculture, Forestry, Global Governance, Trade & Agriculture.

The **International Centre for Trade and Sustainable Development (ICTSD)**, an independent non-profit and non-governmental organisation was established in Geneva in September 1996 to contribute to a better understanding of development and environment concerns in the context of international trade. http://www.ictsd.org/. The ICTSD publishes *BRIDGES* Weekly Trade News Digest http://www.ictsd.org/weekly/index.htm and *BRIDGES* Monthly Review http://www.ictsd.org/monthly/index.htm.

Rural Advancement Foundation International (RAFI) now officially known as ETC (pronounced etcetera) group-Action Group on Erosion, Technology and Concentration at http://www.rafi.org/.



CHAPTER 9 – ENVIRONMENT AND HUMAN RIGHTS

LINKING HUMAN RIGHTS AND THE ENVIRONMENT

> "Many of the fundamental rights enshrined in the Universal Declaration of Human Rights have significant environmental dimensions. Environmental conditions clearly help to determine the extent to which people enjoy their basic rights to life, health, adequate food and housing, and traditional livelihood and culture. It is time to recognize that those who pollute or destroy the natural environment are not just committing a crime against nature, but are violating human rights as well. Human rights cannot be secured in a degraded or polluted environment. The fundamental right to life is threatened by soil degradation and deforestation and by exposure to toxic chemicals, hazardous wastes, and contaminated drinking water. For this reason, we believe that the successful implementation of environmental treaties on biodiversity, climate change, desertification and chemicals can make a major contribution to protecting human rights." UNEP Executive Director, Klaus Toepfer, April 2001.[170]

Environmental campaigners have often been denied civil and political rights, including freedom of expression, freedom of assembly and the right to a fair trial. The murder of Chico Mendes in Brazil and the state execution of Ken Saro-Wiwa in Nigeria are examples of the most extreme denial of rights- the right to life itself. Protecting human rights means that people are then able to demand better environmental protection from their governments. Whether those rights are protected by international or national human rights law, by the application of a constitutional right to a healthy environment, or through the development of legally-binding standards in treaties such as the *Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, is immaterial.

The international community has been moving in the direction of linking environmental and human rights protection, as shown by numerous national, regional and international legal developments. No right to a healthy environment yet exists in international law, though many people advocate the creation of such a right.

Many of the fundamental rights enshrined in the *Universal Declaration of Human Rights* have significant environmental dimensions. Multilateral environmental agreements contain human rights provisions, global and regional human rights bodies have developed jurisprudence on environmental and human rights questions, international

[170] E/CN.4/2001/L.79.

agencies have incorporated these topics into their work, and numerous developments have occurred at the national case law level. The constitutions of 109 countries (out of the 190 nations in the world) mention the protection of the environment or natural resources. One hundred of these constitutions recognize the right to a clean or healthy environment and/or the state's obligation to prevent environmental harm.[171]

The international law of human rights is well developed. There are six core human rights treaties and an overarching statement, the *Universal Declaration of Human Rights*. The first part of this chapter briefly describes the major human rights treaties and their relationship to environmental protection. None of the six 'core' human rights treaties refer to environmental rights, likely because the environment was not a topic of global concern when these treaties were drafted.

Then the second section describes international efforts by the United Nations and others to link environmental and human rights.

The third part outlines how human rights can be used to achieve environmental goals.

The fourth part of the chapter is a case study. Construction of the Three Gorges Dam in China involves both environmental and human rights issues. International environmental law had no mechanisms to bar construction of this project. Human rights treaties also provided no remedies in this case. Many NGOs responded by focussing on another international law angle: the provision of financial and other support by export credit agencies allowed the project to proceed. Changing the rules of these agencies is one way to integrate environmental and human rights issues.

INTERNATIONAL HUMAN RIGHTS LAW

The chief UN organization involved in human rights protection is the UN Commission on Human Rights. It meets annually for six weeks in Geneva.

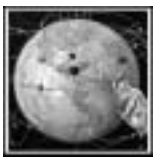
The main international human rights laws are the *Universal Declaration of Human Rights,* a non-binding yet highly influential Declaration, and six treaties, often referred to as the 'core' human rights treaties:

1. The *International Covenant on Civil and Political Rights*, adopted in 1966 and entered into force in 1976.

2. The *International Covenant on Economic, Social and Cultural Rights,* also adopted in 1966 and entered into force in 1976.

3. The *International Covenant on the Elimination of All Forms of Racial Discrimination*, adopted in 1965 and entered into force in 1969.

4. The *Convention on the Elimination of All Forms of Discrimination Against Women*, adopted in 1979 and entered into force in 1981.



[171] Earthjustice, *Issue Paper- Human Rights and the Environment* (San Francisco: Earthjustice) 2001.

5. The *Convention Against Torture and Other Cruel, Inhuman and Degrading Treatment or Punishment*, adopted in 1984 and entered into force in 1989.

6. The *Convention on the Rights of the Child*, adopted in 1989 and entered into force in 1990.

At an influential World Conference on Human Rights in 1993, nations adopted the *Vienna Declaration and Programme of Action*. An often-quoted provision from this Declaration states:

> 'All human rights are universal, indivisible and interdependent and interrelated. The international community must treat human rights globally in a fair and equal manner, on the same footing, and with the same emphasis. While the significance of national and regional particularities and various historical, cultural and religious backgrounds must be borne in mind, it is the duty of States, regardless of their political, economic and cultural systems, to promote and protect all human rights and fundamental freedoms.'[172]

THE UNIVERSAL DECLARATION OF HUMAN RIGHTS

The first major UN human rights instrument, the *Universal Declaration of Human Rights* was adopted by the United Nations General Assembly in 1948 in response to the atrocities of the Holocaust and World War II.[173] Since its adoption, the *Universal Declaration* has become a cornerstone of customary international law, and all governments are now bound to apply its principles. The Declaration divides human rights into two separate categories:

- civil and political rights, and
- economic, social and cultural rights.

To fully implement these rights in international law, the Declaration was followed by two binding human rights covenants, both of which have been ratified by Canada, discussed below.

INTERNATIONAL COVENANT ON CIVIL AND POLITICAL RIGHTS

The *International Covenant on Civil and Political Rights* (ICCPR) protects rights such as the right to be free of arbitrary arrest and from torture, right to a fair trial, freedom of movement, and freedom of thought, conscience, religion, opinion and expression. The Covenant is designed to protect individuals against unjust government interference.

Many human rights in this Covenant have direct relevance to environmental protection, such as the:

---

[172] A description of the Conference can be found at http://www.unhchr.ch/html/menu5/wchr.htm and the Vienna Declaration is online at http://www.unhchr.ch/huridocda/huridoca.nsf/(Symbol)/A.CONF.157.23.En?OpenDocument.

[173] Text available at http://www.un.org/Overview/rights.html.

- Right to life (ICCPR, Article 6)
- Association (ICCPR 22)
- Expression (ICCPR, 19)
- Participation in public life (ICCPR, 25)
- Personal liberty (ICCPR, 9)
- Equality and non-discrimination (ICCPR, 3, 26)
- Rights of access to the courts and fair trial (ICCPR, 9,14,26)

The ICCPR establishes a Human Rights Committee that reviews individual complaints based on violations of the Covenant. The Committee's decisions are not binding, but do have the power of moral suasion. The Human Rights Committee has, for example, found violations by Canada of Article 17 on minority and cultural rights based on complaints by the Lubicon Indian Band regarding threats posed by oil and gas exploration.[174]

INTERNATIONAL COVENANT ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS

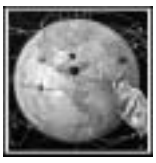
The *International Covenant on Economic Social and Cultural Rights* (ICESCR) protects rights such as the right to work, food, clothing, housing, social security, and education.

Each country must take affirmative action to promote these rights. Implementation of the ICESCR is monitored through the submission of periodic reports. The Covenant requires Parties to "undertake steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the Covenant, by all appropriate means, including particularly the adoption of legislative measures."

Rights in this Covenant relevant to environmental protection include:

- Right to health (ICESCR, 12, includes "environmental and industrial hygiene")
- Adequate standard of living and continuous improvement of living conditions (ICESCR, 11)
- Decent and safe working environment (ICESCR, 7)
- Education (ICECSR, 13)

[174] Lubicon Lake Band v. Canada, Communication No. 167/1984 (26 March 1990), U.N. Doc. Supp. No. 40 (A/45/40) at 1 (1990). At http://www1.umn.edu/humanrts/undocs/session45/167-1984.htm.



- Cultural life (ICESCR, 15)

The UN Committee on Economic, Social and Cultural Rights, a body of independent experts, whose function is to examine periodic reports of States and to make general comments about States' implementation of the rights, has stated that the right to health has environmental dimensions. Its statements are authoritative, but not binding. In its General Comment No 14 on the Right to Health issued in 2000, the Committee made a number of references to the environmental dimension of those rights. For example, "The drafting history and the express wording of article 12.2 acknowledge that the right to health embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinants of health, such as food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment."[175] The Committee also noted that the right to health, like all human rights, imposes three types or levels of obligations on States parties: to respect, protect and fulfil those rights. Each of those obligations requires positive action, for example to refrain from unlawfully polluting air, water and soil, e.g., through industrial waste from State-owned facilities; from using or testing nuclear, biological or chemical weapons if such testing results in the release of substances harmful to human health; and to adopt measures against environmental and occupational health hazards and against any other threat as demonstrated by epidemiological data.

REGIONAL HUMAN RIGHTS SYSTEM

Asia, the Americas and Europe have all established regional human rights systems. Regional treaties such as the *African Charter on Human and Peoples' Rights* and *the Protocol of San Salvador* to the American Convention on Human Rights expressly recognize the right to live in a healthy or satisfactory environment.

Americas – The Inter-American Commission on Human Rights and the Inter-American Court on Human Rights hear allegations of rights violations arising under the *American Declaration of Human Rights and the Duties of Man* (1948) and the *American Convention on Human Rights* (1978). Both the Convention and the Declaration apply to Organization of American States (OAS) members that have ratified the Convention.

Cases decided by this Court have found violations by:

- Brazil, of the Yanomani Indians' right to life by not taking measures to prevent environmental damage.[176]

- Nicaragua, of the Mayagna Sumo Indigenous Community (the Awas Tingni) rights related to traditional lands, natural resources, and environment.[177]

---

[175] COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS, Twenty-second session, Geneva, 25 April-12 May 2000, E/C.12/2000/4, CESCR, available online at the CHR web site at http://www.unhchr.ch.

[176] Yanomani Indians v. Brazil, Inter-Amer. C.H.R. (1985).

Europe – The European Union has a well-developed set of human rights laws and policies that apply to all EU member states. Jurisprudence from the European Court of Human Rights has made a clear connection between a violation of the right to privacy and home life and the right not to be subject to pollution, including the right to know whether pollution is likely to affect a particular individual or community.[178] The *Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, a UNECE treaty, came into force in October 2001. It has provisions on rights of

- access to information
- public participation in environmental decision-making
- and access to justice

Article 1 of the *Aarhus Convention* refers to the "right" of every person "to live in an environment adequate to his or her health and well-being".

Africa – The *African Charter on Human and Peoples' Rights* was adopted in 1982. The Charter includes civil and political rights, economic, social and cultural rights, and controversially, solidarity rights, which include the right of people to a "general satisfactory environment favourable to their development."

INTERNATIONAL ENVIRONMENTAL RIGHTS

International environmental rights emerged as a topic of discussion at the 1972 UN Conference on the Human Environment. The Preamble to the *Stockholm Declaration* states that both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights the right to life itself. Principle 1 continues:

> "Man has the fundamental right to freedom, equality, and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.[179]

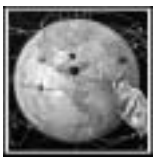
This *Declaration* was the first international law instrument to recognize the link between environmental protection and human rights, without specifically proclaiming a right to a clean environment.

---

[177] Mayagno (Sumo) Community of Awas Tigni v. Republic of Nicaragua, Case No. 11.555.

[178] For cases from the European Court of Human Rights, see its web site at http://www.echr.coe.int/ . Cases interpreting this Article of the European Convention include *Lopez Ostra v. Spain*, 303 – C Eur. Ct.H.R. (Ser. A), 1994 and *Powell and Ravner v. U.K.*, 173 Eur. Ct.H.R. (Ser. A), 1990.

[179] The Stockholm Declaration can be found on line at http://www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503..



In 1990, the UN General Assembly passed a resolution which recognizes that 'all individuals are entitled to live in an environment adequate for their health and well-being.'[180]

The *Rio Declaration on Environment and Development* adopted in 1992 at the United Nations Conference on Environment and Development (Earth Summit) does not address environmental rights or human rights in any depth, except in Principle 1: 'Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.'

Throughout the 1990s, work on the international links between environment and human rights continued at the UN Commission on Human Rights. A coalition of NGOs persuaded one of the UN human rights bodies, the UN Commission on Human Rights' Sub-Commission on Prevention of Discrimination and Protection of Minorities, to prepare an international study on the overlap between human rights and environmental issues. That Sub-Commission (now called the Sub-Commission on the Promotion and Protection of Human Rights) appointed a Special Rapporteur on Human Rights and the Environment to prepare the study. The Rapporteur's work has been controversial. In 1994, the Special Rapporteur, Mrs. Fatma Zohra Ksentini, produced her final report on human rights and the environment which has come to be known as the "Ksentini Report".[181] The report explains how human rights apply to environmental issues.

The Ksentini Report analyzes the legal foundation for the right to a satisfactory environment, and surveys the major international and regional human rights instruments. The Report concludes that deterioration of the environment can seriously impair the enjoyment of many fundamental human rights, including the right to self-determination and permanent sovereignty over natural resources; the right to life; the right to health; the right to food; the right to safe and healthy working conditions; the right to housing; the right to information; popular participation; freedom of association; and cultural rights. It also concludes that effective implementation of the right to a satisfactory environment cannot be dissociated from the twinned efforts to preserve the environment and ensure the right to development. A set of *Draft Principles on Human Rights and the Environment* are attached to the Report. These *Principles* have not been adopted by the UN.

---

[180] UNGA No. A/RES/45/94 Need to ensure a healthy environment for the well-being of individuals, 1990. All UNGA resolutions are available on their web site at http://www.un.org/ga/.

[181] Final report of Mrs. Fatma Kohra Ksentini, Special Rapporteur, *Review of Further Development in Fields with which the Sub-Commission has been concerned – Human Rights and the Environment*, E/CN. 4/Sub. 2/1994/9.

Toxic Waste and Human Rights – The Work of the UN Special Rapporteur on Toxic and Dangerous Products and Waste

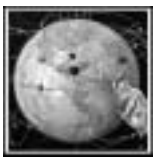
The response from the United Nations human rights system to the problem of toxic waste trade is another illustration of the significant overlap between human rights and the environment. During the 1980s, highly publicized cases of toxic waste dumping in Africa captured public attention. The global community negotiated a new MEA, the *Basel Convention* (discussed in chapter 7**)** to regulate hazardous waste trade, but illegal trade persisted. The human rights impacts of this trade, notably on health and the right to life, attracted the attention of the Commission on Human Rights. In 1995, the CHR appointed a Special Rapporteur on Toxic and Dangerous Products and Waste, whose mandate has been renewed annually. Reports based on the Rapporteur's visits to a number of African, South American and European countries document the impact of the illicit movement and dumping of toxic waste on the enjoyment of human rights. Not surprisingly, the Rapporteur found that these activities had caused infringement of rights to life, health, adequate food, safe and healthy working conditions, collective bargaining, freedom of movement, and expression in the countries receiving the waste, primarily developing countries.[182] Unfortunately, the Special Rapporteur's work has become part of the polarized North-South politics at the CHR, and Northern countries have voted not to extend this Rapporteur's mandate on the grounds that the CHR is not the right forum to address the concerns, that resources can best be used elsewhere, and opposition to the concept of the right to a clean environment.

Toxic waste trade and dumping raise serious human rights questions that are not adequately addressed by existing MEAs. Ship breaking and the dumping and breaking up of obsolete computers are two illustrations. Both involve high levels of extremely hazardous toxic substances exported from the developed world to developing countries. Workers in these operations work under appalling harmful conditions, usually unaware of the health and environmental hazards involved. The chief multilateral environmental agreement developed to address these problems, the *Basel Convention*, is ineffective for a variety of reasons: the US has failed to ratify it, and is the chief exporter of toxic electronic waste; and exemptions abound (i.e., shipbreaking, though 'guidelines' are now under development due to NGO campaigns revealing this exemption). The chief NGO that tracks toxic waste trade, the Basel Action Network, released a report in February 2002, titled *Exporting Harm: The High-Tech Trashing of Asia*, exposing the huge quantities of hazardous electronic wastes that are currently being exported to China, Pakistan and India.[183]

The human rights violations experienced by workers in these operations would be best dealt with by human rights, rather than environmental, law and are appropriate matters for consideration by CHR. Enforcement of the rights to life, health and the procedural environmental democracy rights, particularly access to information and access to justice would fill in the gaps left by the environmental treaties that regulate these issues.

[182] The reports of the Rapporteur are on the UNHCHR web site at: http://www.unhchr.ch/html/menu2/7/b/mtow.htm.

[183] The report is on-line at http://www.ban.org/E-waste/technotrashfinalcomp.pdf.



In 2001, the UN Commission on Human Rights issued *Draft Universal Human Rights Guidelines for Companies*.[184] These Guidelines recognize that though governments have the primary responsibility to promote and protect human rights, companies, as organs of society, are also responsible for promoting and securing the human rights elaborated by the Universal Declaration of Human Rights. One section of these Guidelines concerns environmental protection obligations.

In 2002, UNEP and the office of the High Commission on Human Rights jointly sponsored an experts' seminar to assess progress on these issues since Rio, and consider future action.[185] The seminar was preceded by a two- day preparatory meeting of 27 experts who produced a final text of their discussions. At the 58th session of the Commission on Human Rights in 2002, a unanimous Resolution was passed noting that the range of views expressed by experts and by states at the expert seminar could be a useful contribution to the ten-year review of UNCED.

Links between environment and human rights were discussed at the *World Summit on Sustainable Development*. (WSSD) and are included in the WSSD Plan of Implementation which asks states to "acknowledge the consideration being given to the possible relationship between environment and human rights". (Para 169)

APPLYING HUMAN RIGHTS FOR ENVIRONMENTAL PROTECTION

Human rights can be used to achieve environmental goals in different ways.[186]

MOBILIZING EXISTING RIGHTS TO ACHIEVE ENVIRONMENTAL ENDS

Better enforcement of the rights of association, expression, participation, access to information and access to the courts, together with the right to health and decent living conditions (and, in extreme cases, life) even without express reference to the environment, would lead to a better environment.

REINTERPRETATION OF EXISTING RIGHTS

Another approach to environmental rights would be to interpret existing rights to include an environmental dimension. For example, the right to freedom of expression includes the right to express opinions on matters concerning the environment or natural resources and any decision taken or to be taken by a public authority with regard to them; and the right to health includes the right to live in a clean environment.

---

[184] E/CN. 4/Sub. 2/2001/xx/Add. I, 21 May 2001.

[185] A summary of the seminar and background papers can be found on the UN High Commission for Human Rights web site at http://www.unhchr.ch/environment.

[186] Anderson, Michael R., *Human Rights Approaches to Environmental Protection: An Overview*, in Alan E. Boyle & Michael R. Anderson, eds., *Human Rights Approaches to Environmental Protection*. Oxford University Press, 1996.

Existing rights could be reinterpreted in the context of environmental concerns that were not prevalent when the first rights were formed. The rights could be expressly interpreted to include an environmental dimension. For example, the right to life could be infringed when a state fails to reduce toxic emissions into drinking water. Rights can be interpreted in this manner through judicial decisions; consensus resolutions passed at the intergovernmental level by, for example, the UN General Assembly; or through decisions by UN human rights bodies such as the UN Commission on Human Rights.

CREATION OF NEW HUMAN RIGHTS TO ENVIRONMENTAL PROTECTION

A growing body of case law from many national jurisdictions is clarifying the linkages between human rights and the environment, in particular by: 1) recognizing the right to a healthy environment as a fundamental human right; 2) allowing litigation based on this right, and facilitating its enforceability in domestic law by liberalizing provisions on standing; 3) acknowledging that other human rights recognized in domestic legal systems can be violated as a result of environmental degradation. [187]

Codification of these rights has been advocated, which could include both:

- Procedural rights, such as the right to information (includes right to be informed in advance of environmental risks), right to participate in decision making on environmental issues, right to an EIA, right to legal redress and right to effective remedies in the case of environmental damage; and

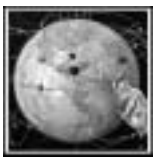
- Substantive rights – since procedural rights by themselves may not be sufficient to protect the environment. Exercising the right of freedom of expression, for example, to protest government inaction in failing to regulate toxic threats, will not solve the problem unless the state also has a positive duty to protect the environment. Examples of a substantive right include: the right to live in a healthy environment; the right to live in a pollution-free environment; or the right to an environment in which ecological balance is protected by the state.

CASE STUDY: THE THREE GORGES DAM, CHINA

Construction of the Three Gorges Dam in China illustrates how human rights issues and environmental protection are intertwined. The project involves diversion of the Yangtze River to prepare for the world's largest hydroelectric dam. The dam, expected to be completed by the year 2009, will halt the flow of the Yangtze River, the third largest river in the world. First estimated in 1993 to cost around $25 billion, the cost now is estimated to exceed $70 billion.[188] China experienced difficulty locating financing for dam construction in the early stages of the project due to refusals by the World Bank and the

[187] FINAL TEXT (16 January 2002) MEETING OF EXPERTS ON HUMAN RIGHTS AND THE ENVIRONMENT, 14-15 JANUARY 2002, http://www.unhchr.ch/environment/conclusions.html.

[188] Shapiro, William. *Human Rights and the Environment.* (1997) Colorado Journal of International Environmental Law and Policy Yearbook at 146.



US Export Import Bank to finance the project due to the conflict with their organizational environmental guidelines.

Rising to a height of 185 meters, the dam will be the largest concrete structure on earth,[189] creating a reservoir covering over 632 square kilometres, flooding 13 major cities, 140 towns and 1,352 villages as well as over 1,600 factories and abandoned mines. There are estimates that the dam will displace more than 1.4 million people, the largest peacetime evacuation in history and the greatest displacement challenge ever caused by a development project.[190] Along with the farmland, hundreds of ancient archaeological sites and much of the base of the granite and limestone cliffs (among China's most popular tourist attractions) will be submerged.[191]

The dam will have enormous capacity for electrical generation (18,000 megawatts) and could eliminate the annual burning of 40 million to 50 million tons of coal if estimates hold true. The dam could also be a long-term solution to perennial flooding on Yangtze River, protecting 15 million people.

As well as the environmental concerns, large dam projects such as this often involve human rights abuses. There are three main areas of human rights concern with this project:

- the Chinese government's suppression of people opposed to the dam project - criticism of the dam has been made into a crime, debate on the subject has been banned and over 170 activists opposed to construction of the dam have been arrested;

- the forced resettlement of over one million people pursuant to a policy of "Developmental Resettlement" where those people that are forced to relocate will be given a lump-sum reimbursement, with no adequate legal mechanism to challenge the compensation offered;[192] and

- concerns over the treatment of construction workers for the dam, as China has been accused of subjecting the 18,000 workers at the dam to hazardous conditions and abusive labour practices.[193]

Reports, including one by the US Export-Import Bank, found that construction of the dam could result in destruction of the Yangtze river system, adverse effects on water quality,

---

[189] Human Rights Watch/Asia, *The Three Gorges Dam in China: Forced Resettlement, Suppression of Dissent and Labor Rights Concerns*. Feb. 1995.

[190] Aird, Sarah. *China's Three Gorges: The Impact of Dam Construction on Emerging Human Rights*. Found in Human Rights Brief; Center for Human Rights and Humanitarian Law. Washington College of Law, Volume 8, Issue 2 (Winter 2001).

[191] Shapiro, William. *Human Rights and the Environment*. (1997) Colorado Journal of International Environmental Law and Policy Yearbook at 146.

[192] Human Rights Watch/Asia, The Three Gorges Dam in China: Forced Resettlement, Suppression of Dissent and Labor Rights Concerns. Feb. 1995.

[193] Shapiro, William. Human Rights and the Environment. (1997) Colorado Journal of International Environmental Law and Policy Yearbook at 146.

and damage estuaries. The dam will jeopardize a number of endangered species that live along the river (the giant panda, the Yangtze River dolphin, the Siberian white crane and the Chinese alligator), spawning grounds of fish, and rare vegetation (rare pine trees, gingkos, legumes). As the dam will be built in an earthquake zone, there is fear that the weight of water in the reservoir may magnify seismic activity significantly. Some engineers fear in the event of an earthquake, the dam would collapse, leading to the catastrophic death of several million people.[194]

INTERNATIONAL LAW AND THE THREE GORGES PROJECT – THE ROLE OF EXPORT CREDIT AGENCIES

What can international environmental and/or human rights law offer in response to this project? Though it arguably involves numerous violations of existing human rights and environmental agreements, China has the national sovereignty to control the development of its natural resources as it sees fit. No other state has or is likely to challenge construction of this project as a breach of international law and launch a formal state complaint against China.

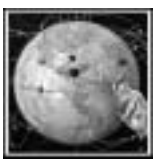
Human rights procedures could theoretically be used to complain about both the perceived environmental and human rights violations involved in construction of the dam. The repression of dissent over this project may have dissuaded any international human rights complaints from Chinese citizens. Any other individuals or groups attempting such complaints would likely face complaints of "cultural imperialism" or interference with China's sovereign rights.

Rather than a direct legal challenge against the Chinese government to stop this project, some activists pursued an indirect route and challenged the decisions to finance the project made by international financial institutions such as the World Bank and by national export credit agencies. This campaign met with some success. Both the World Bank and the US Export-Import Bank decided not to provide financial, insurance or any other support to the Three Gorges Dam project.

Foreign investment, in the form of export credit agency assistance supported foreign involvement, played a significant role in the Three Gorges Dam case. The US Export-Import Bank refused to support US exporters to work on this project because of environmental and human rights concerns. Other export credit agencies, such as the Export Development Corporation of Canada, did provide support, despite public opposition to the use of any government resources (the EDC is a federal Crown Corporation enjoying a number of government advantages) for this project. Because of the growing calls to require export credit agencies to adhere to environmental and human rights guidelines, in future this type of project may be significantly modified.

Both the sheer size, as well as the type of projects, that export credit agencies (ECAs) finance reveals the potential for environmental harm. ECAs are the single largest public

[194] Sullivan, Lawrence R. The Three Gorges Dam and the Issue of Sustainable Development in China. In The Global Environment: Institutions, Law and Policy. Vig, Norman & Axelrod Regina S. eds. Congressional Quarterly Press: Washington. 1999.



financiers of large-scale infrastructure projects in the developing world.[195] The type of projects ECAs finance such as dams, power and chemical plants, mines, forestry, roads, pipelines, and industrial installations are those that can have serious detrimental environmental effects. Yet most ECAs, (with the exception of the US, and more recently, Canada and Australia) are not obligated to conduct environmental or social impact assessments of their lending decisions.

The International ECA Reform Coalition, a coalition of NGOs from around the world, issued the Call for Reform of Export Credit and Investment Insurance Agencies, endorsed by 160 NGOs from 46 countries, in April 1998, asking governments to engage with civil society in a dialogue on the issues of greater transparency and public participation; environmental screening and assessment; social sustainability; and agreement on common environmental and social standards.[196] In 2000, the OECD countries adopted an Action Statement on the Environment, following a 1998 Statement of Intent and a 1999 agreement on the exchange of environmental information.[197]

Common environmental standards for ECAs used by the world's largest exporting countries could assist with an integrated approach to environment and human rights.

SOURCES OF INFORMATION

UN Commission on Human Rights - http://www.unhchr.ch/

Human Rights Internet - HRI is a leader in the exchange of information within the worldwide human rights community. It has a valuable web site and publishes two annual reports on the UN human rights system and the European human rights system titled For the Record. http://www.hri.ca/welcome.cfm

Earthjustice has produced several comprehensive Issue Papers on Human Rights and the Environment which have been presented to the Commission on Human Rights for the United Nations in Geneva – http://www.earthjustice.org/regional/international/

1994 UN Draft Declaration on Human Rights and the Environment, Madame Fatma Zohra Ksentini, Special Rapporteur on Human Rights and the Environment for the United Nations Sub-Commission on Prevention of Discrimination and Protection of Minorities at http://www.fletcher.tufts.edu/multi/www/1994-decl.html.

A Summary of United Nations Agreements on Human Rights, including the Universal Declaration on Human Rights and all relevant UN treaties is found at Human Rights Web at http://www.hrweb.org/legal/undocs.html.

---

[195] Bruce Rich, "Export Credit Agencies: The Need for More Rigorous Common Policies, Procedures and Guidelines to Further Sustainable Development", Environmental Defense Fund, Nov.1998, www.edf.org.

[196] Text of the Call to Reform can be found at http://www.edf.org/programs/International/ECR/ecaresolution.html.

[197] For information on OECD activities on export credit agencies and the environment, see http://www1.oecd.org/ech/act/xcred/Enviro-en.htm.

OECD Working Party on Export Credits and Credit Guarantees (ECG)
http://www1.oecd.org/ech/act/xcred/Enviro-en.htm.

NGO INFORMATION

Amnesty International's program for action on Human Rights and the Environment – http://www.amnestyusa.org/justearth/

Amazon Watch – http://www.amazonwatch.org/

ANPED – The Northern Alliance for Sustainability – http://www.anped.org/

Bhopal.org – http://www.bhopal.org/

CEDHA (Centro de Derechos Humanos y Medio Ambiente/ Centre for Human Rights and the Environment) – http://www.cedha.org.ar/

Centre for International Environmental Law – http://www.ciel.org/

Centre for Science and the Environment, India – http://www.cseindia.org/

EarthJustice – http://www.earthjustice.org/

Earth Rights International – http://www.earthrights.org/index.html

E-LAW Alliance – http://www.elaw.org/

Human Rights Watch – http://www.hrw.org/

Nautilus Institute – http:// www.nautilus.org

Probe International –
http://www.probeinternational.org/pi/index.cfm?DSP=subcontent&AreaID=47

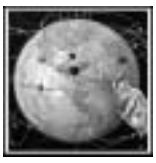
Rights and Democracy – http://www.ichrdd.ca/

For a comprehensive list of NGOs active in environment and human rights, see http://www.business-humanrights.org/Links-Environmental-NGOs.htm.

Export Credit Agencies

International NGO Reform – http://www.eca-watch.org/

NGO Working Group on the Export Development Corporation of Canada –
http://www.halifaxinitiative.org/hi.php/EDC/



CHAPTER 10 – POVERTY AND THE ENVIRONMENT

Poverty alleviation and environmental protection represent two of the major global challenges of the 21st century. The poor, especially vulnerable to water contamination, land degradation, air pollution and climate change, in greatest need of access to clean affordable energy, are often the least able to achieve these goals. Environmental damage, from disappearing tropical forests to diminishing supplies of clean water, has a "disproportionately brutal impact on the poor", according to the Administrator of the United Nations Development Programme (UNDP). Yet few MEAs concentrate on poverty reduction as a means to protect the environment. One exception is the *Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa*.

Statistics on poverty and the environment are alarming. Globally, 1.2 billion people live in 'extreme poverty': they subsist on less than one dollar a day.[198] Approximately 60% of the world's poorest people live in ecologically vulnerable areas.[199] And drought and desertification threaten the livelihood of over 1 billion people in more than 110 countries around the world, according to the UN.[200]

> Throughout the developing world, the greatest environmental health threats tend to be those closest to home. Many in these countries live in situations that imperil their health through steady exposure to biological pathogens in the immediate environment. More than 1 billion people in developing countries live without adequate shelter or in unacceptable housing , more than 1.4 billion lack access to safe water, and more than 2.9 billion people have no access to adequate sanitation -- all of which are essential for good hygiene. Unable to afford clean fuels, the poor rely instead on biomass fuels for cooking and heating. Inside the smoky dwellings of developing countries, air pollution is often higher than it is outdoors in the world's most congested cities.
>
> – Poverty, Health and the Environment - World Resources Institute (WRI)

---

[198] International Fund for Agricultural Development, *Rural Poverty Report 2001 – The Challenge of Ending Rural Poverty*, (Oxford University Press: January 2001) at 3.

[199] Arild Angelsen "The Poverty – Environment Thesis: Was Brundtland Wrong?" Forum for Development Studies, no. 1, 1997, pp.135-154.

[200] Kofi Annan, quoted on the UNCCD web site home page at http://www.unccd.int/main.php

Access to clean water and sanitation is a problem experienced overwhelmingly by the poor. The World Bank estimates that 3 million children die from diarrheal diseases annually and more than 62% of all deaths in Africa are related to polluted water.

This chapter discusses the complex challenge of poverty alleviation and environmental protection. Then it highlights some global policy initiatives and responses to these challenges. Finally, the chapter looks at a MEA case study of the *Convention on Desertification*. In sub-Saharan Africa, human overuse of land and prolonged drought threatens to turn grasslands into desert: "no other region more tragically suffers the vicious cycle of poverty leading to environmental degradation, which leads in turn to even greater poverty".[201] The *United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa is* one legal response to these issues, an MEA that addresses both environmental degradation and poverty.

RECOGNITION OF THE LINK – THE HISTORICAL CONTEXT

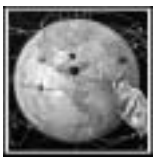
The 1972 *United Nations Conference on the Human Environment* identified poverty as both a cause and a consequence of environmental degradation. In Stockholm, developing countries expressed concern that investing in environmental programs was unaffordable and would leave no funds for development programs, which were a higher and more critical priority.

In 1987, the Brundtland Commission's report, *Our Common Future,* identified the links between environment and poverty. The cycle of food production on marginal land, unequal land distribution, and the use of productive land for export crops can lead to deforestation, soil erosion and exacerbate drought conditions. The report introduced a phrase to describe the relationship between poverty and the environment that became widely used, the "downward spiral":

> "Many parts of the world are caught in a vicious downwards spiral: Poor people are forced to overuse environmental resources to survive from day to day, and their impoverishment off their environment further impoverishes them, making their survival even more difficult and uncertain."

Poverty and the environment continued as a central theme of the 1992 Rio Conference on Environment and Development. Agenda 21's chapter on poverty and the environment discusses the relationship between poverty and environmental degradation in developing countries and the problem of unsustainable production and consumption in developed countries. Rio Principle 5 states that:

> All states and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.



[201] World Commission on Environment and Development, *Our Common Future*, 1987, p.

The Programme for the Further Implementation of Agenda 21, adopted at the Rio + 5 UN Conference in 1997 predicted that poverty eradication would become an overriding theme of sustainable development for the coming years and that the enormity and complexity of the issue could very well endanger the social fabric, undermine economic development and the environment and threaten political stability in many countries. The Programme contained a list of action items on poverty eradication which focussed on sustainable livelihoods; access to basic social services; education; health care; nutrition; clean water and sanitation; social protection systems; public participation; women's rights; increased official development assistance for poverty eradication; and intensifying international cooperation.

Poverty and environment were again topics on the world agenda at the 1994 Cairo Conference on Population and Development, the 1995 Copenhagen World Summit on Social Development, the 1995 Beijing Fourth World Conference on Women, and the 1996 Istanbul Habitat II Conference.

A breakthrough occurred in 2000 with the adoption by the UN of the Millennium Development Goals (MDGs), a concerted approach to poverty eradication that also addresses the environment. These goals are discussed in the next section.

The 2002 World Summit on Sustainable Development (WSSD) once again focussed attention on poverty and the environment. One of the concrete areas of agreement reached at WSSD was a sanitation target, to complement the MDG goal on access to clean water.

The "downward spiral" description is now criticized as too simplistic, since it is based on myths that both poverty and population growth necessarily lead to environmental degradation. According to some UN experts, win-win options do exist that can both reduce poverty and enhance environmental protection, involving improved governance and effective community based institutions.[202]

MILLENNIUM DEVELOPMENT GOALS

To mark the new millennium, the UN adopted a series of time bound goals to address the world's most pressing problems: poverty, hunger, illiteracy, disease, clean water, environmental degradation, and discrimination. The eight goals, known as the Millennium Development Goals, or MDGs, are to be met by 2015. The goals are based on the benchmark year of 1990. A UN team will monitor progress towards the goals based on national reports and international data. The MDGs provide a focus for the entire UN system. Each year the UN Secretary General will report to the General Assembly on progress towards the realization of the goals. The first report issued in October 2002 noted that progress was uneven and slow.

There is reason for optimism that the goals can be achieved. The UN Development Programme (UNDP) has an illustration of progress in at least one part of the world for

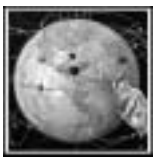
[202] *Attacking Poverty While Improving the Environment: Towards Win-Win Policy Options* (New York: UNDP) 2001.

each goal. Below the MDGs are reprinted, with the indicators that will be used to measure progress and illustrations of progress.

MILLENNIUM DEVELOPMENT GOALS[203]

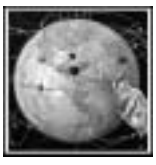
Goals and targets		Indicators
Goal 1	**Eradicate extreme poverty and hunger**	
	Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day	• Proportion of population below $1 a day • Poverty gap ratio (*incidence x depth of poverty*) • Share of poorest quintile in national consumption
	Halve, between 1990 and 2015, the proportion of people who suffer from hunger	• Prevalence of underweight in children (under five years of age) • Proportion of population below minimum level of dietary energy consumption
		More than a billion people still live on less than US$1 a day: sub-Saharan Africa, Latin America and the Caribbean, and parts of Europe and Central Asia are falling short of the poverty target.
Goal 2	**Achieve universal primary education**	
	Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	• Net enrolment ratio in primary education • Proportion of pupils starting grade 1 who reach grade 5 • Literacy rate of 15 to 24-year-olds
		As many as 113 million children do not attend school, but the target is within reach. India, for example, should have 95 percent of its children in school by 2005.
Goal 3	**Promote gender equality and empower women**	
	Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015	• Ratio of girls to boys in primary, secondary, and tertiary education • Ratio of literate females to males among 15- to 24-year-olds • Share of women in wage employment in the non-agricultural sector • Proportion of seats held by women in national parliament
		Two-thirds of illiterates are women, and the rate of employment among women is two-thirds that of men. The proportion of seats in parliaments held by women is increasing, reaching about one third in Argentina, Mozambique and South Africa.

[203] The development goals and indicators are found at the World Bank web site at http://www.developmentgoals.org/About_the_goals.htm. The examples are from the UNDP web site at http://www.un.org/mdg.



Goals and targets		Indicators
Goal 4	**Reduce child mortality**	
	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	• Under-five mortality rate • Infant mortality rate • Proportion of one-year-old children immunized against measles **Every year nearly 11 million young children die before their fifth birthday, mainly from preventable illnesses, but that number is down from 15 million in 1980.**
Goal 5	**Improve maternal health**	
	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	• Maternal mortality ratio • Proportion of births attended by skilled health personnel **In the developing world, the risk of dying in childbirth is one in 48, but virtually all countries now have safe motherhood programmes.**
Goal 6	**Combat HIV/AIDS, malaria, and other diseases**	
	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	• HIV prevalence among 15- to 24-year-old pregnant women • Contraceptive prevalence rate b • Number of children orphaned by HIV/AIDS
	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	• Prevalence and death rates associated with malaria • Proportion of population in malaria-risk areas using effective malaria • prevention and treatment measures • Prevalence and death rates associated with tuberculosis • Proportion of TB cases detected and cured under DOTS **Forty million people are living with HIV, including five million newly infected in 2001. Countries like Brazil, Senegal, Thailand and Uganda have shown that the spread of HIV can be stemmed.**
Goal 7	**Ensure environmental sustainability**	
	Integrate the principles of sustainable development into country policies and program and reverse the loss of environmental resources	• Change in land area covered by forest • Land area protected to maintain biological diversity • GDP per unit of energy use • Carbon dioxide emissions (per capita)
	Halve, by 2015, the proportion of people without sustainable access to safe drinking water	• Proportion of population with sustainable access to an improved water source

	Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	• Proportion of population with access to improved sanitation • Proportion of population with access to secure tenure [Urban/rural disaggregation of several of the above indicators may be relevant for monitoring improvement in the lives of slum dwellers] **More than one billion people lack access to safe drinking water and more than two billion lack sanitation. During the 1990s, however, nearly one billion people gained access to safe water and the same number to sanitation.**
Goal 8	**Develop a global partnership for development**	
	Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction–both nationally and internationally)	Some of the indicators listed below will be monitored separately for the least developed countries, Africa, landlocked countries, and small island developing states.
	Official development assistance Address the special needs of the least developed countries (includes tariff-and quota-free access for exports enhanced program of debt relief for HIPC and cancellation of official bilateral debt, and more generous ODA for countries committed to poverty reduction)	• Net ODA as a percentage of DAC donors' gross national income • Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water, and sanitation) • Proportion of ODA that is untied • Proportion of ODA for environment in small island developing states • Proportion of ODA for the transport sector in landlocked countries
	Market access Address the special needs of landlocked countries and small island developing states (through the Barbados Programme and 22nd General Assembly provisions)	• Proportion of exports (by value, excluding arms) admitted free of duties and quotas • Average tariffs and quotas on agricultural products and textiles and clothing • Domestic and export agricultural subsidies in OECD countries • Proportion of ODA provided to help build trade capacity



Debt sustainability	
Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	• Proportion of official bilateral HIPC debt cancelled • Debt service as a percentage of exports of goods and services • Proportion of ODA provided as debt relief • Number of countries reaching HIPC decision and completion points
Other	
In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	• Unemployment rate of 15- to 24-year-olds • Proportion of population with access to affordable, essential drugs on a sustainable basis
In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries	• Telephone lines per 1,000 people • Personal computers per 1,000 people
In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	**Many developing countries spend more on debt service than on social services. New aid commitments made in the first half of 2002 could mean an additional $12 billion per year by 2006.**

1. Some indicators, particularly for goals 7 and 8, remain under discussion. Additions or revisions to the list may be made in the future.
2. Only one form of contraception – condoms – is effective in reducing the spread of HIV.

GLOBAL POLICY RESPONSES TO POVERTY & ENVIRONMENT

In addition to the MDGs, many global policy initiatives are ongoing to address poverty and the environment, including:

- The UN sponsored Financing for Development Initiative, (FfD), an international dialogue on how to pay for the sustainable development visions produced in recent years. Collaboration between the UN agencies, the World Bank, the IMF and the WTO in FfD has increased hopes that this process will produce concrete actions.

- The World Bank's Environment Strategy aims to improve quality of life, quality of growth and the quality of the regional and global commons, in accordance with its central mission to eradicate poverty. The World Bank Group, one of the world's largest sources of development assistance, in 2001 provided more than US$17 billion in loans

to its client countries. It works in more than 100 developing economies to help the poorest people and the poorest countries.

- The UNDP-EC Poverty and the Environment Initiative is working to identify practical policy changes that can be made to simultaneously reduce poverty and enhance environmental protection. It addresses environmental concerns of the poor. The Poverty & Environment Initiative has established the Forum of Ministers on Poverty and the Environment, collected case studies on best practices, promoted analytical papers and compiled practical strategies which are being widely distributed.[204]

- The Global Environment Facility (GEF). The GEF is the major institution linked to MEA funding, the GEF. Land degradation is a focal area for GEF, and projects that address this area are eligible for GEF funding. Launched in 1991 as an experimental facility, GEF was restructured after the Earth Summit in Rio de Janeiro to serve the environmental interests of people in all parts of the world. In 1994, 34 nations pledged $2 billion (US) in support of GEF's mission; in 1998, 36 nations pledged $2.75 billion to protect the global environment and promote sustainable development. The third "replenishment" of funds for the GEF in 2002 resulted in pledges of $2.92 billion, the highest replenishment ever.[205] Between 1991 and 1999, GEF funded more than $350 million worth of projects focused primarily on deforestation and desertification.

CASE STUDY: POVERTY, ENVIRONMENT & THE DESERTIFICATION CONVENTION

The majority of people in the world living in absolute poverty are in South Asia and Sub-Saharan Africa, areas with the world's most degraded land.

What is Desertification?

Contrary to the image of ever enlarging sand dunes creeping up on productive land, desertification is a less dramatic and more complex phenomenon. The Convention defines it as

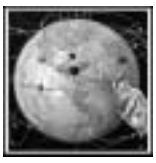
"Desertification is land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations and human activities."

The estimates of areas involved in desertification vary from 20% to more than 41% of the earth's land.[206] It is generally agreed that 900 million people in over 100 countries are affected.

[204] The web site for the UNDP Poverty and the Environment Initiative is: http://www.undp.org/seed/pei

[205] Web Site http://www.gefweb.org/.

[206] Estimates of 20% from Combating Desertification: Canada's Second Report to the UN Convention on Desertification (CIDA: Ottawa, 201) and 41% from Centre for Science and the Environment.



There are many causes of desertification including:

- climatic variation;
- population growth;
- over exploitation of soil;
- overgrazing;
- deforestation;
- unsustainable agricultural practices;
- economic practices that result in poor prices for agricultural and livestock products;
- political compulsions which promote unsustainable land-use practices; and
- international trade practices.[207]

Poor people are the most affected by desertification- as more and more land degrades, those dependant on the land for their livelihood and sustenance are further impoverished.

DESERTIFICATION AND THE UNITED NATIONS

Desertification was the theme of the United Nations Conference on Desertification held in Nairobi in 1977. The Conference adopted the Plan of Action to Combat Desertification (PACD), a series of guidelines to assist countries with developing action plans to fight desertification. Insufficient funding went into the preparation of these plans, and many countries failed to complete them. Some projects were implemented under the PACD, but most were not successful.

Desertification re-emerged on the international agenda during the 1992 lead-up sessions to the *Rio Earth Summit*, in which southern countries lobbied the UN for an anti-desertification convention. But northern nations opposed the convention idea because they did not want to accept financial responsibility for the fight against desertification and because they viewed desertification as a local rather than a global problem. Persistent lobbying by African nations eventually led to agreement and in the end, a chapter of *Agenda 21* was devoted to strategies to address desertification. That same year, as a result of a recommendation from UNCED, the UN General Assembly set up an Intergovernmental Negotiating Committee to prepare the text of a Desertification Convention.

Global Environmental Negotiations – Green Politics (Thompson Press Ltd. New Delhi, India: 1999).

[207] United Nations Environment Programme. Poverty and the Environment – Reconciling Short-term Needs with Long-term Sustainability Goals (London: 1995).

THE CONVENTION TO COMBAT DESERTIFICATION

The *Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa*, or *Desertification Convention*, was negotiated from 1993 to 1994 and came into force in 1996. The Convention has been widely adopted by developing countries, with a high degree of political commitment and support. More than 50 African countries are parties to the CCD, out of a total of 184 Parties as of 2002. In 1999, the secretariat of the Convention was established in Bonn, Germany.

This framework Convention recognizes the physical, biological and socio-economic aspects of desertification and relies on a participatory planning process to combat land degradation, mitigate the effects of drought and restore land to productivity.

The Convention is based on a regional approach. Five regions - Africa, Asia, Latin America and the Caribbean, the northern Mediterranean, and Central and Eastern Europe- are defined in implementation annexes. The African Annex contains the most detailed commitments, for both African and developed country Parties, and stresses the need to use local experts for technical assistance and cooperation. The other annexes are shorter, and reflect the different priorities of the regions. The Northern Mediterranean Annex emphasizes urbanization and agricultural practices as economic causes of desertification. This region is disqualified from receiving funds raised through the mechanisms of the Convention because it is located in the developed world. All Annexes call for increased co-ordination among the key players involved in desertification activities, including donors, national governments, NGOs, and local populations.

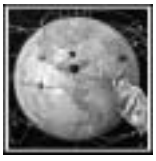
National Action Plans

The Convention imposes obligations that are common to all Parties, and also places additional differing obligations on developed and developing country Parties.

All the Parties share obligations to adopt an integrated approach to the processes of desertification and drought; give due attention to the situation of affected developing country Parties with regard to international trade, marketing arrangements and debt; and integrate strategies for poverty eradication into efforts to combat desertification and mitigate the effects of drought.

The primary obligation of developing country Parties (not applicable to developed countries) is to adopt Action Plans to combat desertification, at the national, subregional and regional levels. By December 2000, about 30 National Action Plans (NAPs) had been submitted to the Desertification Secretariat and examined by Parties.

The Convention spells out a detailed procedure for preparing a NAP, based on “bottom up” participation. The emphasis on this type of planning, rather than central state planning, distinguishes the CCD from many other MEAs. Those affected by the phenomenon of desertification are invited to participate in deciding how best to respond. NAPs are to use a “continuing participating process on the basis of lessons from field action as well as the results of research”, and include “improvement of national economic environments with a view to strengthening programmes aimed at the eradication of poverty and at ensuring food security”. The Plans may include such elements as:



- establishment and/or strengthening, as appropriate, of food security systems, including storage and marketing facilities, particularly in rural areas;

- establishment of alternative livelihood projects that could provide incomes in drought prone areas; and

- development of sustainable irrigation programmes for both crops and livestock.

Developed country Party obligations centre on financing and using the NAP to help coordinate donor assistance. They promise to provide financial resources to affected countries to enable them to implement NAPs.

The Convention also emphasizes capacity building or training. Developing countries are often unable to implement their MEA obligations without new resources and government, institutional and legal training. Capacity building measures in the Convention include: public education programs to promote awareness of the causes and effects of desertification and to encourage sustainable resource use; support to civil society; and making use of local knowledge to explore alternative energy sources and livelihoods.

Scientific research to address the causes and effects of desertification is also a priority. Canada's International Development Research Centre (IDRC) is a key partner in this endeavour, and has a thirty-year track record of funding environmental research in developing countries.

A Committee to Review Implementation of the Convention (CRIC) was formed in 2001. CRIC's objective is to critically review progress by sharing information, case studies and best practices and to propose to the COP concrete recommendations on further steps in the CCD's implementation. All three of the major post-Rio treaties (including the Climate Change and Biodiversity Conventions) now have subsidiary bodies.

Canada and the Desertification Convention

Canada is a strong supporter of the Convention and ratified it on December 1, 1995. Although Canada is an affected country because the Prairie region is at risk of desertification, it is recognised primarily as a donor through aid programming. Canadian agriculture agencies and research institutes have expertise in drylands agriculture which is shared with developing countries. Because of provincial control over land use, Canada does not intend to prepare a NAP. The lead government agency, CIDA, has established a Desertification Office in the Multilateral Environmental Agreements unit, working closely with Agriculture and Agri-Food Canada and the IDRC. CIDA devotes a portion of Canada's official development assistance (ODA) to desertification projects.

CIDA also collaborates with Canadian and developing world NGOs, particularly in Africa. A coordinating body for NGOs, the Reseau International d'Ong sur la Desertfiication was established in 1994 and is now managed by Solidarite Canada Sahel, a Montreal NGO.

Canada also funds research on desertification through organizations such as :

- the Centre for International Forestry Research (CIFOR)

- the International Centre for Agricultural Research in Dry Areas (ICARDA)
- the International Council for Research in Agro-forestry (ICRAF)
- the International Crops Research Institute for Semi-Arid Tropics (ICRISAT)
- the International Institute for Tropical Agriculture (IITA)
- the International Irrigation Management Institute (IIMI).

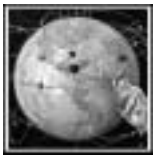
Assessment of the CCD

The Convention calls for new partnerships between affected and donor countries to combat land degradation in the world's drylands. By specifically targeting poverty reduction, and making the links between agricultural and other policies on land degradation, the CCD takes a broader approach than many MEAs which are focussed on single environmental issues. A particular strength is its recognition of the critical role of communities and participatory planning to achieve the treaty's goals. And its integration of environmental, economic and social issues marks it as a true sustainable development strategy.

Yet the CCD has been plagued from its start. It has been called "Rio's Stepchild" and labelled a second-class Convention since Northern countries questioned its need for existence on the ground that desertification could not be classified as a global environmental problem. Many countries have refused to pay for it. Without adequate funds, the treaty will remain ineffective. Too often its goals have been reduced to squabbling over money that needs to be mobilized.

One premise of the CCD, that it would dramatically reshape the international aid process, has not materialized. As a method for funnelling more aid to the most poverty-stricken countries, the CCD by itself has not worked. Many aid budgets, including Canada's, have decreased in recent years.

Competing national planning processes has also led to confusion between a NAP as required by the *Desertification* treaty, a national strategy for sustainable development (NSSD) as required by Agenda 21, and another current process, the World Bank's Poverty Reduction Strategy Paper (PRSP), required to receive funding from the Bank. As more funds are attached to PRSPs, the action has moved to that arena, leaving NAPs behind. The Johannesburg World Summit on Sustainable Development has renewed the global promise for countries to begin to implement a national sustainable development strategy, including, where applicable a PRSP (an attempt to merge the different planning processes into one coordinated strategy) by 2005, but the WSSD Plan of Implementation made only cursory reference to NAPs. In future, the *Desertification* treaty may find a more secure role as an environment/poverty MEA as it gains experience and works more closely with other policy processes.



SOURCES OF INFORMATION

Canada's Desertification Office, CIDA Multilateral Environmental Agreements Unit

Secretariat for the Convention to Combat Desertification (UNCCD) – http://www.unccd.int/main.php

United Nations Development Programme – UNDP-EC Poverty and Environment Initiative http://www.undp.org/seed/pei/

UNDP Poverty Homepage – http://www.undp.org/poverty

United Nations Development Programme - Office to Combat Desertification and Drought (UNDP/UNSO) – http://www.undp.org/seed/unso/index.htm

United Nations Food and Agriculture Organization (FAO) – http://www.fao.org/desertification/default.asp?lang=en

World Bank Environment Strategy – http://lnweb18.worldbank.org/essd/essd.nsf/EnvironmentStrategy/Brochure-home.

Geographic Aspects of Inequality and Poverty – **The World Bank's PovertyNet**: http://www.worldbank.org/poverty/inequal/povmap/

Globalissues.org: Causes of Poverty – http://www.globalissues.org/TradeRelated/Poverty.asp

NGO INFORMATION

Solidarite Canada Sahel – Http://www.scsmtl.qc.ca

Canadian Council for International Cooperation – http://www.ccic.ca

International Development Research Centre – http://www.idrc.ca/

North- South Institute – http://www.nsi-ins.ca/ensi/index.html

Centre for Science and the Environment, India – http://www.cseindia.org

The International Institute on Environment and Development – Drylands Program – http://www.iied.org/drylands/index.html

Environmental Development Action in the third world (ENDA), Senegal – http://www.enda.sn/english/index.htm

Third World Network – http://www.twnside.org.sg/

CHAPTER 11 – SUSTAINABLE DEVELOPMENT

Sustainable development has become a well-known tenet of international policy. Yet the exact meaning of the concept remains a topic of considerable debate. Most MEAs adopted since 1992 list "sustainable development" among their objectives, though no MEA addresses the entire range of activities that the broad concept could potentially encompass. Non-environmental treaties such as the WTO Agreement also list 'sustainable development' among their objectives. Numerous countries have adopted national sustainable development strategies and created new institutions to carry out these strategies.[208] Sustainable development was the theme of the 2002 *World Summit on Sustainable Development*, a global conference held to assess progress towards realization of this abstract concept.

First defined by the Brundtland Commission report, *Our Common Future*, in 1989 as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs", the definition continues to evolve and includes two key concepts, according to the Canadian government:

- The concept of 'needs' in particular the essential needs of the world's poor, to which overriding priority should be given, and
- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet future and present needs.[209]

Sustainable development is said to have three essential elements or to rest on three pillars: economic prosperity, environmental protection and social stability. Integration of these three policy arms is one of the foremost goals of sustainable development.

Sustainable development was endorsed at the 1992 *Rio Earth Summit.* At that Summit, the world's governments, including Canada, adopted the *Rio Declaration on Environment and Development* which states in Principle 1 that: "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature." Agenda 21, the action plan adopted in Rio in 1992, is a blueprint for how countries can achieve sustainable development.

---

[208] See World Resources Institute, *Rio+8: Assessment of National Councils for Sustainable Development* (Washington: WRI), 1999.

[209] From 'Canada and Sustainable Development', Canada's Earth Summit 2002 Secretariat, online at http://www.canada2002earthsummit.gc.ca/en/canada_sd_e.cfm.

At a five-year review held in New York in 1997 (Rio + 5) countries adopted the *Programme for the Further Implementation of Agenda 21*, which reaffirmed global commitment to the principle of sustainable development. And in 2000, at the UN Millennium Summit, world leaders adopted the Millennium Development Goals (MDGs), a set of time bound targets which include ensuring environmental sustainability.

Many agree that implementation is the missing link in Agenda 21. It was a primary theme of government negotiations at the 2002 World Summit on Sustainable Development (WSSD). The WSSD was tasked with focussing governments' attention on implementation of sustainable development concepts. The WSSD Plan of Implementation directs governments and international organizations to refocus efforts to achieve sustainable development by taking further actions on all the issues covered by Agenda 21.

A specialized UN agency, the Commission on Sustainable Development, oversees government action on implementing sustainable development obligations. This chapter first describes that Commission, then outlines MEAs in two key areas for sustainable development: environmental assessment and public participation. It then discusses two areas close to the heart of sustainable development not now covered by any specific MEA: corporate social responsibility and sustainable use of natural resources. It then examines Canada's record on implementing sustainable development commitments at the national level.

UN COMMISSION ON SUSTAINABLE DEVELOPMENT

UN COMMISSION ON SUSTAINABLE DEVELOPMENT

COMMISSION ON SUSTAINABLE DEVELOPMENT	**Link to the web site:**	http://www.un.org/esa/sustdev/csd.htm
	Created:	April 19, 2001
	Institutional type:	Functional commission of the UN Economic and Social Council (ECOSOC), with 53 member countries.
	Secretariat:	http://www.un.org/esa/sustdev/
	National implementation of the Agenda 21 commitments at:	http://www.un.org/esa/agenda21/natlinfo

The Commission on Sustainable Development (CSD) was created in December 1992 by the UN General Assembly as the main institutional outcome from the Rio Earth Summit. It is a subsidiary UN body, reporting first to the UN Economic and Social Council (ECOSOC) and, through it, to the Second Committee of the UN General Assembly.

The CSD plays three main roles:

(1) reviews the progress of the implementation of recommendations and commitments of the Rio agreements at the international, regional, and national levels;

(2) provides detailed policy guidance for future activities to follow up on Rio and achieve sustainable development; and

(3) promotes dialogue and build partnerships for sustainable development with governments, the international community, and major groups who have a significant role to play in achieving sustainable development, including women, youth, indigenous peoples, NGOs, local authorities, workers and unions, business, the scientific community and farmers.[210]

The CSD meets for an annual session of two weeks each year, and is attended by representatives of the fifty-three state members of the Commission, other states, UN organizations, and accredited inter-governmental and non-governmental organizations (who attend as observers). Some consider the CSD to be the most successful Commission of the UN in promoting dialogue between governments, intergovernmental organizations and the 'Major Groups' defined by Agenda 21 as Women, Children and Youth, Indigenous People, Non-governmental Organizations, Local Authorities, Workers and Trade Unions, Business and Industry, Scientific and Technological Communities and Farmers. The CSD has pioneered Multistakeholder Dialogues among these groups and has promoted stakeholder participation in decision-making, even in countries without democratic traditions.

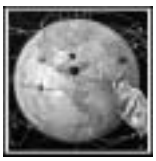
The Commission has been effective in bringing countries together on an equal standing, providing a more relaxed setting than other UN bodies, and in developing an open attitude about the participation of NGOs and major groups.[211] However, the CSD has been criticized because it adopts many vague decisions and resolutions which are ignored by governments. Also, as a functional commission of ECOSOC, the CSD has no mechanism to hold governments accountable, or implement any programme of action.

The CSD receives national reports submitted by governments setting out their progress in implementing the Rio agreements. Because of concerns by developing countries that development aid would be linked to conditions placed on these reports, the degree of detail and the regularity of reports is left up to individual governments. Vague reporting requirements mean that reports are difficult to compare, hard to verify, are of uneven quality, and do not always address the most important issues. Few reports have been submitted and the summaries of the reports produced by the CSD are general. The CSD has moved toward a more effective form of peer group review where governments give presentations, and other governments and major groups comment. The CSD has also promoted greater use of indicators to monitor progress towards sustainable development.

---

[210] *Mandate of the Commission on Sustainable Development*, online: United Nations Sustainable Development <http://www.un.org/esa/sustdev/csdback.htm>.

[211] P.S. Chasek, "The UN Commission on Sustainable Development: The first five years" in P.S. Chasek ed., *The Global Environment in the Twenty-First Century: Prospects for International Cooperation*, (Tokyo: United Nations University Press, 2000) 378-398.



One of the CSD's strengths has been to focus attention on sustainable development issues that are not being given adequate international attention in other international fora. It sponsored the International Panel and Forum on Forests in the 1995 – 2000 period that eventually resulted in the creation of a new UN Forum on Forests. The CSD has also focussed attention on the fragmented nature of international oceans bodies and prompted an annual UNGA session covering all oceans issues as part of the annual Law of the Sea session. One CSD session on oceans scrutinized government support programmes that continue to support fishing overcapacity, leading to WTO negotiations on the issue. At the 1997 session, the issues of tourism and energy were added to the CSD's agenda. Refinements to CSD's operations and work programme were agreed at WSSD and it will remain the central UN body responsible for coordinating sustainable development commitments.

ENVIRONMENTAL ASSESSMENT (EA)

Integration of environmental considerations into economic decisions is a key procedural and substantive component of sustainable development. For development decisions to result in sustainability, all three pillars- economic, environmental and social- must be considered together. Environmental impact assessment is the procedure used to consider the likely environmental impacts and the availability of mitigating measures to reduce harmful impacts of a project and then decide whether or not to proceed with the project

EA can reduce time and costs, increase community acceptance, and generally result in more thorough planning which can help avoid costly and time consuming revelations at later stages. With incentives from government, EA can lead to the adoption of more green technology and other green benefits, such as reduced emissions and energy use.

Most national governments and international institutions require EA. Rio Principle 17 states that environmental impact assessment shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment. Major MEAs concluded since Rio require the use of EA as one tool to achieve their goals. The *Climate Change*, *Biodiversity* and *Desertification Conventions* require nations to ensure that EA procedures include consideration of each treaty's issue as part of the procedure.

One MEA is specifically devoted to transboundary environmental impact assessment, the *Espoo Convention*, a regional UNECE Convention. Canada has signed and ratified Espoo but the US is not a Party. Transborder environmental impact assessment has been a subject of negotiation between the three NAFTA parties, but no agreement has yet been reached.

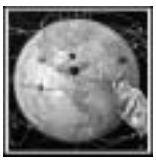
ENVIRONMENTAL ASSESSMENT: THE ESPOO CONVENTION

CONVENTION ON ENVIRONMENTAL IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT, 1991, (THE "ESPOO CONVENTION")	**Link to the text:**	http://www.unece.org/env/eia/eia.htm
	Signed by Canada:	February 25, 1991
	Ratified by Canada:	May 13, 1998
	International Status:	In force as of September 10, 1997
	In Force in Canada:	In force August 11, 1998
	Amendments:	None
	Protocols:	None at this time. Protocol on Strategic Environmental Assessment under development.
	Secretariat:	http://www.unece.org/env/eia/welcome.html
	Implementing legislation in Canada:	*Canadian Environmental Assessment Act* contains transboundary EA obligations.

The *Convention on Environmental Impact Assessment in a Transboundary Context*, 1991, or the *Espoo Convention*, requires Parties to take measures to prevent, reduce and control significant adverse transboundary environmental impacts from proposed activities under their jurisdiction.

The Parties agree to do EAs for activities listed in an Appendix, such as crude oil refineries, thermal power stations, nuclear fuel or waste facilities, large oil and gas pipelines, large dams, major mines and deforestation of large areas. Assessments must be done prior to a decision to authorize the project. If impacts are disclosed, Parties are obligated to control or minimize any adverse transboundary impacts.

The treaty also contains a general obligation for Parties to notify and consult neighbouring countries on all major projects likely to have significant adverse environmental impacts that cross boundaries. The project proponent's state decides if notification and consultation are required with neighbouring states. The treaty also requires Parties to immediately inform any country likely to be affected by the transboundary impact of a proposed activity under a Party's jurisdiction if additional information regarding significant transboundary impacts becomes available before work on that activity has commenced. Parties agree to share a wide range of information regarding the environmental impact assessment procedure. Appendices to the Convention list activities subject to EAs; the contents of EA documentation required by the Convention; criteria to determine environmental significance; inquiry procedure;



post-project analysis; and elements for bilateral and multilateral cooperation and arbitration.

The Convention has not been widely used to date: only 10 projects are listed on its database.

PUBLIC PARTICIPATION IN ENVIRONMENTAL DECISION-MAKING

One of the key principles of sustainable development is that individuals should have a voice in making decisions about the environmental issues in their community. This principle was formalized in Principle 10 of the *Rio Declaration* which states that:

> "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided."

Construction of large dams is an example of a development activity that benefits from thorough and advanced public participation. In its report released in 2000, the World Commission on Dams reviewed EA and public participation as applied to a number of large dam case studies and found that "most unsatisfactory social outcomes of past dam projects are linked to cases where affected people played no role in the planning process." The Commission also found that "there are recent examples that show where participation has reduced conflict and made outcomes more publicly acceptable."[212]

Since 1992, public participation has been enshrined in national laws and regional agreements including the *Aarhus Convention*.

[212] World Commission on Dams, *Dams and Development – A New Framework for Decision Making*, (London: Earthscan), 2000, pp. 176-177.

PUBLIC PARTICIPATION: THE AARHUS CONVENTION

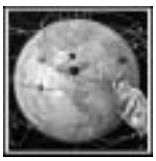
CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION IN DECISION-MAKING AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS	**Link to the text:**	http://www.unece.org/leginstr/cover.htm.
	Signed by Canada:	Not signed
	Ratified by Canada:	Not ratified
	International Status:	In force as of October 30, 2001
	National Status:	Not in force in Canada
	Amendments:	None
	Protocols:	None yet. A Protocol on Pollutant Transfer and Release Registries is under development.
	Secretariat:	http://www.unece.org/
	Implementing legislation in Canada:	No specific implementing legislation. A variety of access to information and public participation laws exist at both the federal and provincial levels.

The UN/ECE *Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* or the *Åarhus Convention* provides an example of one region's response to Principle 10.

The Convention creates legally enforceable obligations from governments directly to their citizens and to any members of "the public affected or likely to be affected by, or having an interest in, the environmental decision-making."

The aim of the Convention is to achieve sustainable development through better decision-making. It recognizes that the public need to be empowered through access to relevant and robust information and through being involved in the decision-making process at early stage, before public authorities have begun to reach a firm conclusion. The access to justice pillar of the Convention strengthens the enforcement of environmental law.

This regional Convention was sponsored by the United Nations Economic Commission for Europe (UNECE), one of five regional commissions of the United Nations, which has 55 member countries including Canada, the US, and Western, Central and Eastern European and Central Asian states. States that are not members of the UNECE (but are UN members) may agree to join the Convention by accession at a later date. So



theoretically this Convention could be converted from regional to global. Canada does not now intend to sign the *Aarhus Convention*.

The Convention was opened for signature in 1998 and has 40 signatories and 22 parties as of 2002. Strong participation from NGOs helped spur the development and successful conclusion of this Convention. Many provisions in the text recognize the contributions that NGOs and other citizens can make to democracy through informed participation.

The objective of the Convention clearly links the procedural rights, known as the "three pillars" to a basic human right – the right to a healthy environment. The Objective states:

"In order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being, each Party shall guarantee the rights of access to information, public participation in decision-making and access to justice in environmental matters in accordance with the provisions of this Convention."

This reference to future generations is the clearest expression to date in a MEA of the principle of inter-generational equity.

Environmental Information Broadly Defined

The *Aarhus Convention on Access to Information, Public participation in Environmental Decision-making and Access to Justice in Environmental Matters* has a broad definition of "environmental information" as any information on: "Environmental information" means any information in written, visual, aural, electronic or any other material form on:

(a) The state of elements of the environment, such as air and atmosphere, water, soil, land, landscape and natural sites, biological diversity and its components, including genetically modified organisms, and the interaction among these elements;

(b) Factors, such as substances, energy, noise and radiation, and activities or measures, including administrative measures, environmental agreements, policies, legislation, plans and programmes, affecting or likely to affect the elements of the environment within the scope of subparagraph (a) above, and cost-benefit and other economic analyses and assumptions used in environmental decision-making;

(c) The state of human health and safety, conditions of human life, cultural sites and built structures, inasmuch as they are or may be affected by the state of the elements of the environment or, through these elements, by the factors, activities or measures referred to in subparagraph (b) above;

Public participation has three components, or three pillars, recognized by the Convention:

- **Access to information** facilitates democracy, by ensuring "that citizens have the information required to participate meaningfully in the democratic process" and "that

politicians and bureaucrats remain accountable to the citizenry".[213] The Convention gives the public the right to seek environmental information for any purpose and also requires Parties to provide this information. Not only must the state collect and disseminate certain types of information, it must take steps to release information electronically. Each Party shall also encourage "operators" of activities to inform the public regularly of significant environmental risks resulting from their activities. The public is also entitled to receive information about law and policy making processes to help them to understand how the government makes environmental decisions, and the range of available public services related to the environment. Disclosure may be refused if it could adversely affect the confidentiality of public proceedings; international relations, national defense, or public security; criminal investigations or trials; commercial or industrial secrets; intellectual property rights; privacy of personal data; the interests of a third party; and the environment (e.g., the breeding sites of rare or sensitive species.)

- **Participation in environmental decision-making** requires governments to consult citizens and provide opportunities for input into new or revised environmental laws, regulations or approvals, as well as policies and programmes. The public participation rights afforded by the Convention apply to people who may be affected by activities with significant environmental impacts through participation in environmental impact procedures, and to those who wish to participate in the preparation of plans and programmes, regulations or other laws or legally binding instruments, related to the environment.

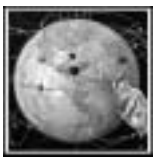
- **Access to justice** gives citizens the means to make sure environmental rights are upheld and regulatory action is taken where needed. This type of access includes broad provisions for citizens to bring complaints before a court and appeal mechanisms to independent bodies on administrative issues. The right to review a decision of a public authority, through access to a court or other independent and impartial review, is guaranteed.

CORPORATE SOCIAL RESPONSIBILITY

The corporation is a modern phenomenon created to limit the liability of individuals involved in commercial activity and to maximize profits to shareholders in the corporation. Multinational corporations operate around the globe, under different legal systems and different degrees of public scrutiny. Corporate activities were once of interest mainly to shareholders and financial markets. Growing awareness of the potential for dramatic social and environmental impacts of these activities has led to intense routine public scrutiny of corporate operations in recent years.

The emergence of a number of voluntary guidelines to govern corporate behaviour marks this change. These standards include efforts by the International Standards Organization (ISO) on environmental management systems, the ISO 14000 series; the UN Secretary

[213] These phrases to describe the relationship between access to information and democracy were used in the Supreme Court if Canada case, Dagg v. Canada (Minister of Finance), [1997], 2 SCR 403, 432.



General's Global Compact which seeks corporate endorsement of a core set of human rights and environmental standards and other principles such as the ten-point code of environmental conduct developed by the Coalition of Environmentally Responsible Economies (CERES).

Calls for greater international legal limits on corporate behaviour have increased in recent years. One of the chief NGO campaigns, which ultimately proved unsuccessful, at the World Summit on Sustainable Development was for a treaty on corporate accountability which would have included environmental standards. Instead the WSSD Plan of Implementation includes this action item: that states should "actively promote corporate responsibility and accountability at all levels, based on the Rio Principles, including through the full development and effective implementation of intergovernmental agreements and measures, international initiatives and public-private partnerships, and appropriate national regulations."

OECD GUIDELINES FOR MULTINATIONAL ENTERPRISES

There are non-binding guidelines for large corporations adhered to by states in the Organization for Economic Cooperation and Development (OECD). The *OECD Guidelines for Multinational Enterprises* contain environmental requirements which resemble those found in MEAS.

OECD GUIDELINES FOR MULTINATIONAL ENTERPRISES

OECD MULTINATIONAL ENTERPRISE GUIDELINES	**Link to the text:**	http://www.oecd.org/pdf/M00021000/M00021070.pdf
	Adopted by Canada:	Yes
	International Status:	First adopted in 1976, latest revision 2000
	Secretariat:	http://www.oecd.org/EN/home/0,,EN-home-93-nodirectorate-no-no-no-28,00.html
	Canadian National Contact Point for Guidelines:	http:// www.ncp-pcn.gc.ca

The *OECD Guidelines for Multinational Enterprises* were first adopted in 1976 and are part of the *OECD Declaration on International Investment and Multinational Investments*. They are recommendations addressed by governments to multinational enterprises, which are "companies or other entities established in more than one country and so linked that they may coordinate their operations in various ways." The Guidelines incorporate social, economic and environmental principles, and ask multinationals to adopt full disclosure and transparency policies. They supplement existing national laws.

The latest 2000 version of the Guidelines added new recommendations on child and forced labour, consumer protection, and combating bribery, among others. The environmental guidelines were augmented by recommendations on environmental management and contingency planning for environmental impacts. All OECD members agreed in 2000 to strengthen the issue resolution part of the Guidelines, by requiring National Focal Points (a government office in each country which promotes the Guidelines, handles inquiries, and helps solve any problems) to follow specific procedures to resolve complaints regarding MNE operations.

The first general policy for enterprises is that they should "contribute to economic, social and environmental progress with a view to achieving sustainable development." Sections on disclosure, employment and industrial relations, environment, combating bribery, consumer interests, science and technology, competition and taxation follow the list of general policies. The next section of the Guidelines details implementation procedures, with a note on procedural guidance. Next come the Commentaries, which explain the Guidelines in more detail, but which are not part of the Guidelines.

The section on environment recommends that enterprises establish environmental management systems, provide environmental information to the public, use full life cycle analysis and EIAs, incorporate the precautionary principle, maintain contingency plans, continually seek to improve corporate environmental performance, provide environmental and safety education and training to employees and contribute to environmentally meaningful and economically efficient public policy. The Commentary says this section reflects the Rio Principles, Agenda 21 and takes the *Aarhus Convention* into account. Also, it states that the Guidelines encourage enterprises to raise the level of environmental performance "even where this may not be formally required by existing practice in the countries in which they operate."

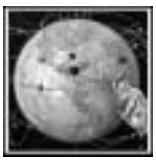
The procedure in Canada for resolving issues concerning adherence to the OECD MNE Guidelines is found at http://www.ncp-pcn.gc.ca/resolve-en.asp.

SUSTAINABLE USE OF NATURAL RESOURCES

Another area vital for sustainable development concerns sustainable use of natural resources. Though some MEAs do incorporate obligations for sustainable use, notably the *Biodiversity Convention*, there are still many gaps in international law regarding sustainable resource use.

ENERGY

Despite the vital importance of energy for a clean environment and for sustainable development, there are few references to sustainable energy in international environmental law. No MEA regulates energy though the *Climate Change Convention* obviously has energy regulation at its core, since stabilization of greenhouse gases will require significant changes in energy use. Both renewable energy and energy efficiency require legislation at the national level to regulate issues such as solar and wind access and to set standards for each sector involved in energy: transport, buildings, industry, appliances, etc.



Though Agenda 21 devotes a chapter to energy, it only recently became a topic of discussion at the Commission on Sustainable Development. CSD-9 in 2001 adopted a decision on energy which begins by stating that "Energy is central to achieving the goals of sustainable development." The decision addresses key issues and recommends options and strategies for each issue. The issues in the decision are listed as: access to energy; energy efficiency; renewable energy; advanced fossil fuel technologies; nuclear fuel technologies; rural energy; energy and transport; and a set of overarching issues such as capacity building, financial resources and public participation. The chapter on energy in the WSSD Plan of Implementation is based on this CSD decision.

The *Protocol on Energy Efficiency* to the *European Energy Charter* is an exception to the lack of attention to sustainable energy in MEAs. It provides a good model for sustainable energy use as it recognizes that energy efficiency is a considerable source of energy and can reduce adverse environmental impacts of energy systems. The *Protocol* promotes investment in energy efficiency between the Parties and requires the adoption of domestic energy efficiency programmes. However, it has only 41 ratifications and is limited in application to Europe.

WATER

Freshwater is a vital and limited resource. Water demand is growing worldwide due to population growth, industrial development and the expansion of irrigated agriculture. Transboundary water resources management is critical as a total of 261 rivers covering 45.3% of the world's total land area, excluding Antarctica, are shared by two or more countries.[214]

Because of the high potential for disputes between nations who both have interests in a particular water body, international rules covering shared watercourses are well developed. One of Canada's oldest bilateral environmental treaties with the US, the *Boundary Waters Treaty*, is an example of these rules. The rules generally centre on allocating shared waters between riparian states. However, environmental protection is becoming a more important focus of this body of international law as concerns over water quality and water's role in the ecosystem rises. The 1997 *UN Convention on the Law of the Non-Navigational Uses of International Watercourse*s requires states to make equitable and reasonable use of international watercourses, and to take steps to prevent causing harm to other watercourse states.

MINERALS

No MEA applies to mineral production, and sustainable use and production of minerals is not required by international law. However, different MEAs do cover various aspects of mineral production.

Any activity relating to mineral resources other than scientific research is prohibited in Antarctica under the 1991 *Protocol on Environmental Protection* to the *Antarctic Treaty* for at least 50 years. This international law supersedes the failed 1988 *Convention on the*

[214] UNEP, *Global Environmental Outlook 3* (London: Earthscan, 2002), 154.

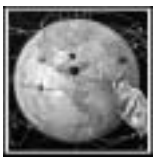
Regulation of Antarctic Mineral Resource Activities, which was not ratified by the states who negotiated it.

Deep seabed mining was a thorny issue in the Law of the Sea negotiations. Valuable polymetallic nodules are found on the deep seabed at a water depth of 5,000 to 20,000 feet. The deep seabed lies beyond the continental shelf and beyond the 200-mile limit of most nations' EEZ, which has been affirmed as the "common heritage of mankind". UNCLOS states that activities in this area beyond national jurisdiction were to be for the benefit of mankind as a whole and benefits were to be equitably shared. In Part XI of the 1982 UNCLOS, an international regime to manage mining in the deep seabed was set up, creating the International Seabed Authority to manage these activities. Profit sharing and technology transfer were part of the Part XI regime, unacceptable to the US, Canada and other developed countries that did not believe the Agreement protected the interests of their corporations. As UNCLOS does not permit reservations, the US could not opt out of Part XI and so refused to become a Party to the treaty. However, UNCLOS' goal – to produce a constitution for the world's oceans – was seen as desirable by the US and the global community kept working to achieve universal participation in UNCLOS. The UN attempted to lure the US and others back to the table by starting consultations on revisions to Part XI. In 1994, the *Agreement relating to the Implementation of Part XI of the UN Convention on the Law of the Sea* was signed, and is now an integral part of the Convention package. This *Agreement* modifies Part XI and eliminates or revises sections that may have deterred the development of deep seabed resources, on production limits, financial terms of contracts and mandatory technology transfer. These revisions have worked: the International Seabed Authority has now issued exploration contracts for polymetallic nodules to investors.

CANADA'S RECORD ON SUSTAINABLE DEVELOPMENT

In 1995, the Canadian federal government made sustainable development a goal of government policy, and created the office of the Commissioner of the Environment and Sustainable Development as part of the office of the Auditor General of Canada to integrate the environment into all aspects of federal decision-making. Legislation requires twenty-five federal departments and agencies to prepare Sustainable Development Strategies, which are assessed and monitored by the Commissioner.[215] The strategies are tabled in Parliament every 3 years. The strategies of the Department of Foreign Affairs, Environment Canada, the Canadian International Development Agency, Fisheries and Oceans Canada, Natural resources Canada, Agriculture and Agri-Food Canada and Health Canada are particularly relevant for environmental treaties, and are available on each department's web site.

Annual reports from the Commissioner on Environment and Sustainable Development are excellent sources of information on Canada's sustainable development record. In particular, chapter 6 of the 1999 Commissioner's report on 'Making International Environmental Agreements Work – The Canadian Arctic Experience', chapters 2-4 of the 1998 report on 'Working Globally – Canada's International Environmental



[215] The Commissioner's website is at http://www.oag-bvg.gc.ca.

Commitments', 'Responding to Climate Change', and 'Canada's Biodiversity Clock is Ticking' are very useful summaries of key Canadian MEA commitments.[216]

Canada has also set up a web site for sustainable development information: http://www.sdinfo.gc.ca/. It includes a historical path with landmark sustainable development dates for Canada starting with the creation of Canada's first national park, Banff, in 1885, and ending with the World Commission on Sustainable Development in 2002.

The Brundtland definition of sustainable development is used in the law that created the Commissioner's post, as well as in other federal statutes, such as the *Canadian Environmental Assessment Act*.

The federal government created an independent sustainable development agency, the National Round Table on the Environment and the Economy, in 1994.[217] It includes representatives from major groups, and has advised the federal government on a wide range of issues related to sustainable development including eco-efficiency, Arctic resource development, climate change, ecological fiscal reform and indicators for sustainable development. The International Institute on Sustainable Development and the International Development Research Centre are two other prominent Canadian centres for research on sustainable development financially supported by the federal government.[218]

Canada is a strong promoter of environmental assessment and public participation in environmental decision-making. The government has no plans at present to sign the *Aarhus Convention* because of a belief that existing access to information and other laws sufficiently address this topic, and coordination of federal and provincial positions would be difficult. Federal environmental assessment legislation is in place in Canada, including regulations which require assessments of projects outside Canada, as well as a 1999 Cabinet Directive on the environmental assessment of policy, plan and program proposals. Pursuant to the 1999 Directive, DFAIT developed a Framework for the Environmental Assessment of Trade Negotiations in February 2001.

The Export Development Corporation of Canada is also required by statute to conduct limited environmental assessment procedures, and participated in the OECD agreement on rules to govern environmental assessment of projects financed by official export credits.

The Sierra Club of Canada has issued a Rio Report Card every year since the summit, evaluating Canada's environmental standing, which has generally given Canada low marks. The Report Card finds that since 1992, Canada's has a poor record of breaking the

---

[216] All the Commissioner's reports are available on-line at http://www.oag-bvg.gc.ca/domino/cesd_cedd.nsf/html/menu3_e.html.

[217] For a description of the NRTEE's programmes, see the website at http://www.nrtee-trnee.org.

[218] Their respective websites are: www.iisd.ca and www.idrc.ca.

promises made in Rio.[219] Canada's commitment to increase overseas development assistance to 0.7% of GDP, has also gone unfulfilled. Canada received a C – in 2000, for "commitment to increase Overseas Development Assistance (ODA) to 0.7% of GNP, because the level of ODA has fallen every year, from 0.45% in 1992 to 0.26% for 2000-2001. But Canada has made some progress in reducing the debt loads of the poorest nations.

One of the most comprehensive reviews of the Canadian federal government's record on implementation of sustainable development commitments was recently completed by an independent multi-stakeholder process as Canada's National Report to the World Summit on Sustainable Development. This report combines reviews from outside experts, government agencies and a third party Reference Group. The Report reviews the subjects of Canada's performance on:

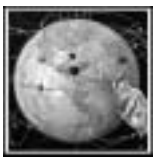
- Changes to decision-making structures
- Social sustainability
- Sustainable communities
- Health and environment
- Conservation and stewardship of biodiversity
- Sustainable development of natural resources
- Climate change
- The Canadian Arctic, and
- International cooperation.

It concludes that although Canada has taken several important steps in the last decade to promote sustainable development which have resulted in more efficient use of energy and resources and better protection of the natural environment, the ecological footprint of the individual Canadian remains large and continues to grow. 'Canada's international cooperation effort has diminished even as its standard of living has improved. …Despite a decade of initiatives at all levels, Canada's progress towards more sustainable development has been uneven.'[220]

Another assessment reaches a similar conclusion. The head of the International Institute for Sustainable Development lists the achievements that Canada can be proud of since Rio: a higher standard of living and high life expectancy; economic growth and improved

[219] *Rio + 8: The Eighth Annual Rio Report Card, 2000*, (June 2000) online: Sierra Club of Canada <http://www.sierraclub.ca/national.rio/rio-report-2000.pdf>.

[220] Stratos, Canada's National Report to the World Summit on Sustainable Development, (Government of Canada: Ottawa) 2002 online at http://www.canada2002earthsummit.gc.ca/en/canada_sd_e.cfm



education. Environmental achievements include more protected areas; large scale recycling programs; reductions in the amounts of some toxic substances entering the environment; and improved energy efficiency, except in the transportation sector. Setbacks are listed as: sharp increases in greenhouse gas emissions; closure of key fisheries; and worsened urban air quality. Poverty for some groups, such as the aboriginal population continues, and Canadians continue to be among the highest per capita users of water and energy in the world. Wastefulness and inequity between different groups in society persist. The reforms to decision-making procedures are noted, but the authors conclude that these changes have yet to appreciably alter Canadian lifestyles. and that "Canada's sustainable development journey seems longer and more arduous today than it did ten years ago at Rio."[221]

[221] David Runnalls and Francois Bregha, *The Canadian Record Since Rio*, vol3, no. 2 Isuma, fall 2002.

CHAPTER 12 – FUTURE DEVELOPMENT OF MEAS

The urgency of the world's environmental problems requires solutions in many forms, and the role of international environmental law is central to the world's policy response. Since the conclusion of the Stockholm *POPs Convention*, there have been no MEAs under negotiation, the first time since the Rio Earth Summit in 1992. No new MEAs appear likely to be launched in the near future. The global community is focussing on implementation of the numerous MEAs that now exist, and attempting to ensure that states meet the commitments they have already made.

The MEAs themselves can and should be strengthened, and international systems of compliance and enforcement improved to ensure that ambitious commitments are met. Political will is the key to achieving a cleaner and more equitable planet. True integration of environmental considerations into all aspects of economic behaviour is also required, and is now lacking.

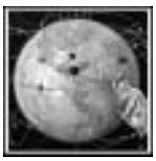
In addition, the global environmental governance structure could be strengthened.

Finally, new instruments such as an overarching soft law document or a binding treaty may prompt the further evolution of this critical branch of law.

IMPROVING MEAS TO SOLVE ENVIRONMENTAL PROBLEMS

Why have the growing number of environmental treaties not solved the environmental problems they are designed to solve? There are a number of possible explanations, and improvements that can be made to MEAs.

First, the commitments contained in MEAs are often weak. "It is not that states are intentionally violating important, substantive environmental protection rules; rather the rules are inadequate to protect the environment."[222] Increasing the effectiveness of the international laws to solve the problems they were designed to address will mean setting higher emission reduction limits for pollutants and greenhouse gases and faster phase-out targets for certain pollutants. Renewable resources are being depleted too rapidly. Forests, fish, freshwater and soil require more careful management. Strengthening the substantive requirements in MEAs is an improvement that could be made.



[222] Mary Ellen O'Connell, "Enforcement and the Success of International Environmental Law", Vol. 3 Global Legal Studies Journal.

Also, MEAs now lack some key elements. For example, liability and compensation rules for environmental damage are absent. With few exceptions, most MEAs do not contain rules for liability and compensation. The *Biosafety Protocol* and *Liability Protocol* under the *Basel Convention* are two recent exceptions to this general rule, (other exceptions are found in some IMO marine pollution treaties) and may represent a positive trend towards more attention to liability. Without strong incentives to comply, such as fear of liability, states may be reluctant to devote sufficient resources to making MEAs work.

Not all environmental problems are covered by a MEA. New agreements could potentially fill gaps in MEAs for conservation of forests, soils, freshwater and to regulate the impacts of mining, oil and gas development, and agriculture. A UNEP sponsored survey of twenty MEA secretariats listed numerous specific issues that are not being addressed effectively by MEAs , including these issues and others.[223]

The nature of international environmental law itself is another reason for the perceived weakness of the MEA system. Most obligations undertaken in treaties can only be effectively implemented at the national or domestic level. And often implementation efforts fall short. Canada's Commissioner of Sustainable Development refers to this problem as the "implementation gap." A promising method of closing this gap is the increasing availability of individual complaint mechanisms for non-enforcement of environmental obligations, though the most highly touted of these mechanisms still fall far short of the remedies available to corporations under trade treaties.[224] Other domestic implementation techniques, such as domestic litigation, public participation and moral censure can also increase an MEA's effectiveness. Improving domestic implementation can help improve MEA effectiveness.

The enforcement tools contained in the treaties are another reason. Direct enforcement at the international level depends on the availability of effective techniques for enforcement. The contrast between the enforcement remedies in trade treaties and those in environmental treaties is instructive. Countries act swiftly to address treaty breaches that will involve economic harm, such as breaches of the agreements comprising the World Trade Organization (WTO) or the North American Free Trade Agreement (NAFTA). Sanctions are infrequently used in MEAs, though the new systems for liability and compensation referred to above may indicate a trend to put penalty systems into place that will ensure environmental treaties are taken more seriously.

Nations are focussing on improving compliance, through the use of more "sunshine" methods of transparency, public participation and non-coercive reporting and adjustment systems.

---

[223] UNEP, *International Environmental Governance: Multilateral Environmental Agreements* UNEP/IGM/4/INF/3, 16 November 2001.

[224] For example, procedures under NAFTA allow investors to sue countries directly for harm to their economic interests, in Chapter 11, the "investor-state suit' provision, and these procedures are quick, enforceable, have heavy sanctions and are closed to the public, while the procedures for individuals or NGOs to complain of non-enforcement of environmental laws under the NAFTA side agreement are slow, indirect, and have no penalties attached.

MOVING BEYOND ENVIRONMENT

Integrating the environment into economic decisions also may lead to new agreements in areas outside the natural environment, such as corporate social responsibility, human rights, trade, and international finance. Without recognition of the essential human dimension, environmental protection and sustainability are unlikely to be achieved. The emphasis on sustainable development in the new Arctic legal regime; the focus on access and benefit-sharing in the biodiversity context; the prominence of market mechanisms in the climate change regime; and the key role that human health factors played in the persistent organic pollutants regime are all examples of how moving beyond an "environment-only" focus can lead to significant global agreements.

The protests against the WTO in Seattle, the abandonment of the Multilateral Agreement on Investment (MAI) and the strength of direct market campaigns (such as the campaign which persuaded large-scale buyers not to purchase lumber products from old growth forests) all signal the importance of influencing private sector behaviour to achieve international environmental goals. There are many influential supporters for a global environmental organization (GEO) as a multilateral rules-based counterpart to the World Trade Organization (WTO). Voluntary standards are also proposed as a solution. The UN Secretary-General has asked for corporations to voluntarily embrace a "Global Compact" on human rights, labour and environment standards. Other methods of holding corporations accountable for the impacts of their activities are gaining ground, from increased use of foreign direct liability lawsuits to hold parent companies liable for the acts of their subsidiaries, to national statutes designed to impose uniform standards on corporations no matter where they operate.[225]

IMPROVING GLOBAL GOVERNANCE

MEAs have been criticized as duplicative and creating too heavy an administrative burden for many countries. Rather than solving the world's environmental problems, this increase in treaties has caused problems itself. "Treaty congestion" means that "there is a great potential for the additional inefficiency of overlapping provisions in agreements, inconsistencies in obligations, significant gaps in coverage, and duplication of goals and responsibilities."[226]

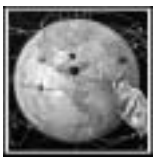
To help begin to solve this problem and to coordinate MEA activities, the United Nations, UNEP and other international bodies are studying proposals to:

- establish common reporting obligations for states to reduce duplication and administrative overload;

---

[225] For a summary of the foreign direct liability lawsuits and domestic statutes to control corporate activity extraterritorially, see Halina Ward, *Governing Multinationals: The Role of Foreign Direct Liability*, (London: RIIA), 2001.

[226] Michael J. Kelly, *Overcoming Obstacles to the Effective Implementation of International Environmental Agreements*, (1997) 9 Georgetown International Environmental Law Review, 447.



- eliminate overlaps and duplication between the subjects covered by different MEAs, or at least establish a better system of notification between MEA decision making bodies,
- co-locate or cluster treaty secretariats;
- coordinate meetings or hold treaty meetings of related treaties (i.e., *Ramsar* and *Biodiversity*) back-to-back; and
- coordinate scientific and other assessments.

NEW BINDING TREATY OR NEW SOFT LAW DECLARATION?

> The Charter of the United Nations governs relations between States. The Universal Declaration of Human Rights pertains to relations between the State and the individual. The time has come to devise a covenant regulating relations between humankind and nature.
>
> *– UN Secretary-General's 1990 Report*

The growth in the number of multilateral environmental agreements in the past few decades has reached a critical mass. Unlike many other international law regimes, international environmental law is not governed by a comprehensive set of universally binding rules.

Many experts believe that an overarching binding framework is needed to improve the effectiveness of international environmental law. In trade and environment disputes, for example, environmental concerns are at a disadvantage, because the rules for international environmental protection are not as clear as the WTO's trade rules. Binding environmental principles could also help coordinate the activities of the many international institutions involved in environmental policy, and establish minimum environmental standards–both for private sector activities and for governments – by assisting in the harmonization of domestic environmental laws.[227]

Among the many proposals for the future evolution of this branch of law, two movements stand out. Many people believe that a binding treaty which establishes common principles for MEAs is desirable. The IUCN Dr*aft Covenant on Environment and Development* has been developed to fulfill this goal. Another widely held goal is for an inspiring statement of common values expressed in plain language rather than legal text, such as the *Earth Charter*. Both these documents are discussed below.

---

[227] David Hunter, *Global Environmental Protection in the 21st Century*, Foreign Policy in Focus (May 2000).

IUCN DRAFT CONVENANT

The IUCN *Draft Covenant on Environment and Development* is a proposal for a universally binding treaty to cover environment and development issues.

In *Our Common Future*, the World Commission on Environment and Development called for "a new and legally-binding universal Convention [which] should consolidate existing and establish new legal principles, and set out the associated rights and responsibilities of States individually and collectively for securing environmental protection and sustainable development to the year 2000 and beyond."

Since the early 1990s, the IUCN's Commission on Environmental Law has been working on this Covenant. A new revised version was released in 2000.

The Draft Covenant contains a preamble and 72 Articles arranged into eleven Parts. The Parts relate to fundamental principles, general obligations, natural systems and resources, processes and activities, global issues, transboundary issues, implementation and cooperation, responsibility and liability, application and compliance. It contains the most widely accepted and established concepts and principles of international law. The Draft Covenant affirms that the global environment is a common concern of humanity. If adopted, it would require Parties to prevent, control and mitigate harm to the environment. The Draft Covenant has been used as a checklist for drafting environmental legislation at the national level in many countries.

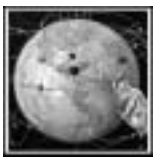
EARTH CHARTER

The *Earth Charter* is a declaration of fundamental principles for building a just, sustainable, and peaceful global society in the 21st century. It recognizes that environmental protection, human rights, equitable human development, and peace are interdependent and indivisible

Supporters hoped that the *Earth Charter* could be adopted at the 1992 Rio Earth Summit, but the ambitious agenda for that Summit left the Charter unfinished. An Earth Charter Commission was formed in 1997 to oversee completion of the project and an Earth Charter Secretariat was established at the Earth Council's headquarters in Costa Rica. The *Charter* was written by an international drafting committee, who undertook a comprehensive international consultation process.

The drafters of the *Earth Charter* hope that it will be used as a soft law instrument that provides an ethical foundation for the ongoing development of environmental and sustainable development law.[228]

The IUCN Commission on Environmental Law and the Earth Charter Commission are coordinating their efforts as the drafts of the Covenant and Earth Charter are revised and finalized. Many hope that if the *Earth Charter* is adopted, it will provide the impetus for the eventual conclusion of a treaty, as soft law is often a precursor to binding obligations. For example, the 1948 *Universal Declaration of Human Rights*, a `soft law' instrument, was



[228] The website of the Earth Charter is at http://www.earthcharter.org.

the precursor to two legally binding 1966 UN Covenants on Human Rights. Environmentalists believe that the *Earth Charter* could have similar inspirational power as the *Universal Declaration of Human Rights*.

The power of MEAs to solve environmental problems will only be as strong as the powers that states are willing to relinquish. For now, multilateral negotiation remains the best, and only, means to manage global and transboundary environmental problems.[229].

[229] P. Chasek, *Earth Negotiations* (Tokyo: United Nations University, 2000), 8.

APPENDIX 1 – SOURCES FOR INTERNATIONAL ENVIRONMENTAL LAW INFORMATION

This Guide attempts to distil the most useful sources of MEA information. There is now an overwhelming amount of publicly available information available about MEAs, a welcome change over the past ten years. Before the Earth *Negotiations Bulletin* (ENB) was founded in 1992, it was difficult for the public to learn about new developments in international environmental law. Covering up to 150 days of negotiations each year in recent years, this reporting service provides daily coverage of the meetings of the major treaties. The web site for the ENB is maintained by Canada's International Institute for Sustainable Development, and contains helpful summaries of all the major MEAs, as well as archives of past meetings.[230]

Information about international environmental law can be found in many places, including law libraries, government sources; international organizations and non-governmental organizations. (For NGO information, consult the end of each chapter addressing a specific environmental topic.)

LAW LIBRARIES

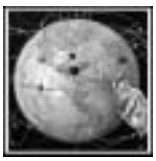
Leading legal texts in this area are:

- *International Environmental Law and Policy*; David Hunter, James Salzman, Durwood Zaelke, (NY: Foundation Press), 1999.
- *International Environmental Law: Basic Documents*; Philippe Sands, (Manchester: University of Manchester), 1997.
- International Environmental Law; Elaine Hughes, in Canadian Environmental Reporter, Butterworths, 1999.

Law reports which include the full texts of treaties, available in law libraries, include:

- International Legal Materials (ILM)

[230] The ENB is available on-line at the IISD web site at www.iisd.ca. It is also available by email subscription.



- Canadian Treaty Series (CTS)

- United Nations Treaty Series (UNTS)

GOVERNMENT OF CANADA SOURCES

The Department of Foreign Affairs and International Trade (DFAIT) is the arm of the federal government with primary responsibility for international law. The DFAIT website contains information on topics such as sustainable development; trade and the environment; Canada's participation in international and regional organizations and on some MEAs: http://www.dfait-maeci.gc.ca.

Environment Canada (EC) also plays a key role in MEA negotiation. Its International Relations Directorate is the central policy and coordination centre for EC's international activities, and is organized into 3 branches: the International Policy and Cooperation Branch, the Americas branch, and the Climate Change International Branch. The International Relations Directorate publishes the ***Compendium of International Environmental Agreements***, now available in its Third Edition at http://www.ec.gc.ca/international/multilat/compendium_eng.htm. This compendium is comprised of 59 international environmental agreements, and also includes a number of regional agreements. The EC website, the Green Lane, has additional information on environmental issues and on some MEAs: http://www.ec.gc.ca.

The Commissioner of the Environment and Sustainable Development (CESD) developed the International Environmental Commitments database, which covers a total of 88 agreements and includes: (1) general information about each agreement; (2) specific commitments made; and (3) actions taken in response to a particular commitment. The database has now been transferred to the Department of Foreign Affairs and is at: http://pubx.dfait-maeci.gc.ca/A_Branch/AES/Env_commitments.nsf/Homepage.

The CESD also issues annual reports on critical environmental issues. Past reports have discussed Canada's international agreements; performance on implementing the Biodiversity and other Conventions; and international agreements relating to the Arctic. Reports are available at: http://www.oag-bvg.gc.ca/.

The Canadian International Development Agency (CIDA) carries out Canada's international development obligations. CIDA participates in many MEA negotiations: http://www.cida-acdi.gc.ca.

INTERNATIONAL ORGANIZATIONS

International organizations also have a wealth of information about MEAs. Each UN agency also has its own website, and each secretariat of a treaty also has a website. These websites are listed throughout this Guide.

The UN has a treaty service at http://untreaty.un.org/. This collection includes six categories of treaty-related data:

- Status of Multilateral Treaties Deposited with the Secretary-General
- The United Nations Treaty Series
- Texts of Recently Deposited Multilateral Treaties
- Photographs of Treaty Signature Ceremonies
- Titles of the Multilateral Treaties Deposited with the Secretary-General in the UN official languages
- Summary of Practice of the Secretary-General as Depositary of Multilateral Treaties.

Also see http://untreaty.un.org/English/guide.asp.

UNEP: http://www.unep.org. The UNEP web site maintains a collection of documents from the major UN Conferences.

All outcomes from the **1972 Stockholm Conference** can be found at http://www.unep.org/Documents/Default.asp?DocumentID=97.

The products of the **1992 Rio Conference** are available at the Earth Council's web site at http://www.ecouncil.ac.cr/about/ftp/riodoc.htm.

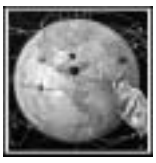
- NGO Treaties (ngoeng.zip) (http://www.ecouncil.ac.cr/ftp/ngoeng.zip) (131K)
- Agenda 21 (ag21eng.zip) (http://www.ecouncil.ac.cr/ftp/ag21eng.zip) (347K)
- Biological Diversity (bioeng.zip) (http://www.ecouncil.ac.cr/ftp/bioeng.zip) (17K)
- Climate Change (climeng.zip) (http://www.ecouncil.ac.cr/ftp/climeng.zip) (19K)
- Rio Declaration (rioeng.zip) (http://www.ecouncil.ac.cr/ftp/rioeng.zip) (4K)
- Forest Principles (foreng.zip) (http://www.ecouncil.ac.cr/ftp/foreng.zip) (6K)

Rio Declaration On Environment And Development at http://www.unep.org/Documents/Default.asp?DocumentID=78&ArticleID=1163.

UN website for World Summit on Sustainable Development: http://www.johannesburgsummit.org/

RESEARCH AND ACADEMIC INSTITUTES

The International Institute for Sustainable Development (IISD) in Winnipeg is home to the Earth Negotiations Bulletin (ENB), a comprehensive reporting system for all MEA negotiations. The ENB site contains archives of all negotiating sessions and useful summaries of each MEA: http://www.iisd.ca/linkages. In addition, the IISD produces research and policy analysis on a range of MES-related issues, such as trade and the environment and climate change: http://www.iisd.ca.



International Institute for Environment and Development. IIED is an independent, non-profit organization promoting sustainable patterns of world development through collaborative research, policy studies, networking and knowledge dissemination, and addresses global issues such as mining, the paper industry and food systems: www.iied.org.

Environmental Treaties and Resource Indicators (**ENTRI**) provides an online search service for finding information about environmental treaties and national resource indicators: http://sedac.ciesin.org/pidb/pidb-home.html.

The Multilaterals Project, begun in 1992, is an ongoing project at the Fletcher School of Law & Diplomacy, Tufts University, Medford, Massachusetts to make available the texts of international multilateral conventions and other instruments. Although the project was initiated to improve public access to environmental agreements, the collection today also includes treaties in the fields of human rights, commerce and trade, laws of war and arms control, and other areas. Although the vast majority of texts date from the second half of this century, the collection also includes historical texts, from the 1648 Treaty of Westphalia to the Covenant of the League of Nations.
http://www.fletcher.tufts.edu/multilaterals.html

Project on International Courts and Tribunals (PICT). Decisions from international courts and tribunals are collected by a new joint project of a major NGO and a law school. http://www.pict-pcti.org/home.html.

Yearbook of International Co-operation on Environment and Development. The Yearbook is contains descriptions of the world's most important international Agreements on environment and sustainable development, and activities and structure of more than 50 intergovernmental organizations and NGOs. Many Articles from the Yearbook are available online at http://www.greenyearbook.org./index.htm.

Yearbook of International Environmental Law. The *Yearbook of International Environmental Law*, is a leading publication in the field of international environmental law and a major reference source. Each volume contains articles by leading authorities, a "Year in Review Section" providing over 100 reports on key developments contributed by expert scholars or practitioners, a literature review and bibliography section. Not available online.

American Society of International Law. ASIL provides an electronic resource guide to international environmental law. The guide is very comprehensive on most of the important international agreements, and contains a plethora of links to relevant sites. The guide can be accessed online at: http://www.asil.org/resource/env1.htm.

APPENDIX 2 – ANNOTATIONS

LIST OF ENVIRONMENTAL TREATIES AND OTHER INTERNATIONAL AGREEMENTS RELATED TO THE ENVIRONMENT

Agreement Between the Government of Canada and the Government of the USA on the Conservation of the Porcupine Caribou Herd, CTS 1987/31.

Agreement between the Government of Canada and the Government of the United States of America on Air Quality, March 13, 1991, 30 I.L.M. 678.

Agreement on the Conservation of Polar Bears and Their Habitats (1974) 13 ILM 13.

Antarctic Treaty, December 1, 1959, 402 U.N.T.S. 71.

Arctic Environmental Protection Strategy, June 14, 1991, 30 I.L.M. 1624.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, March 22, 1989, 28 I.L.M. 657 (1989).

Cartegena Protocol on Biosafety to the Convention on Biological Diversity, January 29, 2000, 39 I.L.M. 1027 (2000).

Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), November 23, 1972, 11 I.L.M. 1358 (1972).

Convention on the Conservation of Antarctic Marine Living Resources, 19 I.L.M. 837 (1980).

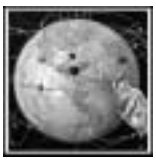
Convention for the Conservation of Antarctic Seals, February 11, 1972, 1990 CTS 40.

Convention on the Preservation and Protection of Fur Seals, July 7, 1911, 37 Stat.1542.

Convention for the Protection of Migratory Birds in the US and Canada, August 16, 1916 TS No. 628.

Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, June 25, 1998, 38 I.L.M. 517 (1999).

Convention on Biological Diversity, June 5, 1992, 31 I.L.M. 818 (1992).



Convention on Environmental Impact Assessment in a Transboundary Context or the Espoo Convention, February 25, 1991, 30 I.L.M. 800 (1991).

Convention on Long-Range Transboundary Air Pollution (LRTAP), November 13, 1979, 1302 U.N.T.S. 217.

Convention on the Conservation of Migratory Species of Wild Animals, June 23, 1979, 19 I.L.M. 11 (1980).

Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), March 3, 1973, 993 U.N.T.S. 243.

Convention on the Non-Navigational Uses of International Watercourses, 36 I.L.M. 719 (1997).

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), December 29, 1972, 1046 U.N.T.S. 120 (1973).

Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, September 11, 1998, 38 I.L.M. 1 (1999).

Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR) February 2, 1971, 996 UNTS 245.

Declaration of the UN Conference on Environment and Development, UN DOC.A/CONF.151/26/Rev.1, 1992.

Declaration on the Establishment of the Arctic Council, September 19, 1996, 35 I.L.M. 1382.

European Energy Charter and Protocol on Energy Efficiency, 34 I.L.M. 373 (1996).

General Agreement on Tariffs and Trade (GATT), October 30, 1947, 55 U.N.T.S. 187.

Great Lakes Water Quality Agreement, April 15, 1972, 11 I.L.M. 694.

International Convention for the Regulation of Whaling, December 2. 1946, 161 U.N.T.S. 72.

International Convention on Civil Liability for Oil Pollution Damage, November 29, 1969, 973 U.N.T.S. 3.

International Convention on Oil Pollution Preparedness, Response and Cooperation, November 30, 1990, 30 I.L.M. 733 (1991).

International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, December 18, 1971, 834 U.N.T.S. 17.

International Plant Protection Convention, December 6, 1951, 150 U.N.T.S. 67.

International Treaty on Plant Genetic Resources for Food and Agriculture

International Tropical Timber Agreement (ITTA) 1994, 33 I.L.M. 1014 (1994).

Kyoto Protocol to the United Nations Framework Convention on Climate Change, December 10, 1997, 37 I.L.M. 22 (1998).

International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001.

International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996, 35 I.L.M. 1415 (1996).

International Convention for the Prevention of Pollution from Ships (MARPOL), November 2, 1973, 12 I.L.M. 1319 (1973).

International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), 17 I.L.M. 546 (1978).

Montreal Protocol on Substances that Deplete the Ozone Layer, September 16, 1987, 26 I.L.M. 1550 (1987).

North American Agreement on Environmental Cooperation (NAAEC), September 14, 1993, 32 I.L.M. 1480 (1993).

North American Free Trade Agreement (NAFTA), December 17, 1992, 32 I.L.M. 88 (1992).

Protocol on Environmental Protection to the Antarctic Treaty, October 4, 1991, 30 I.L.M. 1461 (1991).

Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (HNS Protocol)

Protocol to the Antarctic Treaty on Environmental Protection, 30 I.L.M. 1461 (1991).

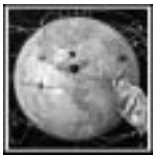
Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-Level Ozone (The "1999 Gothenburg Acidification Protocol"), 21 International Environmental Reporter 5051.

Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30% (The "1985 Helsinki Sulphur Protocol"), June 14, 1994, UNDOC EB.AIR/R. 84. 21 International Environmental Reporter 4825.

Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes (The "1988 Sofia NOx Protocol"), 27 I.L.M. 698 (1988).

Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes (The "1991 Geneva VOC Protocol"), 21 International Environmental Reporter 4875.

Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions (The "1994 Oslo Sulphur Reduction Protocol), 33 I.L.M. 1542 (1994).



Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants (The Aarhus Protocol on Persistent Organic Pollutants), March 31, 1998, 37 I.L.M. 505 (1998).

Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Heavy Metals (The "1998 Aarhus Protocol on Heavy Metals), 21 International Environmental Reporter 4951 (1998).

Report of the UN Conference on the Human Environment, (1972), 11 ILM 1416.

Rio Declaration on Environment and Development, (1992), 31 I.L.M. 874.

Stockholm Convention on Persistent Organic Pollutants (POPs), May 22, 2001, 40 I.L.M. 532 (2001).

Stockholm Declaration of the United Nations Conference on the Human Environment, (1973), 11 I.L.M. 1416.

Treaty Between Canada and the United States of America Relating to Boundary Waters and Questions Arising Along the Boundary Between the United States and Canada, January 11, 1909, 4 A.J.I.L. (Supp) 239.

United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (also known as the UN Fish Agreement – UNFA), 34 I.L.M. 1542 (1995).

United Nations Convention on the Law of the Sea (UNCLOS), December 10, 1982, 21 I.L.M. 1261 (1982).

United Nations Convention on the Law of Non-Navigational Uses of International Watercourses, (1997), 36 I.L.M. 700.

United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, October 14, 1994, 33 I.L.M. 1328 (1994).

United Nations Framework Convention on Climate Change, May 29, 1992, 31 I.L.M. 849 (1992).

Vienna Convention for the Protection of the Ozone Layer, March 22, 1985, 26 I.L.M. 1529 (1987).

LIST OF CANADIAN STATUTES

A non-official list of federal statutes is maintained online by the Department of Justice at: http://laws.justice.gc.ca/en/index.html.

Access to Information Act, RS 1985, c. A-1.

Arctic Waters Pollution Prevention Act, RSC 1985, c. A-12.

Auditor General Act, RSC 1985, c. A-17.

Canada National Parks Act, RS 2000, c. 32.

Canada Shipping Act, RSC 1985, c. s-9.

Canada Shipping Act 2001, RS 2001, c.332.

Canada Wildlife Act, RS 1985, c. W-9.

Canadian Environmental Protection Act 1999, RS 1999, c.33.

Canadian Environmental Assessment Act, RS 1992, c.37.

Coastal Fisheries Protection Act, RSC 1985, c. C-33.

Export Development Act, RSC 1985, c. E-20.

Fisheries Act, RSC 1985, c. F-14.

International Boundary Waters Treaty Act, RS 1985, c. I-17.

Migratory Birds Convention Act 1994, RS 1994, c. 22.

North American Free Trade Implementation Act, RS 1993 c.44.

Oceans Act, SC RS 1996, c. 31.

Plant Breeders' Rights Act, RS 1990, c. 20.

Plant Protection Act, RS 1990, c. 22.

Species at Risk Act, RS 2002, C-5.

Transportation of Dangerous Goods Act 1992, RS 1992, c. 34.

Wild Animal and Plant Protection and Regulation of International and Inter-provincial Trade Act, RS 1992, c. 52.

World Trade Organization Agreement Implementation Act, RS 1994, c. 47.