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United Nations Environment Programme

UNEP Environmental Law Training Manual

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FOREWORD

Agenda 21, the action programme adopted at the 1992 United Nations Convention on Environment and Development, reinforced UNEP's key role in the implementation and further development of international environmental law. In fulfilment of the thrust of that role, UNEP has, for over two decades, provided legal assistance to countries, trained government officers and disseminated environmental law information.

The Agenda is given concrete expression in UNEP's Programme for the Development and Periodic Review of Environmental Law (the Montevideo Programme), first adopted in 1981 for a ten-year period. A Montevideo II Programme was developed during 1991-1992 and adopted by Governing Council decision 17/25, setting the strategy for UNEP's activities in the field of environmental law in the 1990s as well as requiring that the Programme be reviewed within five years. After its intergovernmental review by senior experts in December 1996, Governments during the 19th Session of the Governing Council endorsed the continuing validity of the Programme in decision 19/20. An important component of Montevideo II is enhancing the capacity of states to: participate effectively in the development and implementation of environmental law; implement international environmental law instruments; and promote public awareness of international environmental issues through the provision of education and information.

UNEP's Environmental Law and Institutions Programme Activity Centre (ELI/PAC) has now drawn on the experience gained from a range of activities to produce this Environmental Law Training Manual. The Manual has been written in close collaboration with the secretariats of major environmental conventions as well as national experts in various aspects of environmental law. Although the Manual is directed primarily at those in government and academia, it also could build awareness of environmental law among the private sector and the wider public.

As a tool for building national capacity, the Manual aims to enhance compliance with and implementation of a growing number of environmental legal obligations. It further should contribute to the development of national and international environmental law, including the participation in international negotiations by developing countries and countries with economies in transition.

The Manual will be used in UNEP's future global, regional and national training courses. It also should be helpful to governments interested in developing their own environmental law training programmes. Finally, it may assist the development of training or educational materials by other organizations and institutions at not only the global level but the regional and national levels as well.

Many progressive compliance mechanisms are discussed in the Manual, making it a timely contribution to the furtherance of environmental law aiming at sustainable development. UNEP hopes this unique publication both informs and motivates those who come into contact with it.

The Executive Director
United Nations Environment Programme

INTRODUCTION

AN OVERVIEW

Chapter 38 of Agenda 21 designated the United Nations Environment Programme (UNEP) as the principal body within the United Nations system in the field of the environment and outlined the priority areas on which it should concentrate. Among these are the further development of international environmental law, in particular conventions and guidelines, and promotion of its implementation; the provision of legal advice to Governments, at their request, in establishing their national legal and institutional frameworks; and facilitation of information exchange, including information on environmental law.

The Governing Council at its seventeenth session, which was held immediately after UNCED, reinforced this mandate when, by Decision 17/25, it adopted UNEP's Programme for the Development and Periodic Review of Environmental Law for the 1990s (Montevideo II), which outlined eighteen programme areas in which UNEP should take action in the 1990s and beyond. These include enhancing the capacity of States to participate effectively in the development and implementation of environmental law; promoting the effective implementation of international legal instruments in the field of the environment; and promoting pubic awareness, education, information and public participation in the consideration of international environmental regimes and the development of national laws.

UNEP's Environmental Law and Institutions Programme Activity Centre (ELI/PAC) has sought to fulfil this mandate through capacity building, including the production of environmental law publications on environmental legislation at both national and international levels. The UNEP Environmental Law Training Manual is the latest in a series of such publications.

UNEP's experience drawn from its training programmes, missions and other contacts is that government officials, academic institutions, students, the private sector and NGOs who work in the field of environmental law and sustainable development, particularly in developing countries and countries with economies in transition, feel a serious and urgent need for easily accessible material on environmental law. Although there are many reference books on international law, there is a notable dearth of such books on environmental law specifically. Where available, such books tend to be expensive and difficult to come by. This book, along with the other recent UNEP environmental law publications, is aimed at filling a vacuum much felt by those who have little or no access to professional materials.

The Manual is divided thematically into three parts: Part I offers an overview of environmental law; Part II reviews the major international environmental law conventions and other mechanisms; and Part III discusses national legal regimes.

PART I: OVERVIEW OF ENVIRONMENTAL LAW

This Manual will be used by individuals with widely divergent backgrounds – those who are legally trained and those who are not, those who have experience in the field of the environment and those who do not. Accordingly, the initial chapters are meant to serve as a basic introduction to the world of environmental law at both the international and national levels.

The first chapter, *Scope and History of Environmental Law*, outlines the basic elements of environmental law. It begins by discussing the definition of "environment" and then explains "environmental management" and "sustainable development". It indicates that the choice of definition is significant for the policy and actions of the State in protecting the environment. The chapter then looks at the role of environmental law and the history of its development, at the national and international levels, right through to mid-1997.

The second chapter, *Introduction to International Law Relating to The Environment* attempts to answer the basic question, "what is international law?". The chapter then proceeds to look at the sources of international law,

that is, conventions, international custom, general principles of law recognised by states and judicial decisions and the teachings of publicists.

Chapter Three, *Emerging Principles and Concepts in International and National Environmental Law,* looks at a number of legal principles which have come to light in recent years. At the international level, these include sustainable development, a common concern of humankind, common but differentiated responsibilities and partnership. At the national level the chapter identifies the crystallisation of environmental issues in policy documents, more comprehensive coverage of environmental issues, the strengthening of the normative content of environmental legislation, the use of economic instruments for environmental management, the incorporation of international norms into national legislation, a reliance on anticipatory and precautionary mechanisms and measures, efforts towards ensuring a coherent legislative framework, the facilitation of compliance and enforcement, the centralization of environmental management and the establishment of innovative dispute avoidance and settlement mechanisms.

PART II: INTERNATIONAL ENVIRONMENTAL CONVENTIONS AND OTHER MECHANISMS

Chapter Four deals with *Conservation and Sustainable Use of Biological Diversity and Its Components.* The chapter discusses the Convention on Biological Diversity, the Convention on the Conservation of Migratory Species of wild Animals (CMS), the Convention on International Trade in Endangered Species (CITES) and the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora.

Chapter Five, on *Atmosphere Protection,* briefly discusses acid rain as a form of transboundary air pollution before thoroughly describing the legal regimes which address ozone depletion and climate change due to global warming. One major segment of the chapter traces the origins of the ozone depletion problem, discusses the genesis of the Vienna Convention for the Protection of the Ozone Layer and then looks at the provisions of the Montreal Protocol on Substances that Deplete the Ozone Layer.

The other major segment of the chapter consists of the partial reprint of an article by Daniel Bodansky on the 1992 United Nations Framework Convention on Climate Change (UNFCCC). This article was prepared with the assistance of the UNFCCC Secretariat and has been reprinted with the permission of the Yale Journal of International Law.

Chapter Six on *Water Protection* contains two main segments on the marine environment and the international law of shared water resources. The first segment looks at The United Nations Convention on The Law of the Sea, various International Maritime Organization conventions on oil and other pollution from ships as well as environmental protection conventions which have been developed under the auspices of UNEP's Regional Seas Programme. The second segment reviews various theories on States' rights and responsibilities regarding shared water resources. It then discusses the recently adopted Convention on Non-Navigational Uses of International Watercourses and the major components of various regional watercourse agreements.

Chapter Seven is on the *United Nations Convention to Combat Desertification.* The chapter defines desertification and then analyses the provisions of the Convention, including those related to the obligations of Parties, priority for Africa, technology transfer, capacity building, public awareness, financial mechanisms and institutions. It briefly discusses the regional implementation annexes to the Convention and national legislation to implement the Convention.

Chapter Eight, *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,* analyses the provisions of the Basel Convention and the obligations imposed on State Parties. It discusses the definition of "waste", means for achieving the environmentally sound management of hazardous waste, the control of or prohibition on exporting hazardous wastes for disposal or recycling and the national legislation needed to implement the Convention.

Chapter Nine, *Trade and Environment*, looks at the interrelationship between international trade and environmental protection. It outlines the legal regime governing international trade starting with the General Agreement on Tariffs and Trade (GATT) and tracking the evolution of the World Trade Organization. The chapter discusses the GATT trade provisions which are relevant to environmental protection and then looks at various international environmental conventions, highlighting provisions which have implications for the free trade regime. These include the Basel Convention on Hazardous Wastes, CITES and the Montreal Protocol on Ozone Depleting Substances.

Chapter Ten, *Global Environment Facility (GEF)*, discusses the origins of the GEF, its three implementing agencies (UNDP, UNEP and The World Bank) and its operation.

Part III: National Legal Regimes

Chapter Eleven, *Environmental Law at the National Level*, looks at the implementation of international conventions and non-binding legal instruments at the national level, particularly in relation to sustainable development. It then explores constitutional matters relating to environmental management. Models for environmental institutions and legislation are mentioned, and the role of customary practices in environmental regulation is described. Cross-sectoral aspects of environmental legislation are then highlighted.

Chapter Twelve is on *Elements of Framework Environmental Legislation*. This looks at the basic components of a framework environmental protection law. These include: definitions of common terms, a statement of general objectives and principles, institutional arrangements, policy formulation and planning, environmental impact assessment and environmental audits, environmental quality criteria and standards, integrated pollution control, public participation and dispute settlement procedures.

Chapter Thirteen, on *Environmental Management of Land and Human Settlements*, discusses the role of law in the management of human settlements.

Chapter Fourteen, *Environmental Impact Assessment*, looks at the rationale for EIA, the problems encountered in the application of EIA, the obligations imposed on various actors and examples of national EIA legislation.

Chapter Fifteen is on *Trade in Hazardous Chemicals*. It discusses the need for chemicals management and action which has been taken at the national and international levels. This includes: (1) the voluntary UNEP/FAO Prior Informed Consent (PIC) procedure for certain hazardous chemicals in international trade which forms the basis for current intergovernmental negotiations on a legally-binding PIC Convention and (2) domestic regulatory schemes needed to implement PIC and ensure the sound management of chemicals. The chapter ends with a description of further measures being taken to reduce the risks from trade in chemicals.

Chapter Sixteen, *Industrial Compliance and Enforcement*, discusses the elements of a successful compliance and enforcement programme, institutional capacity building for industrial compliance and enforcement, incentives and sources of programme funding, permits and compliance self-monitoring, inspections and enforcement actions.

ACKNOWLEDGMENTS

In compiling this Environmental Law Training Manual, which encompasses such a broad range of issues, we required expertise from various sources. We are very grateful to everyone who has contributed towards the publication which we hope will assist government officials and others in further developing environmental law as an effective tool for sustainable development.

The Manual has been developed over a period of time under the leadership of UNEP's former Assistant Executive Director of Policy and External Relations, Frits Schlingemann. It has taken shape under the guidance of Sun Lin, the former Director of UNEP's Environmental Law and Institutions Programme Activity Centre (ELI/PAC) and Donald Kaniaru, Acting Director and former Deputy Director of ELI/PAC as well as senior managers such as Alexandre Timoshenko (Chief, International Legal Instruments, ELI/PAC), Lal Kurukulasuriya (former Chief, Education, Training and Information Unit, ELI/PAC) and Raúl Brañes (former Legal Advisor, Regional Office for Latin America and the Caribbean, UNEP).

Former and current Legal Officers within ELI/PAC were responsible for the drafting and editing of various chapters of the Manual, including Sally Bullen, Christian Lambrechts, Mita Manek, Elizabeth Mrema, Masa Nagai, Dan Ogolla, Peigi Wilson and Marceil Yeater. ELI/PAC consultants Albert Mumma and Paul Zimmerman also contributed to this process. Two chapters draw heavily on the writings of J. Patrick McAuslan and Rob Glaser. We also are grateful to the Yale Journal of International Law for allowing us to reprint part of an article written by Daniel Bodansky on the United Nations Framework Convention on Climate Change.

Relevant chapters of the Manual benefited from the substantive and technical input provided by the International Maritime Organization and the staff of major environmental convention secretariats currently under the direction of Michael Z. Cutajar (UNFCCC), Hama Arba Diallo (CCD), Calestous Juma (CBD), Arnulf Müller-Helmbrecht (CMS), Iwona Rummel-Bulska (Basel Convention), K.M. Sarma (Ozone) and Izgrev Topkov (CITES). Particularly valuable advice and support were provided by Seth Osafo and Gilbert Bankobeza.

Ben Boer, as principal consultant, and his colleague Don Rothwell at the University of Sydney assisted in the preparation and editing of the Manual. Of course the Manual would not exist but for the efforts of ELI/PAC's secretaries, including Serah Macharia, Consolata Ochieng', Rosemary Okinda, Dorothy Syanda, Beatrice Wanjira and Ruth Watulo. In addition, work on the Manual was supported by several UNEP interns, including Jean-Marie Hakizimana, Srinath Ramamurthy and Tamara Weerasekera.

Resource persons and trainers during the Second Global Training Programme in March/April 1995 tested the soundness of the initial material and sensitized us to the ways in which we might adjust the substance of this publication. We similarly acknowledge their gracious contribution.

The team which created the Manual hopes it proves useful to those who read it, and we welcome any suggestions for its improvement in future editions.

PART I

OVERVIEW OF ENVIRONMENTAL LAW

CHAPTER 1

SCOPE AND HISTORY OF ENVIRONMENTAL LAW

DEFINITIONS OF THE ENVIRONMENT

The definition of the term "environment" establishes the philosophical basis of any legislation drafted and implemented to protect the environment. The way that the term environment is defined indicates the value placed on various aspects of the environment and the perceptions which policy makers have of the environment, particularly humans' place in it. Such a definition also reflects the focus of the environmental legislation and the commitment of the State to protecting the environment. It is therefore essential to begin with defining the environment.

The term "environment" means different things to different people. Some would consider the term to refer to the basic elements of the earth, such as the air, land and water. Some definitions, particularly in the context of which we are presently speaking of the environment, consider the environment to consist only of those natural resources upon which humans place a value, that is aspects of the earth, sky and waters that can be polluted or used up. Another definition might include all living elements of the earth as well as the natural resources, but not include humans in the definition or define the environment as it relates to humans. The primary criticism of such definitions is that they fail to place humans within the environment, divorcing humans from the natural environment and implying that humans are somehow above or beyond nature.

Increasingly, the environment is described in a much more holistic sense. The place of humans in the environment was recognized at the UN Conference on the Human Environment held in Stockholm in 1972: "Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social, and spiritual growth."[1] The World Charter for Nature, adopted by the UN General Assembly in 1982 states: "Mankind is a part of nature and life depends on the uninterrupted functioning of natural systems which ensure the supply of energy and nutrients. Civilization is rooted in nature, which has shaped human culture and influenced all artistic and scientific achievement, and living in harmony with nature gives man the best opportunities for the development of his creativity and for rest and relaxation."[2]

Listed below are some definitions of the environment taken from environmental legislation throughout the world.

Canadian Environmental Protection Act, 1988, s. 3(1):

> **"environment" means the components of the Earth and includes:**
>
> (a) air, land, and water,
> (b) all layers of the atmosphere
> (c) all organic and inorganic matter and living organisms, and
> (d) the interacting natural systems that include components referred to in paragraphs (a) to (c).

Egypt's *Law No. 4 Promulgating a Law Concerning Environment*; Official Journal Issue No. 5, 3 February 1994:

> ***Environment; is meant to denote the VITAL SURROUNDINGS which comprises the living creatures and its contents of materials, as well as the air, water, and earth within its compass, and the establishments set up by man.***

---

1 Declaration of the UN Conference on the Human Environment, Stockholm, Sweden, 1972, 11 ILM 1416 (1972), Preamble.

2 World Charter for Nature, UN Resolution 37/7, 1982; 22 ILM 455 (1983).

Republic of Slovenia *The Environmental Protection* Act, June 2, 1993:

1. The environment is that part of nature which is or could be influenced by human activity. The natural environment comprises primordial nature and the nature which has been transformed by man. The living environment is that part of the environment which influences man directly. Within this Act, developed or other technological environments are part of the environment only as factors of environmental change.

1.1 Nature is the whole of the material world and the structure of natural laws governing its mutually linked and interdependent elements and processes. Man is an integral part of nature.

1.2 Natural elements are the soil, water, air, flora, and fauna which form the lithosphere, pedosphere, hydrosphere, atmosphere, and biosphere.

1.3 Natural factors are physico-chemical processes, relief, climate, hydrographical and biological conditions and other factors which cause changes in the environment. Environmental factors also include the influences of human activity.

2. An ecosystem is a dynamic system of a biotope and biocoenosis which appears as a combination of natural elements and natural factors which react reciprocally as a functional unit.

2.1 A habitat is the usual biotope of an individual organism or population.

3. Natural resources are those components of nature which are essential for the satisfaction of man's physical and material needs and interests, and may be exclusively or at the same time natural national assets, stock or flow resources, or non-expendable natural resources. Rare, precious, or more valuable natural resources shall be considered a national treasure.

3.1 Natural national assets comprise areas in public ownership, that is, undeveloped parts of a public resource on land, under the ground, in water, sea, and air, allowing access and movement to everybody under equal conditions.

3.2 Stock and flow resources are renewable or non-renewable elements which are directly or indirectly economically exploitable.

3.3 Non-expendable natural resources are, in addition to rare and precious natural phenomena, other valuable phenomena, components, or parts of organic or inorganic nature, natural regions or parts of natural regions, plant and animal species and their biotopes, ecosystems, parts of the natural and cultural landscape, and objects of developed nature.

The National Conservation and Environment Protection Act 1987, No. 5 of 1987, St. Kitts and Nevis:

> ***"environment" means the physical factors of the surroundings of human beings including the land, soil, water, atmosphere, climate, sound, odours, tastes, and the biological factors of animals and plants of every description.***

Thailand's *Enhancement and Conservation of National Environmental Quality* Act, B.E. 2535 (1992), s. 4:

> ***"environment" means various things of a physical and biological nature surrounding human beings and created naturally and man-made objects.***

Australia's *Environment Protection (Impact of Proposals)* Act 1974, s 2:

> ***all aspects of the surroundings of human beings, whether affecting them as individuals or in their social groupings.***

It is desirable that any general definition of the environment include the entire range of living and non living factors that influence life on the earth and their interactions. This would include living and non-living aspects. Living resources would include animals, including humans, plants and micro-organisms. Non-living resources would consist of two elements. One element would be the physical life support systems of the planet such as the geography, hydrology, atmosphere, matter, and energy. The other would include the historical, cultural, social and aesthetic components including the built environment.

Environmental Management

What is the scope of the "environment" when we speak of environmental management? Environmental issues are often narrowly defined in the press and in the mind of the general public. Many would think merely of issues of pollution such as air pollution from diesel trucks or water pollution from sewage or industrial waste. Although these are certainly elements of the problem, it is important to take a wider perspective to encompass the management of resources. Environmental management encompasses concerns about, among others:

- air quality;
- water quality and quantity;
- soil erosion and land degradation;
- protection of endangered species;
- proper management of dangerous chemicals;
- adequate treatment and proper disposal of waste;
- management of natural resources, including:
- mining;
- forestry;
- fisheries;
- oil exploration and production;
- protection of ecosystems, including:
    - forests;
    - wetlands;
    - scenic sites; and
- coordinated management of the global commons, including:
    - high seas;
    - atmosphere;
    - Antarctica; and
    - outer space.

Beyond the elements that are generally conceived of as being "of nature", there are also human elements of the environment including:

- human settlements;
- cultural, historical, and religious aspects of human activities;
- population; and
- minorities and indigenous peoples.

Environmental management then is the administration of human activities as they affect and relate to the entire range of living and non-living factors that influence life on the earth and their interactions. A broad definition of environmental management allows policy makers to draw together disparate components that would otherwise appear to be outside the realm of environmental management.

Let us consider the example of a policy of landownership where only a few own most of the land. This means that the majority of the population are unable to grow food for themselves on land they control. The large landowners may allow the rest of the population to use the land to grow food, or, as is more often the case, the land is used for the economic benefit of the few that own it. If the land is used for the production of monocultural crops such as bananas or wheat, the natural biodiversity of the region is diminished. This is in itself an environmental problem and places the crop at greater risk due to failure from pests and disease. This potential for failure then is seen to warrant the heavy use of chemical pesticides and fertilizers, further damaging the environment. Additionally, the majority of the population are forced to obtain food by other means. If they have no income they are forced to scrape out a living on marginal land leading to problems of desertification, soil erosion, and deforestation, or, if they can afford it, by bringing the food

from miles away most likely by some form of transportation using gasoline powered engines, adding to air pollution and global warming. It is possible to see from this simple example, how a policy decision can affect the environment and create environmental problems.

Many describe the current state of affairs as a crisis of ethics or values – an individualistic philosophy of the world, where humans are viewed as superior to nature, and some humans superior to others has subsumed notions of community, responsibility to others, and a recognition of the interconnectedness of all to each other in a short-sighted dash for material possessions.

As a result of the obvious links between short term economic gain and environmental degradation, many have come to view environment and development as fundamentally contradictory elements. As conflicting values, one must be forgone in order to provide for the other. This is a flawed position, as it denies the importance of development to environmental protection, and conversely, appears to justify continued environmental degradation as an inescapable aspect of development. This dialectic approach is inadequate to deal with the complexity of the issues.

The World Commission on Environment and Development commissioned by the United Nations in 1987, otherwise known as the Brundtland Commission, attempted to highlight the problems facing the world and to offer a new means to address the dual concerns of environment and development. The practical problem facing humanity is how to protect the environment while still guaranteeing a level of development consistent with human well-being on a global scale. "Sustainable development", a term popularised by the Brundtland Commission, has been embraced as the new philosophy.

Promotion of Sustainable Development

What is Unsustainability?

Before considering the meaning of sustainable development, it is useful to consider those matters that contribute to unsustainability. In 1997, UNEP published the first Global Environmental Outlook Report which outlines the major environmental threats facing the various regions of the world. The Report states:

- The use of renewable resources — land, forest, fresh water, coastal areas, fisheries and urban areas — is beyond their natural regeneration capacity and therefore is unsustainable.
- Greenhouse gases are still being emitted at levels higher than the stablisation targets internationally agreed upon under the United Nations Framework Convention on Climate Change.
- Natural areas and the biodiversity they contain are diminishing due to the expansion of agricultural land and human settlements.
- The increasing, pervasive use and spread of chemicals to fuel economic development is causing major health risks, environmental contamination, and disposal problems.
- Global developments in the energy sector are unsustainable.
- Rapid, unplanned urbanization, particularly in coastal areas, is putting major stress on adjacent ecosystems.
- The complex and often little understood interactions among global biogeochemical cycles are leading to widespread acidification, climate variability, changes in the hydrological cycles, and the loss biodiversity, biomass and bioproductivity.

There are also widespread social trends, instrinsically linked to the environment, that have negative feedback effects on the environmental trends, notably:

- an increase in inequality, both among and within nations, in a world that is generally healthier and wealthier;

- a continuation, at least in the near future, of hunger and poverty despite the fact that globally enough food is available; and
- greater human health risks resulting from continued resource degradation and chemical pollution.

The ecological debt accumulated needs to calculated. This ecological debt will be borne by our children and their successors as well as, of course, by the non-human species, unless the correct measures are taken now to ensure that the global ecological bank balance is put into credit.[3]

What is Sustainable Development?

The Brundtland Commission defined sustainable development as:

> *development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*[4]

"Sustainable development" thus afforded a conceptual solution to the environmental problem. It allowed the values of environment and development to be reconciled by calling for the integration of environmental and developmental concerns at all levels of decision-making. Despite the potential of "sustainable development" as a solution to environmental problems facing us today, the difficulties of its implementation cannot be overlooked:

> *The two words sustainable and development are in a strict sense contradictory. Sustainable implies the elements of long-term renewal, maintenance, recycling, minimal raw material exploitation and management of people's needs on a collective basis. Development can be interpreted in many different ways but according to our present industrial-based culture it implies short-term planning, minimal maintenance, waste, maximal exploitation of raw materials and emphasis on the individual. Besides economic growth, however, development can also mean social, cultural and spiritual evolution. Somehow this aspect of sustainability must first come to the surface for an ecologically-based type of development to evolve.*[5]

It is difficult, if not impossible, to embrace the concept of sustainable development without a change in the underlying philosophy which places humans first. It is this challenge that has led to criticism of "sustainable development". Caring for the Earth[6] criticises the Brundtland definition of sustainable development as ambiguous because it allows for such interpretations as "sustainable economic development". Caring for the Earth defines "sustainable development" as:

> *improving the quality of human life while living within the carrying capacity of supporting ecosystems.*

This definition is in itself philosophically problematic, in terms of placing human beings at the centre of concern. Sustainable development involves the integration of environmental and developmental aspirations at all levels of decision-making. It involves the application of concepts such as:

> *intragenerational and intergenerational equity: that is, "equitable" access to environmental resources both within the present generation as well as for future generations;*
>
> *application of the precautionary principle or approach; and*
>
> *the maintenance of biological diversity and biological integrity: both of these are vitally important for the continued existence of ecosystems.*

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3 See further, Boer, Ben, "Institutionalising Ecologically Sustainable Development: The Roles of National, State, and Local Governments in Translating Grand Strategy into Action" (1995) 31 Willamette Law Review 307-358.

4 Our Common Future, Oxford, 1987 (hereafter Brundtland Report) 87.

5 Rosemarin, A., "Sustainability as a New and Necessary Philosophy", XXIX(2) (1990) Ambio 51.

6 Published jointly by IUCN, UNEP and WWF, 1991.

The concept of "sustainable development" has been adopted almost universally by the international community, national governments and non-governmental organisations since the publication of the Brundtland Report and has been institutionalised by the United Nations Conference on Environment and Development (UNCED). However, the concept of sustainable development was not new at the time of UNCED. Indeed, the concept was already expressed in Principle 2 of the Stockholm Declaration in 1972 which provided:

> ***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.***

UNCED sought to build on this definition through a number of provisions in the Rio Declaration. A further mandate of UNCED was to formulate appropriate mechanisms so that "sustainable development" could be achieved globally.

Although a final definition has yet to be agreed upon, for the purposes of this Training Manual we shall adopt the definition provided by the Brundtland Report: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Environmental management for sustainable development can be defined as the administration of human activities as they reflect upon and relate to the entire range of living and non-living factors that influence life on the earth and their interactions for the purpose of ensuring development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[7]

The Role of Environmental Law

Laws generally reflect and shape a society's norms. They can change attitudes towards particular aspects of life, and control behaviour. Laws can be defined as codes of conduct appropriate to the values of the community drafting and enforcing them. There are of course many types and sources of law, such as customary or traditional, canon, common, and civil law. These may be written or unwritten, but all define acceptable behaviour within that society. Codes of conduct with regard to the environment are contained in all sources of law, some of which date back thousands of years.

Environmental law is a category of law, much as are laws regarding transportation or criminal activity. The definition of what constitutes an environmental law is as wide as the definition of environment itself. Environmental law can be generally defined as the body of law which contains elements to control the human impact on the earth. Elements of environmental law can be found throughout a society's legal codes, whether specifically referred to as "environmental" or not.

Environmental law can be divided into two major streams – international environmental law and national environmental law.

International Environmental Law

The Permanent Court of International Justice defined international law in the case of the *S.S. "Lotus"* as follows:

> ***International law governs relations between independent States. The rules of law binding upon States therefore emanate from their own free will as expressed in conventions or by usages generally accepted as expressing principles of law and established in order to regulate the relations between these coexisting independent communities or with a view to the achievement of common aims.***[8]

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7 For further discussion on the role and principles of sustainable development, see Lang W (ed) Sustainable Development and International Law 1995.

8 Guruswamy, L.D., Palmer, Sir G.W.R., Weston, B.H., International Environmental Law and World Order, American Case Book Series (St. Paul, Minn.: West Publishing Co., 1994) 12.

International environmental instruments primarily include conventions, protocols, and "soft-law" instruments such as guidelines or codes of conduct. In addition, agreements, resolutions, guidelines and declarations adopted to facilitate the implementation of treaties and conventions are relevant. International environmental law assists in building and captures consensus between nations on goals for environmental protection and resource conservation and sustainable use. A more thorough discussion of international environmental law and detailed descriptions of various international conventions are contained in later chapters. Note that the concentration in this Training Manual is on the UNEP-administered conventions, but it should be borne in mind that many other international legal instruments exist which concern the environment.

National Environmental Law

Broadly speaking, national environmental law consists of the legislation, standards, regulations, institutions and administrations adopted to control activities damaging to the environment within a State. This would include framework environmental legislation, sectoral legislation and incidental legislation. Framework environmental legislation is a single law which contains a comprehensive system of environmental management. This would include the institutional issues such as which government authority will manage the environment, pollution control, enforcement, etc. Sectoral legislation addresses specific aspects of the environment and human activity such as a law establishing a national park or legislation to control factories. Sometimes countries have both sectoral legislation and framework legislation while other countries have one or the other or neither. Incidental environmental legislation refers to those laws that are not specifically intended to address environmental issues but do contain some elements that have an impact on environmental issues. This might include, for example, criminal legislation that contains a prohibition on polluting or tax laws that contain a tax rebate for installing pollution control devices in a factory. In some cases these national laws are a reflection of international norms or commitments and are adopted with the intent of implementing international environmental conventions. For example, legislation must be enacted at the national level to create a Management Authority to issue export permits for species protected under the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES). National environmental law is a mechanism for translating environmental and sustainable development policies into action at the national level. More detailed discussions of national environmental law are contained in later chapters.

History of Development of International and National Environmental Law

International Environmental Law

Today, we are witnessing an accelerated development of international law in general and international environmental law in particular. There is increasing evidence that the development of international environmental law is moving in the direction of sustainable development. Indeed, international environmental law is probably one of the most dynamic and rapidly evolving branches of international law.[9]

International conventions are an increasingly important source of international environmental law. At the outset of this century, protection of some natural resources had been already established through international conventions. Today, hundreds of international conventions exist in the field of the environment. The UNEP 1996 Register of Treaties and Other Agreements in the Field of the Environment lists 216 multilateral environmental instruments.

BEFORE 1940

Concern for the environment first began to appear on the international agenda during the early twentieth century with the conclusion of a number of international conventions.

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9 **Speech by Ms. Elizabeth Dowdeswell, Executive Director of UNEP at the Second High-Level Nordic Policy Seminar, Copenhagen, 27 October 1994.**

The first such treaties include:

A. Convention for the Protection of Useful Birds to Agriculture, 1902
B. Treaty for the Preservation of Fur Seals, Washington, 1911
C. Convention Concerning the Use of White Lead in Painting, Geneva, 1921
D. Convention for the Regulation of Whaling, 1931.

As their names may suggest, these conventions were narrow in scope, aimed at protecting only a few species which were considered valuable resources to humans, or to protect human health.

At this time also, were the first indications of nations' willingness to work together to protect resources that transcended national boundaries. For example, the Treaty between the United States and Great Britain Respecting Boundary Water Between the United States and Canada, Washington, 1909 was the first boundary water agreement concluded in respect of waters between Canada and the United States. There was also a nascent conservationist movement as demonstrated by two regional conventions concluded before 1940 for the protection and preservation of flora and fauna:

A. Convention Relative to the Preservation of Fauna and Flora in their Natural State, London, 1933; and
B. Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, Washington, 1940.

Both provided for the establishment of nature reserves and parks and for the protection of some wild species. At this time, international law in general was limited, and this is true for environmental law as well. What international environmental law that did exist was primarily limited to conservation.

1940-1972

The number of international environmental treaties increased dramatically during this time. There were approximately 60 international agreements concluded by 1970. Nevertheless upon examination, it is apparent that the primary motivation for their conclusion was the protection of component parts of the environment considered "valuable" in human terms. The utilitarian approach saw environmental protection achieved by the regulation of use.

On the other hand, towards the end of the 1960s, the awareness of the extent and implications of environmental degradation increased and became a focal point for public pressure on national governments. It was at this time that the focus of environmental action started to shift from an *ad hoc* attack of isolated environmental problems to a more holistic approach.

Most significant in terms of international diplomacy in general was the establishment of the United Nations System. The United Nations was established in 1945. The purposes of the United Nations are expressed in the first Article of the Charter of the United Nations, which are very broad. Beside maintaining international peace and security, the United Nations aims to:

A. develop friendly relations among nations;
B. achieve international co-operation in solving international problems of an economic, social, cultural or humanitarian character; and
C. be the centre for harmonising the actions of nations in the attainment of these common ends.

In order to carry out its broad mandate dealing with various issues from economic and social progress to health to cultural and educational co-operation, the United Nations has entered into agreement with, or established several specialized agencies. Environmental concern appeared soon on the agenda of a wide variety of those specialized agencies and of other existing international organizations. By 1970 various UN bodies and other international organizations were involved in issues of environmental management, including:

A. atmospheric pollution, which was within the ambit of the World Health Organisation (WHO), World Meterological Organization (WMO), International Civil Aviation Organi-

zation (ICAO), International Atomic Energy Agency (IAEA), Food and Agriculture Organization (FAO), United Nations Education, Science and Culture Organization (UNESCO), the Organization for Economic Cooperation and Development (OECD) and North Atlantic Treaty Organization (NATO) Committee on the Challenges of Modern Society (CCMS);

B. marine environment, which was covered by the International Maritime Consultative Organization (IMCO) now the International Maritime Organization (IMO), FAO, UNESCO, WHO, IAEA, OECD and the CCMS;

C. water pollution and water resources development by WMO, FAO, UNESCO and OECD;

D. land use and conservation of natural resources by FAO and UNESCO (through the Intergovernmental Oceanographic Commission or IOC); and

E. urban environmental problems by WHO, FAO, and UNESCO, and standards setting in relation to selected pollutants by IAEA, OECD, IMO, UNESCO (IOC), WHO, OECD and CCMS.

Various other UN bodies, including regional economic commissions, such as the Economic Commission for Europe or UN/ECE, were involved in specialized aspects of these problems. Clearly however, there was a lack of co-ordination of these activities. A body with a clearer environmental focus was required.[10]

This situation, namely the need for further cooperation among international organizations; existing environmental treaties focusing on the protection of parts of the environment "valuable" in human terms; and public awareness regarding the need to further protect the environment as a whole, led the UN General Assembly to adopt resolutions (2398 (XXIII) of 3 December 1968; 2581 (XXIV) of 15 December 1969) convening the United Nations Conference on the Human Environment:

> ***Convinced** of the need for intensified action at the national, regional and international level in order to limit and, where possible, eliminate the impairment of the human environment,*
>
> ***Desiring** to encourage further work in this field and to give it a common outlook and direction,*
>
> ***Believing** it desirable to provide a framework for comprehensive consideration within the UN of the problems of the human environment in order to focus the attention of Governments 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 co-operation and agreement.*

FROM STOCKHOLM TO RIO

The UNCHE was held in Stockholm in June 1972. It elaborated an Action Plan consisting of 106 recommendations, and a Declaration of 26 Principles on the Human Environment. It also proposed a new UN Agency, the United Nations Environment Programme (UNEP) composed of a Governing Council, a Secretariat and an Environment Fund. UN General Assembly Resolution 2997 (XXVII), 15 December 1972, gives the Governing Council, among others, the following functions and responsibilities:

- to promote international co-operation in the field of the environment and to recommend, as appropriate, policies to this end;
- to provide general policy guidance for the direction and co-ordination of environmental programmes within the United Nations system;
- to receive and review the periodic reports of the Executive Director of UNEP on the implementation of environmental programmes within the UN system;
- to keep under review the world environmental situation in order to ensure that emerging environmental problems of wide international significance receive appropriate and adequate consideration by Governments;
- to promote the contribution of the relevant international scientific and other professional communities to the acquisition, assessment and exchange of environmental knowledge

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10 **Birnie, P.W. and Boyle, A.E., International Law and the Environment, (Oxford: Oxford University Press, 1994) p.39.**

and information and, as appropriate, to the technical aspects of the formulation and implementation of environmental programmes within the UN system; and

- to maintain under continuing review the impact of national and international environmental policies and measures on developig countries, as well as the problem of additional costs that may be incurred by developing countries in the implementation of environmental programmes and projects, and to ensure that such programmes and projects shall be compatible with the development plans and priorities of those countries.

In 1975 the UN General Assembly approved UNEP's work contributing to the development and codification of a new body of international law to meet new requirements generated by environmental concerns and by the strategy based on the UNCHE Declaration. UNEP's strategy for achieving this programme was based on co-ordinated action, with close collaboration with governments and intergovernmental bodies. The strategy intended to assemble data for use in formulation of general principles, rules, and instruments, especially to foster the UNCHE Principles.

In 1981 a Programme for the Development and Periodic Review of Environmental Law (the Montevideo Programme) was drafted in Montevideo by a group of legal experts convened by UNEP. It was adopted by the Governing Council in 1982. The Montevideo Programme activities can be grouped in three categories:

- the conclusion of international agreements;
- the development of international principles, guidelines and standards; and
- provision of technical assistance for the further development of national legislation and institutions, including the implementation of international agreements through national legislation.

UNEP has played a catalytic role in the development of international environmental law. Under the auspices, or with the collaboration of UNEP, four global environmental conventions were elaborated during this time, namely:

- Convention on the Control of International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973;
- Convention on Migratory Species, Bonn, 1979;
- Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985, and its Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987; and
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 1989.

During this period, UNEP also launched its Regional Seas Programme under which conventions, protocols and programmes of action have been concluded to protect 13 regional seas. In addition, UNEP developed various guidelines or "soft-law" instruments, among them:

- London Guidelines for the Exchange of Information on Chemicals in International Trade, 1989; and
- Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Activities.

ENVIRONMENTAL LAW POLICIES AFTER RIO

The twentieth anniversary of UNEP was marked with a United Nations Conference on Environment and Development (UNCED), which took place in Rio de Janeiro in July 1992. The objective of UNCED was to formulate appropriate mechanisms to address the practical crisis facing humanity in protecting the environment while still guaranteeing a minimum level of development.

As part of the work leading up to UNCED, a review of the Montevideo Programme was concluded in 1991, and the Programme for the Development and Periodic Review of Environmental Law for the 1990s (commonly referred to as Montevideo II) was adopted. Montevideo II outlines 18 specific areas of concentration

for UNEP in the field of environmental law, and seven additional subjects for possible consideration during this decade. UNEP's implementation of the programme was reviewed and recommendations for further implementation were developed at the Meeting for Senior Government Officials Expert in Environmental Law in December 1996.

The output of the Conference was the Rio Declaration on Environment and Development, which elaborates 27 basic principles to guide activities to ensure that lifestyles are sustainable, and Agenda 21, which is a framework for the cooperative generation of strategies for sustainable development and environmental management at global level. To this end, it provides mechanisms in the form of policies, plans, programmes and guidelines for national governments, by which to implement the principles contained in the Rio Declaration. Its provisions are not legally binding. Also adopted were the Convention on Biological Diversity, the UN Framework Convention on Climate Change, and the Forest Principles. All these instruments serve a common objective which transcends the whole Conference: sustainable development.

THE COMMISSION ON SUSTAINABLE DEVELOPMENT

In order to monitor the implementation of decisions made at UNCED, particularly Agenda 21, the United Nations General Assembly resolved in December 1992 to establish a Commission on Sustainable Development (CSD).

The CSD consists of representatives of fifty three countries maintaining an equitable geographic distribution. The primary functions of the Commission on Sustainable Development are:

- to monitor progress in the implementation of Agenda 21 and activities related to the integration of environmental and developmental goals through the United Nations system;
- to review the adequacy of funding for the objectives of Agenda 21; and
- to provide recommendations to the United Nations General Assembly through the Economic and Social Council on the implementation of Agenda 21.

The CSD has met every year for up to three weeks, and in 1997 it provided input to the UN General Assembly Special Session to review the status of implementation of Agenda 21 and the success of UNCED five years after Rio.

National

National legislation has evolved in much the same manner as international environmental law, following the same movement from an initial concern with pollution prevention and conservation of natural resources, to more recent concentration on sustainable development.

Prior to the Stockholm Conference, although many countries had legislation that dealt with some aspects of the environment, for instance in Africa there were laws for wildlife conservation, most environmental legislation world wide was limited to nature and natural resources conservation and the protection of public health. Three dominant features characterized "environmental legislation" prior to Stockholm. In the first instance, the legislation was predominantly sectoral in scope, second it was largely "use-oriented", and finally it was "rule-oriented".

The evolution of environmental legislation in developing countries can be divided into two distinct periods. The first period, the pre-Stockholm era, is largely characterized by "use-oriented" natural resource laws. The second period, drawing its momentum from the environmental awakening of the 1970's witnesses the emergence of "resource-oriented" legislation, anti-pollution laws, and, ultimately, system oriented and integrated legal regimes. These types emerged in each of the regions at different times: for example, the system-oriented legal regimes began to be adopted in Latin America in the 1970's while they are just beginning to be adopted in Africa and in some of the countries of the Asia and Pacific region; resource oriented legislation appears in Africa in the mid-1970's, a development that had taken place in Latin America at a much earlier date.

In the pre-Stockholm period sectoral laws dealing with discrete natural resource sectors such as land, forests, water, minerals, wildlife, fisheries, etc., existed in all the countries. The legislation was to a large extent primarily concerned with the allocation and exploitation of the natural resources rather than with their sustainable management.

Due to this inherent "use-orientation", the various sectoral legal regimes contained very limited provision for the regulation of the adverse environmental consequences of resource exploitation. Water laws were basically concerned with the allocation of water rights (the establishment of waterworks and the issuance of abstraction permits) rather than with water conservation or the prevention and control of water pollution. Notable examples were the Malawi *Waterworks Ordinance*, 1926; the Sudan *Nile Pumps Control Ordinance*, 1940, and the Fiji *Water Supply Act*, 1955 and *Drainage Act*, 1961. Forestry legislation focused almost exclusively on establishing State monopoly rights on forest resources and the licensing mechanisms for their exploitation. For example the Sudan *Central Forest Ordinance*, 1932; the Kenya *Forest Ordinance*, 1942; and the Malawi *Forest Ordinance*, 1942. Legislation on land resources primarily addressed issues of land-tenure rather than land-use and land husbandry. Environmental protection and conservation components were later grafted onto these legal regimes piecemeal and mainly in response to critical instances of environmental degradation.

Thus, there emerged between the 1950s and the 1970s in some of the developing countries what has become known as "resource-oriented" legislation. The accelerated pace of the exploitation of environmental resources created important environmental stresses in most countries, including the risk of irreversible degradation of renewable natural resources and the depletion of non-renewable natural resources. "Resource-oriented" legislation was basically aimed at long-term management and sustainable use of natural resources. The new legal regimes not only required that resource utilization takes into account environmental considerations but also emphasized the formulation of natural resources management plans. The Zambia *National Resources Act*, 1970, contained important provisions relating to the formulation of natural resources conservation plans; restoration and rehabilitation measures; the prevention of soil erosion; and the control of water pollution. The Kenya *Agriculture Ordinance*, 1955, provided for the formulation of land preservation schemes for specified land areas and the regulation of land-use to deal with problems of soil erosion and deforestation. Wildlife legislation gradually incorporated the concept of the maintenance of a safe minimum stock through the protection of vulnerable species. The Botswana *Fauna Conservation Act*, 1961, listed in its second schedule "protected game species". Hunting permits for such species could be granted for limited purposes only. This trend in wildlife legislation is best illustrated by the Kenya *Wildlife (Conservation and Management) Act*, 1976, which not only contained lists of protected animals and birds, but also strictly regulated trade in trophies and specimens in line with the CITES regulatory regime on international trade in endangered species. Similar provisions are to be found in the Tanzania *Wildlife Conservation Act*, 1974, and the Zimbabwe *Parks and Wildlife Act*, 1975.

Besides the evolution of "resource-oriented" legislation and anti-pollution laws, the post-Stockholm period has also witnessed the emergence of system-oriented legal regimes. As appreciation of the interrelationships within the ecosystem and the linkages in environmental stresses has increased in recent years, there has been a growing realization that not even a combination of sectoral "resource-oriented" legislation and anti-pollution laws is sufficient to safeguard the quality of the environment or to guarantee sustainable development. The shift towards system-oriented legislation began in Latin America with the promulgation of the Colombian *Code of Renewable Natural Resources and Environmental Protection*, 1974, and the Venezuelan *Basic Environment Act*, 1976. It has since been adopted by most of the countries of Latin America, became vogue in Asia in the 1980's, and is a fast developing trend in Africa. The "system-oriented" legal regime aims at integrated planning and management of the environment on the basis of all-embracing ecological policies and environmental management programmes. This constitutes one of the most significant trends in environmental legislation in developing countries.

Government and public concerns over worsening environmental problems have created an important impetus to legal and institutional developments. The emergence of significant environmental legal and institutional developments have been undertaken either out of the growing environmental awareness of governments and

citizens or under the influence of regional and international organizations committed to the cause of the environment.

Agenda 21 in its Chapters 8, 38 and 39 emphasizes the need to develop endogenous capacity for sustainable development in developing countries. National environmental legislation, and related institutions, is conceived of as part of the critical elements in capacity building for sustainable development. Chapter 8.13 notes that "laws and regulations suited to country-specific conditions are among the most important instruments for transforming environment and development into action". They provide an important framework for the integration of environment and development in decision-making.

Whereas both the Rio Declaration and Agenda 21 exhort Governments to establish an effective legal and regulatory framework with a view to enhancing national capacities to respond to the challenges of sustainable development, it is the activities of UNEP, FAO, and the IUCN from the beginning of the 1980's (and more recently UNDP and the World Bank) which have maintained the momentum for legal and institutional change. The technical assistance activities of international organizations have provided a great deal of assistance to developing countries and countries with economies in transition. UNEP's technical assistance programme to developing countries in the field of environmental legislation and institutions started in 1975 and to date has led to legislative developments in more than 70 countries. The Development Law Service of the FAO has provided technical assistance to many countries in the formulation of legislation dealing with discrete natural resource sectors such as forestry, fisheries, land-use and wildlife. The IUCN's National Conservation Strategy programme and the World Bank (in collaboration with UNDP and UNEP) National Environmental Action Plan programme have legal components aimed at the review and strengthening of legal and institutional frameworks for environmental management. National Conservation Strategies and National Environmental Action Plans have been formulated and adopted in several countries in Africa, Asia and the Pacific and Latin America and the Caribbean.

Conclusion

Environmental law is one of the fastest growing fields of law, at both the international and national levels. This dynamic field has captured the changing philosophy about the environment over the years; moving away from a simple conservation and human health focus, to a more holistic and integrated perspective. In the effort to define and acheive sustainable development, environmental law must continue to grow and adapt along with our increasing understanding of the interrelationships within the environment and our part in it.

Exercises on Scope and History of Environmental Law

1. Develop a concise definition of the term "environment". What is the rationale for your preferred definition?
2. To what does the term "environmental management" refer?
3. Define sustainable development.
4. Sustainable development offers a means of balancing the demands of economic growth and environmental protection. Discuss.
5. Discuss the role of environmental law in modern society.
6. What is the subject matter of national and international environmental law?
7. What were the main achievements of UNCED? How did UNCED affect your country?
8. What are the environmental priorities in your country? How can they be addressed under Agenda 21?

CHAPTER 2

INTRODUCTION TO INTERNATIONAL LAW RELATING TO THE ENVIRONMENT

What is International Law?

International law is the system of law which governs relations among States. At one time, States were the only bodies enjoying international legal personality, i.e. having rights and duties under international law, but today, international organizations,[1] non-state groups and individuals[2] are also seen as having an international personality in certain situations. While international law is therefore primarily concerned with States, a late twentieth century definition of international law must reflect the expansion of international law to regulate the relations of states with international organizations and also individuals.[3]

The scope of international law is still expanding. Since the Second World War, international law has been further developed, in particular under the auspices of the United Nations, to include international cooperation and human rights. International cooperation is necessary to ensure stable economic and social development, without which there is no solid foundation for international peace and security, as well as human rights to promote stable political development.

In order to respond to the new environmental challenges which directly concern developmental issues, and may indirectly affect the international peace and security, international environmental law, as a new branch of international law, is also increasingly expanding.

Sources of International Law

The sources of international law are referred to in Article 38 (1) of the Statute of the International Court of Justice which provides:

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1 In the Reparation for Injuries case (Reports of Judgments, Advisory Opinions and Orders of the International Court of Justice 1949, p.174)., for example, the following question was put before the International Court of Justice:

> In the event of an agent of the United Nations in the performance of his duties suffering injury in circumstances involving the responsibility of a state, has the United Nations, as an organization, the capacity to bring an international claim against the responsible de jure or de facto government with a view to obtaining reparation due in respect of the damage caused (a) to the United Nations, (b) to the victim ?

The Court answered both questions in the affirmative, advising that the organization had an implied power to make such a claim to ensure the efficiency of its work by providing its agents with the necessary protection.

As another example, the European Union has rights and duties under various international conventions to which it is a Party, such as the Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Basel, 1989, the Convention on Biological Diversity, Rio de Janeiro, 1992, and the United Nations Framework Convention on Climate Change, New York, 1992.

2 It should be noted that companies and individuals do not have rights or obligations under international law de sui generi. Their rights or obligations under international law can be conferred only by States. For example, under the Convention for the Protection of Human Rights and Fundamental Freedoms, Rome, 1950, individuals, non-governmental organizations or groups of individuals may bring a claim before the European Commission of Human Rights against a State Party to the Convention, provided that the State being claimed against recognizes the competence of the Commission to receive such claims.

3 See: I.A. Shearer, Starke's International Law 11th (London: Butterworths, 1994) 3-4.

The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:

(a) international conventions, whether general or particular, establishing rules expressly recognized by the contesting States;
(b) international custom, as evidence of a general practice accepted as law;
(c) the general principles of law recognized by civilized nations;
(d) [...] judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

This provision is usually accepted as constituting a list of sources of international law. However, some writers have criticized it on the ground that it does not list all sources. Soft law, such as declarations, guidelines, codes of ethics, are also often referred to as an authoritative source of international law.

The various sources, not necessarily in the order listed in the Statute of the International Court of Justice, are examined below.

International Custom

Customary international law is the actual practice of States, which usually derives either from their reciprocal understanding on the way to interact in specific areas, or from a broad and long recognition and acceptance of rules already elaborated in international legal instruments.

Initial evidence of these practices can be gathered in published material, i.e. newspapers, reports of international meetings, or States' official documents, reflecting actions of States or statements made by high government officials. Evidence of international customary rules can also be gathered in judgments and advisory opinions of the International Court of Justice, as well as arbitral and other international tribunals.

To be established as customary rules, State practice must answer two main criteria.

- Constant and uniform usage : A single precedent is not enough to establish a customary rule. There must be a degree of repetition over a period of time. Furthermore, the practice should not be tainted by major inconsistencies, that is a large number of practices which go against the "rule" in question. Minor inconsistencies do not prevent the creation of a customary rule.
- *Opinio juris sive necessitatis*: The practice should be seen by States as governed by international law. As such, the exchange of greetings between the crew of two warships passing, although a long established custom, is not recognized as falling under international law.

Codification of international customary law

In recent years, there has been a tendency to codify customary law into international legal instruments such as treaties and conventions. Such codifications present obvious advantages: the rules become more precise and more accessible; and new States are more willing to accept rules which they themselves have helped to codify. A clear illustration was the adoption in 1982 of the United Nations Convention on the Law of the Sea which sought to codify customary international law on the law of the sea, while also developing new concepts of the law of the sea.

International Conventions

International conventions are an increasingly important source of international law, and, in particular, of international environmental law. At the outset of this century, only a few international regimes to protect some natural resources had been established through international conventions. Today, hundreds of international conventions exist in the field of the environment. The UNEP 1996 *Register of Treaties and Other Agreements in*

the Field of the Environment lists 216 multilateral environmental instruments, and future editions will reflect additional instruments.

The Vienna Convention on the Law of Treaties

Because of the importance of treaties as a source of international law, and the need for certainty in treaty practice and interpretation, customary rules on the law of treaties have been developed for a long time. This law has been codified in the 1969 Vienna Convention on the Law of Treaties (VCLT)[4]. The VCLT deals with a great range of matters affecting treaties. It is important to have an understanding of its provisions and of general treaty law in order to appreciate some of the legal and practical issues which impact on treaties. As an important threshold issue, it should be noted that the VCLT deals with treaties between States (Art 1). This is a reflection of the fact that treaties are international instruments, traditionally entered into only by States, and not between States and individuals. Recently, there has been recognition of the fact that treaties are now being entered into between States and international organizations and a separate Convention now exists on that subject.[5]

The following sections discuss several characteristics which are common to treaties, with appropriate reference to related provisions of the Vienna Convention on the Law of Treaties.

Definition of a treaty

The VCLT describes a treaty as being "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." (Art 2(1)). It is therefore important to note that a treaty must be in written form and that an oral agreement cannot constitute a treaty in international law.

Title

An international agreement or instrument is normally called a treaty or a convention, while terms such as Protocol, Agreement, Accord, Act, Statute, Covenant or Charter may also be used. It is important to distinguish these legal instruments from other documents which are not governed by international law.

Whether an international instrument or document is to be governed by international law depends on the intention of the parties. This can sometimes be ascertained by the language used in the instrument or by statements made by the State parties during its negotiation or subsequently.

Although the type of international agreement is not formally determined by the name given to it, there are some customs commonly followed, for example:

(i) peace agreements are usually called treaties;
(ii) agreements constituting important organizations are often called charters, covenants or statutes; and
(iii) agreements amending or complementing an already existing agreement, are usually called protocols.

In the field of international environmental law all types of titles are widely used. However, for environmental multilateral agreements of global coverage the title "convention" is used most often.

Types of treaties

Treaties can be either bilateral, that is between two contracting States, or multilateral, between more than two States. Multilateral treaties dealing with the environment can also have either global application or only apply

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4 **Convention on the Law of Treaties, Vienna, 1969 (entry into force on 27 January 1980) in United Nations Treaties Series vol. 1155, p. 331.**

5 **Convention on the Law of Treaties between States and International Organizations or between International Organizations, Vienna, in 25 ILM 543, (1986)**

within a certain region. The area of intended application of the treaty will have an important impact upon the number of States, and which States become parties to the treaty. For example, the Convention on the Prevention of Marine Pollution by Dumping of Wastes, London, 1972, is a treaty of global application and has 62 contracting parties. By contrast, the Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Oslo, 1972, is a regional convention which applies in the North Atlantic and Arctic Oceans and has only 13 contracting parties.

Whether the treaty is bilateral or multilateral may also determine the way in which it is negotiated. Bilateral treaties are often negotiated at a Ministerial or government-to-government level. Multilateral treaties are often negotiated at diplomatic conferences, either convened by an international organization such as the UN or one of its agencies, or at the invitation of a particular State. Because of the large number of States which may be invited to participate at a multilateral diplomatic conference, and the complexity of the issues under discussion, the time required to negotiate a multilateral treaty can vary considerably. For example, the UN Convention on the Law of the Sea, Montego Bay, 1982, was negotiated at the Third UN Conference on the Law of the Sea, which held 11 sessions between 1973 and 1982. This lengthy period of negotiation reflected the complexity of the Convention and also the number of States which participated at the Conference. In contrast, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters was negotiated at a single meeting held in London in November and December 1972.

Entry into force

The procedures for adoption and entry into force of a treaty can be complex and vary depending on its type. A bilateral treaty will be agreed upon by mutual consent of the parties. Once the text has been finalized, it will be signed by both States. Depending on the terms of the treaty and the internal constitutional arrangements of the parties, it may also be necessary to deposit acts of ratification prior to the treaty eventually entering into force. Entry into force will only occur after both parties have signed and ratified it. A multilateral treaty can also be adopted by the consent of all States which participated in its drawing up, though a two-thirds vote may sometimes also be sufficient (Art 9).

In nearly all cases, multilateral treaties will, for a certain period, be open for signature following their conclusion. It is common at this stage for most of the States which participated in the negotiation of the treaty to sign it. While it is possible under the terms of the treaty for it to enter into force upon the receipt of a certain number of signatures (Art 12), this is not common practice. Rather, most treaties will require the deposit of instruments of ratification from a certain number of States prior to the formal entry into force of the treaty (Art 14).

Ratification is a process whereby the relevant authority in a State notifies the convention depositary of that State's formal acceptance of the terms of the convention. In other States, ratification is an act of the executive government or the head of State. In some instances, States have created certain procedures which must be followed prior to ratification. For example, in the United States of America, the Senate must approve ratification.

The number of signatures or ratifications required to bring a treaty into force will be determined by the actual terms of the treaty (Art 24). For example, the UN Convention on the Law of the Sea required 60 ratifications before it could enter into force. The Basel Convention on Transboundary Movements of Hazardous Wastes and Their Disposal, Basel, 1989, required 20 ratifications. Usually the number of required ratifications is less than the number of States which participated in the negotiation of the treaty or which have signed the treaty.

In the interim periods between negotiation, signature and ratification, a treaty does not have any legal force. However, the VCLT provides that States are not to engage in "acts which would defeat the object and purpose of a treaty" during this interim period until such time as they have made clear that they do not intend to become a party or that it has become clear that the treaty will not enter into force (Art 18). It should be noted that in the case of recent environmental conventions (e.g., Convention on Biological Diversity) their interim/pre-ratification implementation, before actual entry into force, might be envisaged. This is usually established by the Final Act during adoption of the convention. The States who have conclusively accepted a treaty which has entered into force, by way of ratification or some other act, are often referred to as 'Contracting Parties'.

Even after a treaty has entered into force it remains possible for States which participated in its negotiation and previously signed the treaty to still become contracting parties by depositing an instrument of ratification. States which were not part of this process may also become contracting parties under the specific terms of the treaty. In these cases, acts of acceptance, approval, accession or adhesion will be sufficient (Art 16). Once a treaty has entered into force it becomes binding upon the contracting parties to perform the obligations of the treaty in good faith; a doctrine known as *pacta sunt servanda* (Art 26)

Domestic legal effect of a treaty

Because treaties are international instruments between States they create legal obligations between States and not between individuals. Whether a treaty has domestic effect is a separate issue which will often depend on the domestic legal system of the contracting party.

The constitutional arrangements which exist in each State may be important in determining the legal effect of a treaty. For example, in the United States of America, treaties have direct domestic legal effect once they have been ratified by the President on the advice of the Senate. In some other States, treaties only have legal effect once they have been formally implemented by some act of the legislature, parliament, executive government, or the President. Yet another issue arises in federal States. Under the terms of the constitution of a federal State, the central government may not have the power to make laws dealing with a treaty. This power may reside with the regional or provincial governments or may only be exercised with the agreement of those governments.

While the domestic status of a treaty does not affect a contracting State's international obligations under the treaty, it does have an important impact on the domestic law of the State. If the treaty has not been given formal effect, or has no status in the domestic legal system, then it has no domestic legal effect. This is most important in treaties dealing with the protection of the environment, especially those which anticipate some change in domestic regulation of certain activities. An example would be greenhouse emissions into the atmosphere by industry.

A treaty may have domestic legal effect in a number of ways. It may impact on the domestic legal system as a result of:

(i) domestic legislation or law;
(ii) proclamation by the Head of State (President or equivalent);
(iii) the State having simply ratified the treaty; or
(vi) the courts recognizing the effect of the treaty.

In each one of these instances, the potential exists for the treaty to regulate certain activities of citizens, including corporations, of the contracting State.

Reservations and Declarations

An important feature of treaty law is the ability of contracting parties to make either reservations or declarations upon their formal acceptance of the treaty. This procedure is always governed by the strict terms of the treaty and in some treaties it is not possible to make a reservation (Art 19). A reservation is a unilateral statement made upon signature or ratification of a treaty which purports to exclude or to modify the legal effect of certain provisions of the treaty in their application to that State. The content of a reservation may be wide-ranging, unless it is incompatible with the object and purpose of the treaty (Art 19).

Certain rules exist dealing with the making of reservations governed by both treaty law and the terms of the treaty itself (Art 20). The most important effect of a reservation, however, is its impact on the legal relations between the contracting parties and its modification of the terms of the treaty. If there is no objection to the reservation, then its effect is to modify the legal relations between contracting parties to the extent of the reservation (Art 21, 22).

It is possible for States which do not agree to the reservation to make an objection to it. Providing an objecting State does not oppose the entry into force of the treaty between itself and the State making the reservation, the provision to which the reservation relates does not apply as between the two parties (Art 21(3)). Unless otherwise provided by the treaty, a reservation or objection can be withdrawn at any time (Art 22).

As Parties' uniform and concerted behaviour under environmental conventions is an important pre-requisite for their efficacy, such conventions usually do not allow reservations.

Principle of Good Faith

Apart from the principle of *pacta sunt servanda* (see below), a fundamental rule of treaty law is that a treaty is to be interpreted in good faith and in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose (Art 31(1)).

Interpretation

The interpretation of a treaty can sometimes be made simpler by the definition of various terms which are found throughout the treaty. This is most important in environmental treaties where technical or scientific terms may be relied upon. In addition to the preamble and annexes to a treaty, it is also possible to refer to other documents. Documents or agreements made at the time of the conclusion of the treaty can be helpful, such as the Final Act of a negotiating conference, and other documents made by the parties and accepted as an instrument related to the treaty (Art 31(2).

Subsequent agreements or practice between the parties regarding interpretation of the treaty, and relevant rules of international law applicable in the relations between the parties can also be taken into account (Art 31(3)). If there remains some uncertainty resulting in an ambiguous or obscure meaning or an interpretation which is manifestly absurd or unreasonable, it is also possible to take into account, as a subsidiary means of interpretation, the preparatory work of the treaty and the circumstances of its conclusion (Art 32). In many instances, multilateral treaties are concluded in two or more languages. Unless otherwise provided in the treaty, each text is equally authoritative (Art 33).

Amendment and Revision

Under the terms of the VCLT, formal procedures exist for the amendment of a treaty (Arts 39-41). However, because many treaties include their own amending rules, these procedures are rarely used. Bilateral treaties are often amended by way of agreement between the parties, which can in some instances result in a completely new treaty. Because bilateral treaties only have two contracting parties, it is easier to amend their terms than in the case of multilateral treaties which must accommodate the desires of a large number of parties.

Many multilateral treaties contain provisions for their own amendment. These procedures can range from meetings of all the contracting parties, to meetings convened by the governing international organization or the treaty secretariat. A variety of procedures can also be relied upon in order to amend treaties. In some instances, a formal procedure resulting in the negotiation of an instrument such as a Protocol may occur which will only become legally binding once all contracting parties have adopted the Protocol. In other instances, the operational scope of treaties can be expanded by the adoption of Annexes dealing with specific topics. Less formal procedures exist for the amendment of some treaties, and this has the advantage of ensuring that detailed standards included within a treaty can be adjusted as needed. These procedures operate most effectively when there is a treaty secretariat or an international organization responsible for coordinating these amendments.

Amendment and revision procedures are especially important for environmental treaties. Such procedures are widely used to adapt the treaties, in a timely manner, to expanding scientific knowledge in relevant areas and the changing needs of environmental protection.

Role of Depositary

In all multilateral treaties it is normal practice for either a contracting party or an international organization to act as a depositary for the treaty. This will actually be provided for under the terms of the treaty. The depositary will note signatures of the treaty and also receive instruments of ratification, acceptance, or accession acknowledging formal adherence to the treaty. The Depositary will be required to maintain lists of the status of all contracting parties and signatories to the treaty and of any amendments made to the treaty.

It is normally the depositary's role to also ensure that the treaty has been registered with the Secretariat of the United Nations.[6] If there is no secretariat to the treaty, then the depositary may also have the responsibility of convening meetings to review the treaty and discuss possible amendment. However, such meetings would normally only be called under procedures provided for under the treaty or with the agreement of a majority of contracting parties.

Role of other bodies

Depending on the complexity and scope of the treaty, there may be several bodies established under a convention to ensure the achievement of its objectives. These bodies usually aim at following-up the implementation of the convention by the Parties, assisting the Parties in that regard, and further developing or amending the convention when necessary. To this end the following bodies may be established.

PLENARY, NON-STANDING BODY

A plenary, non-standing body, i.e., the Conference of the Parties, is usually the highest body of a convention. It consists of representatives of all Parties to the convention, and convenes on a regular basis to adopt decisions necessary for the achievement of the objectives of the convention.

NON-PLENARY, STANDING BODY

In order to implement decisions adopted by the plenary, a non-plenary, standing body, i.e. Standing Committee or Commission, may be established. It consists of a limited number of members elected by the plenary, non-standing body, and meets as often as necessary.

ADVISORY BODY

Advisory bodies may be set up to provide technical or scientific advice to the above-mentioned bodies or to the Secretariat.

SECRETARIAT

A secretariat may also be established. It will take on many of the roles of the depositary, but also be involved in the day-to-day administration of the treaty regime. This may include receiving reports from the contracting parties dealing with implementation of the treaty and reported infringements. It would also include the role of convening and administering any annual or other meetings of review amongst the contracting parties, or other conferences called to discuss specific issues under the terms of the treaty or related issues. If a secretariat is created to administer a treaty, the contracting parties will need to finance the operation of the secretariat. It will often be the case that the secretariat will have a director and other permanent staff plus a headquarters located within the territory of one of the contracting parties.

General Principles Of Law

General principles of law are a third source of international law. The line of demarcation between customary international law and general principles of law is often not very clear since customary international law,

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6 Charter of the United Nations, Art 102.

understood in a broad sense, may be considered as including all that is unwritten in international law. Nevertheless, unlike customary international law which consists of specific rules formulated for practical purposes, general principles of law are rather broad propositions underlying the various rules of law. As such, they provide guidance in the interpretation and application of international law.

General principles of international law

General principles of law mainly derive from principles recognized in the municipal law of all or nearly all States. Among these general principles, it is worth mentioning the principle of good faith which applies in several areas of international law.[7]

PACTA SUNT SERVANDA

Every treaty in force is binding upon the parties to it and must be performed by them in good faith (Art 26). "Treaties of every kind, when made by the competent authority, are as obligatory upon nations as private contracts are binding upon individuals [...] and to be kept with the most scrupulous good faith.[8]" As such a party may not unilaterally free itself from the engagements of a treaty, or modify the stipulations thereof, except by the consent of the contracting parties, through a friendly understanding.

ABUSE OF RIGHTS – SIC UTERE TUO UT ALIENUM NON LAEDAS

States must exercise their rights in a manner compatible with their various obligations arising either from treaties or from the general law. This is the general expression of the principle prohibiting abuses of rights. In recognizing the interdependence of rights and obligations, the principle "reconciles conflicting interest, establishes the proper limits of rights, and secures harmony in the legal order."[9] This principle can be illustrated in the *Corfu Channel* case[10] where the International Court of Justice concluded that:

> ***No State may utilize its territory contrary to the rights of other States.***

The principle has been further restated in Principle 21 of the Declaration of United Nations Conference on the Human Environment, Stockholm, 1972, and in Principle 2 of the Rio Declaration on Environment and Development, Rio de Janeiro, 1992 (Rio Declaration). The latter states:

> ***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 and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.***

DUTY TO NOTIFY

Although a State is ordinarily free to pursue and alter its own domestic and foreign policy, it may be obliged in certain circumstances to notify other States of a proposed change in its policy when such change pertains to those States. This principle of duty to notify can be illustrated in the following example. "If State A has knowingly led State B to believe that it will pursue a certain policy, and State B acts upon this belief, as soon as State A decides to change its policy – although it is at perfect liberty to do so – it is under a duty to inform State B of this proposed change."[11]

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7 Bin Cheng, General Principles of Law as Applied by International Courts and Tribunals, (Cambridge: Grotius, 1987).

8 Van Bokkelen Case (1888), in J.B. Moore, History and Digest of the International Arbitrations to which the United States has been a Party vol. 2 (Washington: 1898), quoted in Bin Cheng, Op. Cit., p.112.

9 Bin Cheng, note 7, p.136.

10 Reports of Judgments, Advisory Opinions and Orders of the International Court of Justice 1949, p. 22.

11 Bin Cheng, note 7, p.137.

In international environmental law, this principle has been further developed in several instruments, including the Rio Declaration which states in its Principle 19 that:

> *States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.*

The duty to notify applies also in case of emergencies which are likely to affect other States, as stated in Principle 18 of the Rio Declaration:

> *States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States ...*

Judicial Decisions

Judicial decisions of courts (both international and domestic), tribunals and other institutions which determine disputes are recognized as being a subsidiary source of international law. The principal international court which develops international law in this manner is the International Court of Justice (ICJ). The ICJ, one of the principal organs under the Charter of the United Nations, was established in 1946 and is permanently located at The Hague.

The decisions of the ICJ only bind those parties before the court. Therefore, notwithstanding the competence of the Court to determine questions of law and fact in cases before it, the Court's decisions are not binding on non-parties. While the decisions of the court are not binding and though the ICJ is not obliged to decide a case in accordance with previous decisions, it usually takes into account previous decisions which are relevant to the case in question.

Although the decisions of courts and tribunals are only a subsidiary source for determining applicable rules of international law, the judgments and advisory opinions of the ICJ and other tribunals are important since they are often considered as the affirmation or the revelation of international customary rules.

Among the decisions adopted by international judicial bodies, the arbitral judgment of 11 March 1941 in the *Trail Smelter* case should be given particular attention, as it is considered as having laid the foundations for international environmental law, at least regarding transfrontier pollution. In its conclusion, the Arbitral Tribunal stated that:

> *No State has the right to use or permit the use of its territory in such manner as to cause injury by fumes in or to the territory of another or the properties or persons therein ...*

This rule has been favourably referred to in the *Lake Lanoux* arbitration[12] between France and Spain where the tribunal stated:

> *It could have been argued that the works would bring about a definite pollution of the waters of the Canal or that the returned waters would have a chemical composition or a temperature or some other characteristic which could injure Spanish interests.*

Teachings of the Most Highly Qualified Publicists of the Various Nations

The teachings and writings of the most highly qualified publicists in international law are also considered an additional subsidiary source of international law. They can also play a role in developing new rules of law. Learned writings of scientific and professional associations and of eminent lawyers are significant sources of international environmental law. For example, the Helsinki Rules[13] on waters of international rivers which has

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12 International Law Reports vol. 24 (1975), pp.111, 123.

13 International Law Association, Helsinki Rules: Report of the 52nd Conference of the International Law Association (1966), pp. 484-505.

been developed by the International Law Association, are considered as highly authoritative.[14] The theory of inter-generational equity, as expounded by Brown-Weiss,[15] is currently considered to be one of the emerging concepts of international environmental law.

Non-binding International Instruments

The primary method upon which the international legal system has relied to deal with bilateral and multilateral issues throughout the twentieth century has been through the use of treaties. Treaties create binding legal obligations between the contracting parties. However, because of their binding nature and the legal obligations they impose upon state parties, many states are sometimes reluctant to commit themselves to accepting legal obligations.

This reluctance to accept legal obligations imposed by treaties may arise for a variety of reasons. The treaty may impose too strict an obligation upon the contracting party so that it will be difficult to meet the standards which are required. This may expose the contracting party to legal consequences if it is found to have breached the treaty. The treaty may require all parties to implement changes to their domestic legal system. In some instances this may be very difficult to achieve, due to the constitutional system of the state or the impact such measures may have upon various interest groups. Treaties can also create financial obligations for states or impose a variety of additional burdens which are unacceptable.

As a consequence of the impact which treaties have upon states, there has throughout the past 30 years been a growth in the adoption of non-binding international instruments. These are instruments dealing primarily with aims, goals and objectives, which have been adopted by states at diplomatic conferences or meetings of international organizations. They are not intended to be legally binding upon the states which agree to them. Non-binding international instruments are often referred to as "soft law."

Growth in adoption of non-binding international instruments

The growth of non-binding international instruments has primarily been a consequence of the United Nations system. One of the primary methods by which United Nations members express their common view on a matter is the adoption of General Assembly Recommendations (Arts 11 & 13, United Nations Charter). This process is to be distinguished from situations where the United Nations convenes a separate conference to consider the adoption of a Convention or other legal instrument.

A number of other subsidiary bodies of the United Nations also adopt Recommendations and Resolutions at annual meetings or assemblies. While the effect of these instruments will in all cases depend upon the terms of the charter of the relevant body, in most cases they do not have legal effect. Because these Recommendations and Resolutions often do not have any legal effect, it is possible to obtain the support of a greater number of states when these measures are adopted. This is because states can be assured that their support for such instruments will not have legal consequences.

In the case of the protection of the international environment, non-binding international instruments have played an important role. This is because the adoption of legal instruments to protect, conserve and manage the environment will create obligations upon states that inevitably will impact upon their sovereignty. The adoption of resolutions, recommendations or declarations concerning the environment which do not have legal effect are more acceptable to many states because they do not have the impact of immediately imposing legal obligations. Rather they tend to set goals and aims towards which the international community may aspire.

Non-binding international instruments tend to represent consensus positions. They refer to, for example, declarations, action plans or other instruments agreed through diplomatic negotiations between governments

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14 United Nations Conference on Environment and Development, Preparatory Committee, 3rd Session, 12 August-4 September 1991, Development of Legal Instruments for Transboundary Waters: Progress Report by the Secretariat (A/CONF.151/PC/79).

15 Brown-Weiss, Edith, In Fairness to Future Generations, Transnational Publishers Inc. (1988)

and, although they are not legally binding, they carry significant political weight. These types of instruments can be classified into two types: those directed at particular areas of environmental protection, and those of more general application. Examples of non-legally binding international instruments directed at particular areas of environmental protection include:

- London Guidelines for the Exchange of Information on Chemicals in International Trade;
- Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes;
- Goals and Principles of Environmental Impact Assessment; and
- Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources.

These agreements also have served to supplement and provide a framework in which to negotiate legally-binding international instruments addressing specific environmental issues.

Examples of non-binding international instruments of general application are:

- Stockholm Declaration on the Human Environment
- The World Conservation Strategy
- Caring for the Earth
- Hague Declaration
- The Rio Declaration
- Agenda 21
- The Forest Principles

These instruments will now be briefly examined.

Stockholm Declaration on the Human Environment

The 1972 Stockholm Declaration resulted from the 1972 UN Conference on the Human Environment held in Stockholm. The Stockholm Conference was the first major international conference, held under the auspices of the United Nations, designed to deal with questions surrounding the management and protection of the environment and its relationship with humans. One hundred and thirteen states participated at the Conference, with the former USSR and Eastern bloc states being the only major grouping which chose not to attend.

The Conference also recommended certain institutional arrangement which resulted in the UN General Assembly's establishment of the United Nations Environment Programme (UNEP).

The Stockholm Conference adopted a Declaration containing 26 Principles which are designed to "inspire and guide the peoples of the world in the preservation and enhancement of the human environment". The Principles represent the "common conviction" of the various participating states at the Conference. In most instances they are written as statements of principle dealing with the relationship between humans and the environment.

Several different groups of principles are contained within the Declaration. Two Principles proclaim rights (Principles 1 and 21), four deal with conservation of resources (Principles 2-5), two deal with pollution (Principles 6 & 7), eight address development issues (Principles 8-15), nine address specific non-legal topics (e.g., Principles 16, 20, 23 and 26) and one considers state responsibility.

Only two of the 26 Principles refer to legal concepts. Principle 21 deals with the obligation upon states to control activities within their national jurisdiction which have transboundary application. Principle 22 refers to the need for states to develop further international law principles regarding liability and compensation for pollution victims.

The Stockholm Declaration is one of the most important initiatives taken towards the development of international environmental law in the past 30 years. However, it is clear that the parties at the Conference did not

intend to create a legally binding document. While the instrument has some of the characteristics of a treaty, importantly, it does not seek to impose legally binding obligations upon the parties.

Notwithstanding that the Stockholm Declaration was not intended to be legally binding, it has had an important impact on international environmental law. The Declaration has acted as a catalyst for the development of further measures in international law protecting the environment. In this respect it has assisted in the crystallization of international environmental law.

The World Conservation Strategy

The World Conservation Strategy (WCS)[16] was prepared in 1980 by the World Conservation Union (IUCN), with the assistance of the World Wildlife Fund (WWF - now known as the World Wide Fund for Nature) and the United Nations Environment Programme (UNEP)[17]. The World Conservation Strategy was a plan of action presented to governments and public bodies around the world. It identified a range of priorities and actions designed to achieve three key objectives:

- the maintenance of essential ecological processes and life-support systems;
- the preservation of genetic diversity; and
- the sustainable use of species and ecosystems.

Underlying the WCS was the need to integrate conservation objectives with development policies. To this end it emphasized the need for a "cross-sectoral" approach to the environment.

In the years after its publication, many countries produced National Conservation Strategies based on the World Conservation Strategy. These strategies in turn stimulated policies and plans as well as legislative enactments on environment protection in a wide range of countries.

The World Charter for Nature

The World Charter for Nature initiated by IUCN and drafted in collaboration with other organizations, including UNEP, is a further example of a non-binding international instrument of broad application. It was proclaimed by the United Nations General Assembly in 1982. It consists of a Preamble and 24 Articles divided into three sections: "General Principles", "Functions" and "Implementation".

The "General Principles" of the Charter are concerned with:

- respecting nature and its essential processes;
- not compromising genetic viability and, to this end, safeguarding habitats;
- giving special protection to unique areas, representative samples of ecosystems and rare or endangered species;
- using natural resources so as to achieve optimum sustainable productivity; and
- protecting nature against warfare and other hostile activities.

In the "Functions" of the Charter, these General Principles are developed and applied to specific areas such as: decision-making processes; planning and implementation of social and economic development; population growth and the use of natural resources.

The "Implementation" section of the Charter calls for the incorporation of the principles of the Charter into the laws and practices of each State, and also into the practices of intergovernmental and non-governmental organizations. It further urges that: knowledge of nature be broadly disseminated; that funds, programs and administrative structures for the conservation of nature be provided; and that States cooperate to give effect to the provisions of the Charter.

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16 IUCN, WWF, UNEP, World Conservation Strategy (IUCN, WWF, UNEP, 1980)

17 This and the following sections have been drawn in part from Ben Boer, "Institutionalizing Ecologically Sustainable Development: The Roles of National, State and Local Governments in Translating Grand Strategy Into Action" (1995) 31 Willamette Law Review 307 at 309-310.,

Thus, although the World Charter for Nature is not binding international law, as a resolution adopted by the United Nations General Assembly, it has significant political weight, and a number of its principles have been reflected in the laws and programs of many countries.

The Hague Declaration

Another example of a non-binding international instrument which emerged from a conference is the 1989 Declaration of the Hague. The Hague Declaration was the result of a two-day conference convened at the Hague in March 1989. The Conference was jointly initiated by France, The Netherlands and Norway and was attended by 24 states.[18]

The Conference was specifically designed to deal with broad issues of principle where it was unnecessary to have considerable detail and agreement on specifics. The countries which were selected to attend also allowed for a North-South dialogue and the adoption of a document which had the support of states from a variety of regions.

The Hague Declaration takes the form of an instrument which initially outlines a range of global environmental problems. In identifying these problems, certain solutions are put forward in the document. The highest level of commitment by the parties at the Conference is expressed in two parts of the Hague Declaration.

The first part outlines a range of principles which the states acknowledge and agree to promote. Five interrelated principles are agreed to, one of which expressly refers to the need to develop necessary legal instruments. The second part outlines four additional principles which the states agree to promote. These principles essentially deal with fostering further international cooperation to deal with the environmental issues outlined throughout the Declaration.

Caring for the Earth

In 1991 Caring for the Earth[19], the successor to the World Conservation Strategy, also was prepared in cooperation with UNEP. It concentrates on the following areas:

- energy;
- business, industry and commerce;
- human settlements (ie. wherever people live);
- farm and range lands;
- forest lands;
- fresh waters; and
- oceans and coastal areas.

Although a more discursive document, it does endeavor to define actions that are necessary to achieve sustainable development. It contains a broad range of prescriptions on environmental policy, and includes a substantial section on the content of environmental law. It can therefore be considered to be a non-binding international instrument.

The Rio Declaration

The Rio Declaration on Environment and Development was adopted in 1992 by the UN Conference on Environment and Development (UNCED). It contains 27 principles to guide activities in relation to the environment of nations and individuals. It builds on the Stockholm Declaration of 1972, and introduces the mandate of sustainable development as the basis for global, national and local action. Among other things, it:

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18 The States in attendance were: Australia, Brazil, Canada, Côte d'Ivoire, Egypt, France, Federal Republic of Germany, Hungary, India, Indonesia, Italy, Japan, Jordan, Kenya, Malta, Norway, New Zealand, The Netherlands, Senegal, Spain, Sweden, Tunisia, Venezuela and Zimbabwe.

19 IUCN, WWF, UNEP, see note 2 above; this has also been published in a popular version in 1993, entitled Caring for the Earth: A Strategy for Survival (IUCN, WWF, UNEP, 1993) (a subtle change in orientation).

- Recognizes intergenerational equity: that the right to development must be fulfilled so as equitably to meet developmental and environmental needs of present and future generations (Principle 3)
- Calls on States to enact effective environmental legislation (Principle 11)
- Adopts the precautionary principle: where there are certain threats of serious or irreversible damage, lack of full scientific certainty is not a sufficient reason for postponing cost-effective measures to prevent environmental degradation (Principle 15); and
- Recognizes the financial and technological responsibility of developed countries, and the important roles of women, youth and indigenous and local communities, the private sector and non-government organisations in achieving sustainable development (Principles 7, 10, 20, 21 and 22).

It seems now to be accepted by many countries that the enactment of effective environmental legislation, as called for by Principle 11, requires the incorporation of at least some of the Rio principles into domestic legislation.[20]

Agenda 21

Agenda 21 is a program of action for sustainable development which was agreed to by all governments at the UNCED Conference. Agenda 21 should be read together with the Rio Declaration on Environment and Development and the Forest Principles. These instruments fulfill the mandate given to the UNCED Conference "to devise integrated strategies that would halt and reverse the negative impact of human behavior on the physical environment and promote environmentally sustainable economic development in all countries."[21]

Agenda 21 provides mechanisms in the form of policies, plans, programs and guidelines for national governments, by which to implement the principles contained in the Rio Declaration. Agenda 21 consists of 40 chapters, divided into four sections:

- Social and Economic Dimensions;
- Conservation and Management of Resources for Development;
- Strengthening the Role of Major Groups; and
- Means of Implementation.

Agenda 21 thus details the framework for the cooperative generation of strategies for sustainable development and environmental management at a global level. Although its provisions are not legally binding in international law, the political commitments made at Rio, and the momentum for the promotion of its programs through the Commission on Sustainable Development and by international intergovernmental organizations and NGOs, are ensuring that some of its major suggested programs will be carried into effect at the national level. It is clear from the reports of the Commission on Sustainable Development, as well as other more general indicators, that many of the provisions of Agenda 21 are beginning to form the basis of decision making on environment and development matters for governments, intergovernmental and non-governmental organizations and the private sector.

The Forest Principles

The Forest Principles were agreed at UNCED, along with other instruments. It would appear there was not sufficient political will at UNCED and thereafter to transform these principles into a global convention; thus the matter has remained at the level of principles only.

The Forest Principles are described as a non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests, both natural and planted, in all geographic regions and climatic zones.

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20 This is attested by the legislative and other materials compiled for an International Conference on Codifying the Rio Principles in National Legislation, The Hague May 22-24 1996.

21 Earth Summit Agenda 21, The United Nations Programme of Action from Rio (United Nations Department of Public Information, 1992) Introduction

The Principles are designed to encourage governments to promote and provide for community participation in development, implementation and planning of national forests policies, and urges that all aspects of environment protection and social and economic development relating to forests should be integrated. The Principles are likely to have a significant effect on the legislative and policy mechanisms of many countries.

Impact of non-binding international instruments

While non-binding international instruments have no legal impact when they are adopted, they do have the potential to have important legal consequences. The adoption of such an international instrument at a major international conference, for example, does represent some evidence of state practice. It demonstrates that the states present at the conference were prepared to accept that the statement they agreed to represented a common set of goals, aims or aspirations concerning the environment.

The adoption of such instruments becomes important evidence of state practice which can become the basis for the development of customary international law. Customary international law is created as a result of consistent state practice and evidence which states believe they are under a legal obligation to respect.

An example of how a non-binding international instrument played an important role in the development of international environmental role is Principle 21 adopted at the Stockholm Conference. Principle 21 has two limbs:

- states have the sovereign right to exploit their own sovereign resources; and
- states have a responsibility to ensure that activities within their own national jurisdiction or control do not cause damage to the environment of other states or areas beyond national jurisdiction.

The second limb of Principle 21 reflects the decision of the Tribunal in the *Trail Smelter* arbitration[22] and a number of decisions by tribunals and courts which came after that case. Since its adoption, Principle 21 has been so consistently referred to by a large number of states and accepted in a great range of international conventions, that it is now accepted that it represents customary international law.[23]

Another impact of non-binding international instruments is that they present the opportunity for states to deal with matters which could not formally be considered under a legal instrument. Because of the very nature of the instrument adopted, states will be more prepared to accept non-binding instruments and documents than the legal equivalent. As a result, such instruments can form the basis for enhanced international cooperation dealing with certain environmental matters which could not otherwise be successfully dealt with via a treaty.

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Exercises on International Law Relating to the Environment

1. How would you define public international law?
2. Could you differentiate between public international law and private international law?
3. What are the two main criteria for establishing State practices as customary rules? List three international customary rules and explain how they respond to the two criteria.
4. Imagine a case to which several sources of international law apply. If there is a conflict among these sources in the case in question, will some of these sources prevail over the others? How would you classify them in order of decreasing authority?
5. New concepts in international environmental law are currently emerging. Explain the differences and similarities among them.
6. How would you link the concepts of sustainable development and inter-generational equity?
7. How would you rationalize the concepts of common but differentiated responsibilities and global partnership?
8. Who may bring a case before the International Court of Justice (ICJ)?
9. Under which conditions is the ICJ competent to decide on a case?
10. Highlight the merits of the parties to the *Trail Smelter* case, as well as the conclusion of the Arbitral Tribunal. Relate the case to the development of international environmental law.
11. Highlight the merits of the parties to the *Corfu Channel* case, as well as the conclusion of the ICJ. Relate the case to the development of international environmental law.
12. Is there any legal difference between an agreement, a treaty, a covenant, a charter, a protocol, a statute, or a convention? Explain.
13. What is the legal value of the preamble of an international legally binding instrument?
14. Describe the various procedures by which States become Parties to a treaty. Compare the procedures for becoming a Party which have been established under the following conventions:
    - 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington
    - 1979 Convention on the Conservation of Migratory Species of Wild Animals, Bonn
    - 1985 Vienna Convention for the Protection of the Ozone Layer, Vienna
    - 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal
    - 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Basel
    - 1992 Convention on Biological Diversity, Rio de Janeiro
    - 1992 United Nations Framework Convention on Climate Change, New York

15. To what extent is a State bound by a treaty if it has done nothing more than sign it?

16. Under which conditions may a State formulate a reservation when signing, ratifying, accepting, approving or acceding to a treaty? What is the legal value of a reservation? To what extent can a reservation affect the obligations of the State making it towards the other Parties?

17. Compare the provisions concerning reservations in the conventions listed in exercise 14.

18. Which conditions must be fulfilled for the entry into force of the conventions listed above in exercise 14?

19. List the bodies established under the conventions listed in exercise 14.

    (a) Compare the mandates of the Conferences of the Parties.
    (b) Compare the mandates of advisory bodies.
    (c) Compare the mandates of the Secretariats.
    (d) Compare the mandates of the Depositaries.

Exercises on Non-binding International Instruments

1. Will all treaties create legal obligations for the contracting parties?

2. Why may some states be reluctant to accept treaty obligations?

3. Do non-binding international instruments make reference to the adoption of legal instruments?

4. Is it probable that states will be able to more readily reach agreement with respect to a non-binding international instrument than a treaty?

5. Can the report of the Brundtland Commission on Our Common Future be classified as a non-binding international agreement?

6. Is it important to distinguish between recommendations of Conferences and resolutions or declarations?

7. What was the principal non-binding international instrument adopted at the 1972 Stockholm Conference?

8. Did any of the principles contained within the 1972 Stockholm Declaration eventually have a legal impact?

9. What forms do non-binding international instruments take?

10. After adopting a non-binding international instrument at the 1972 Stockholm Conference, why did the states attending the Rio UNCED Conference also adopt another non-binding instrument in the form of the Rio Declaration?

11. Can all the decisions taken at international conferences and meetings of contracting parties to conventions be classified as non-binding international instruments?

12. What is the major distinction between a non-binding international instrument and a treaty?

13. Would it have been possible for states to have agreed upon the terms of the 1972 Stockholm Declaration if, instead of being a non-binding instrument, it had taken the form of a treaty? Give reasons.

14. What is the importance of the Hague Declaration with respect to demonstrating the impact of non-binding international instruments?

15. What is the major distinction in the language and wording of a non-binding international instrument as opposed to a treaty?

16. Can a non-binding international instrument create legal obligations?

17. Can the terms of a United Nations resolution or recommendation create any legal obligations for states?

18. What is the process which allows for a non-binding international instrument to eventually begin to have legal effect?

19. Many states will be more prepared to accept a non-binding international instrument rather than a treaty. Consider why this practice exists and whether international environmental law has gained as a result of this trend.

20. If non-binding international instruments have no legal effect, then what is their purpose and what do they achieve?

21. Does the popularity of non-binding international instruments indicate that legal instruments and mechanisms have a limited role in dealing with protection of the international environment?

22. Because non-binding international instruments generally represent only a consensus towards cooperative action, are they any weaker in their intent and purpose than a treaty?

23. How is it possible for non-binding international instruments dealing with the protection of the environment to deal with certain matters which could not effectively be dealt with in a treaty?

24. What are the factors which will be influential in determining whether a non-binding international instrument is adopted rather than a treaty?

25. Beginning with the 1972 Stockholm Declaration, there has been an increased reliance upon non-binding international instruments dealing with the environment. Why has this trend developed and have these instruments been more successful than treaties?

26. Why have non-binding international instruments been particularly popular in dealing with matters concerning the protection of the international environment?

27. Consider the terms of Agenda 21. Would it have been possible to incorporate some of its terms into a legal instrument, or were there other practical reasons for having a non-binding instrument?

28. What is the potential impact of the Statement of Forest Principles?

Discussion points for small groups

29. The United Nations General Assembly regularly considers a range of environmental issues. What is the effect of a Recommendation adopted by the General Assembly? Can any importance be placed on the voting record when recommendations are adopted?

30. Compare the terms of the 1992 Rio Declaration with the terms of the 1992 Convention on Biological Diversity. Is there much difference between the language used in an instrument designed to be non-binding compared to the language used in one which creates legal rights and obligations?

31. The Rio Declaration adopted at the 1992 United Nations Conference on Environment and Development is one of the most recent "global" examples of a non-binding international instrument. Consider the impact which the Rio Declaration has had to date, and assess whether any of its provisions duplicate those contained within the Stockholm Declaration.

Simulation Exercise

32. Consider the following fact situation and advise the Minister for Environment accordingly.

In 1995 a major international conference is convened to deal with the problem of land-based pollution. The intention prior to the Conference was to adopt a Convention specifically setting goals for the reduction of land-based marine pollution and for states to engage in bilateral, regional and global cooperation to that end. During the conference a major rift develops between developing and devel-

oped states over the terms proposed for the Convention. Developing states indicate they will not agree to the proposed convention. They do, however, indicate that they would accept a non-binding legal instrument. The Minister of Environment for your state asks for advice on what type of instrument should be adopted. Advise.

CHAPTER 3

EMERGING PRINCIPLES AND CONCEPTS OF INTERNATIONAL AND NATIONAL ENVIRONMENTAL LAW

INTRODUCTION

In the 23 years since the first international conference on the environment, the United Nations Conference on the Human Environment held in Stockholm, Sweden in 1972, the attention of the world has increasingly been focused on the state of the environment. Concern for the destruction of the environment and the impact on people and wildlife has spurred the world to attempt to correct its ways. This attention on the environment has encouraged new ways of thinking about the world and the place of humans in it. The United Nations Conference on Environment and Development (UNCED), dubbed the Earth Summit, which was held in Rio de Janeiro in June 1992, represented an important shift in thinking from simple environmental protection to sustainable development as the central environmental goal. The surge of activities to protect the environment after the Stockholm Conference was targeted simply at dealing with the adverse impacts of human activity on the environment. In contrast, sustainable development demands attention to socio-economic, technological and ecological factors in the process of exploitation of environmental resources.

The concept of sustainable development was made vogue by the 1987 Brundtland Commission on Environment and Development, which defined it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[1] However, it is the Earth Summit, attended by over 100 Heads of State and Government, that gave political legitimacy to the concept. Agenda 21, adopted at the Summit, provides a blueprint for reconciling the imperatives of economic development and those of a healthy environment. States are adopting new mechanisms, including developments in law and legal institutions, in their attempts to implement the requirements of Agenda 21.

INTERNATIONAL LAW

Sustainable Development

The notion of sustainable development requires environment and development issues to be addressed in an integrated manner in order to meet the various needs of the present, and to take into account the needs of future generations. As Ms Elizabeth Dowdeswell, Executive Director of UNEP has noted, sustainable development is now taking on a more definite shape – to include such specific concerns as conservation of biological diversity, reduction of over-consumption, limitation of population growth, and elimination of the worst forms of poverty.

Sustainable development was acknowledged at the 1992 Earth Summit where Agenda 21 and the Rio Declaration endorsed it as their conceptual foundation, relating it extensively to human life and activities. It is also reflected in recent binding instruments of international environmental law. One of the major objectives of the Biodiversity Convention, which was also signed at Rio, is the conservation of biological diversity and the sustainable use of its components. The Climate Change Convention affirms that responses to climate change should be coordinated with social and economic development in an integrated manner. The Desertification Convention also promotes a new and more effective approach within the framework of sustainable development.

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1 Our Common Future, Oxford, 1987 p. 87.

Sustainable development's holistic interpretation of global problems dictates implications beyond environmental law as well. Indeed, the concept has implications for legal principles as fundamental as those contained within the United Nations Charter. The Charter defines the role of the UN as being to create international peace and security. In San Francisco, the Charter's drafters drew lessons from World War II, coming to the important understanding that without stable economic and social development, there is no solid foundation for international peace and security. This idea was incorporated in the Charter and represented a major development in comparison with the Covenant of the League of Nations.

Contemporary understandings now go further: international peace and security require stable socio-economic development but for socio-economic development to be stable, it must be pursued on the basis of sustainable development. Therefore, the concept of sustainable development and its evolution in the field of international environmental law can be seen to be linked with the purposes and principles of the UN Charter.

Sustainable development has an all-embracing nature, covering the broad gamut of human activities. The related evolution within international environmental law may therefore also have far-reaching implications for the progressive development and codification of international law generally. In particular, the evolution will occur in connection with the various branches of international law. For example, the sustainable development concept requires the complementary development of trade law and environmental law, a closer link between environmental law and human rights law, and the further development of liability and compensation regimes to meet the requirements of environmental law.

Sustainable development and the systemic conception of the environment, though first recognized at the international level in 1972, is a new trend in environmental legislation and institutions as nations are still exploring what the concept means and ways to incorporate it in national legislation. The concept of sustainable development and its implementation in environmental law and administration is probably the most important emerging trend in environmental law. It is important to provide a description of the term and explain how it can operate in national and international environmental law and institutions. In fact the concept of sustainable development is the concern that has driven many of the other recent developments in environmental law and institutions. As such it forms the backdrop for much of the following discussion about emerging trends and will link many of the concepts together. Sustainable development must therefore not only be discussed as an emerging trend in its own right, but also within the context of other trends.

Common Concern of Humankind and Common but Differentiated Responsibilities

The concept of the common concern of humankind reflects humanity's increasing awareness of the interdependent and global nature of environmental problems. These issues stretch across national boundaries and are shared concerns of humanity. In both the Climate Change Convention and the Biological Diversity Convention, Parties have directly acknowledged that the environmental issue at hand is a common concern of humankind. The two basic assumptions implicit in the common concern concept are:

- that States should not cause harm with regard to issues of common concern, and
- that they share the responsibility for addressing these common concerns.

With regard to the realm of law, the concept appears to contrast somewhat with the fundamental principle of State sovereignty. Indeed, it is against the backdrop of State sovereignty that the use of natural resources and environmental protection has been largely conceived. The notion of permanent sovereignty over natural resources was recognised in a series of General Assembly Resolutions between 1952 and 1973.

Now, the international community has developed the sovereignty concept by introducing the notion that the sovereign right of States to exploit resources exists alongside a responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. This principle was incorporated within Principle 21 of the 1972 Stockholm Declaration and reaffirmed within recent instruments such as Principle 2 of the Rio Declaration and also within binding Conventions, for example, Article 3 of the Biological Diversity Convention.

As the principle of sovereignty has developed over time, the international community has continued to stress the notion of sovereign equality. Now, in addressing common environmental issues, the international community increasingly recognises that they must be dealt with in accordance with common but differentiated responsibilities of States. This concept represents a philosophy by which common concerns are to be effectively addressed. Specifically, it recognises the fact that shared obligations arising in accordance with common concerns should not necessarily give rise to matching responsibilities. Rather, each nation should contribute in accordance with its capacity and capabilities.

The wider acceptance of evolution in the direction of the common but differentiated concept is reflected within recent international environmental conventions. The Climate Change Convention is explicit in stating that "[t]he Parties should protect the climate system ... on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities." Each Contracting Party to the Biological Diversity Convention undertakes to provide financial support and incentives for national activities "in accordance with its capabilities."

In exercising their sovereign right over natural resources within their national jurisdictions, countries must not do harm to other States. The sovereignty of each and every State remains equal, but now States assume differentiated responsibility in addressing environmental issues. This requirement may *prima facie* appear as a limitation or infringement on sovereignty or sovereign equality. It is a fact, however, that the international community is increasingly accepting the common concern and common but differentiated responsibility concepts, incorporating them within both soft law and legally binding instruments. In addition, it could be considered that these concepts represent a further development or enrichment of the principle of sovereignty and sovereign equality. The "no harm" requirement, as well as the notion of differentiated responsibility, are both aimed at the protection and improvement of the environment and at achieving sustainable development. These goals will ultimately benefit each and every nation, both present and future generations. Lawyers and policy makers are well aware of the difficulty in practically implementing these concepts. Yet there is hope that the concepts of the common concern of humankind and common but differentiated responsibilities in the field of international environmental law will further develop and contribute to the fundamental principle of sovereignty.

Partnership

The concept of partnership as it has evolved within international environmental law could be considered to represent the further development of the notion of international co-operation. In the UN Charter the peoples of the United Nations resolve to combine their efforts to accomplish the stated aims. One of the fundamental purposes of the United Nations, as laid down in Chapter I, is to achieve international co-operation in solving international problems. The 1970 Declaration on Principles of International Law solemnly proclaimed the duty of States to co-operate with one another in accordance with the Charter.

Partnership builds on the idea of co-operation, reflecting an increased understanding of the need to strike co-operative arrangements between the economic and political factions of the world community in addressing global environmental programmes: between the North and South, rich and poor, among regional groupings, and between governmental and non-governmental institutions. And yet because the concept of partnership in the field of international environmental law is being developed in the context of sustainable development – and reflects the requirements of the common concern and common but differentiated responsibilities concepts – it goes further to require not only the goal of co-operation but, in addition, the promotion of effective means by which to achieve that. Specifically, partnership arrangements are manifested within environmental law instruments as a range of innovative enabling and facilitative mechanisms.

Examples of facilitative mechanisms include information exchange and reporting requirements and multilateral consultative processes. Under the Biodiversity Convention, for example, Parties undertake to facilitate exchange of information and to provide reports on implementation measures taken and their effectiveness in meeting Convention objectives. Under the Climate Change Convention, the Conference of the Parties is authorised to consider the establishment of a multilateral consultative process for resolving questions related

to implementation. Further mechanisms provide for the involvement of NGOs and/or promote public awareness in order to ensure a broad background for implementation and the means for effective co-operation. For example, the Conference of the Parties of the Biological Diversity Convention agrees to co-operate with States as well as international organizations in developing educational and public awareness programmes.

More notable however are the enabling mechanisms, in particular, those which provide for financial assistance and technology transfer. The Multilateral Fund established pursuant to the Montreal Protocol was an innovation and has provided a precedent for further financial assistance mechanisms within environmental treaties. Implementation of the Climate Change Convention by developing countries is stated to be contingent upon financial and technological assistance from developed country Parties. The Biodiversity Convention is characteristic of recent conventions in committing parties "to provide and/or facilitate access for and transfer to other Contracting Parties of technologies" relevant to the purpose of the Convention.

Finally, it is important to note that the notion of partnership is ultimately grounded in the sustainable development concept, the holistic approach of which dictates a broad focus. As stated in the Preamble to Agenda 21:

> *Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfillment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future.* ***No nation can achieve this on its own; but together we can – in a global partnership for sustainable development.*** *(emphasis added)*

NATIONAL LAW

Crystallization of Environmental Issues in Policy Documents

The constitution of a country constitutes the first and primary level in its hierarchy of juridical norms. Constitutional provisions, *inter alia*, outline national priorities and hence determine the direction and nature of future legislative policies and executive actions. Since the 1972 Stockholm Conference, basic principles of environmental management have increasingly been incorporated into the national constitutions of developing countries due to the high profile the environment has assumed in national affairs. In most cases, such constitutional provisions are declaratory of the duty of the State to strive towards environmentally sound development, the sustainable use of natural resources and/or the maintenance of a safe and healthy environment for its citizens. The individual's right to a clean and healthy environment and the State's duty to protect and conserve the environment and natural resources are recurrent themes in the new constitutions.

Examples of such provisions in national constitutions can be found throughout the world. The *Constitution of Mali*, 1992 provides:

> *Every person has a right to a healthy environment. The protection and defence of the environment and the promotion of the quality of life are a duty for all and for the State.*

The *Constitution of Thailand*, 1974 declares that:

> *The State should conserve and keep the environment clean and eliminate pollution which jeopardizes the health and hygiene of the people.*[2]

The *Constitution of Panama* states that:

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2 Art. 93.

It is the fundamental duty of the State to safeguard the conservation of ecological conditions by preventing environmental pollution and imbalances in the ecosystems, in harmony with economic and social conditions.[3]

Of course the effectiveness of constitutional provisions such as these depends very much on the opportunities for administrative review which vary from country to country. Nevertheless, the elevation of environmental concerns to constitutional status in these countries is at least a clear statement of intent, and may enhance the priority likely to be conferred by Governments on sound national environmental management and sustainable development.

More Comprehensive Coverage of Environmental Issues

The range of issues which environmental laws address has broadened considerably in an attempt to control the impact of human activity on the planet. Environmental legislation has been formulated and implemented to deal with a variety of environmental pollutants, such as toxic chemicals or noise, to control particular activities such as mining or power generation, or to provide general guidelines for protecting basic natural resources such as air or water. Legislative responses to environmental problems have grown as a function of the increasing appreciation of those problems and their impacts.

The Burkina Faso *Code de l'Environnement*, composed of 100 articles, is an attempt to deal comprehensively, in one legislative text, with most of the environmental problems affecting the country. The issues addressed include the conservation of flora and fauna; pollution of environmental media; industrial wastes, including transboundary movement of hazardous wastes; environmental impact assessment; and land-use planning and management. The *Environmental Quality Act*, 1974 of Malaysia is another example of framework environmental legislation that contains provisions for many environmental issues including restricting pollution of the atmosphere, noise pollution, soil pollution, pollution of inland waters, and prohibitions on the discharge of oil or waste into the sea or Malaysian waters.

Sometimes legislation is passed to deal with specific issues. Thus, instead of a single environment statute purporting to cover all environmental concerns, a series of individual statutes address a collection of problems. In Papua New Guinea there is an *Environmental Planning Act* 1978, an *Environmental Contaminants Act*, 1978, a *National Parks Act*, 1982, a *Conservation Areas Act*, 1980, 1992, an *International Trade (Fauna and Flora) Act*, 1979, a *Crocodile Trade (Protection) Act*, 1974, a *Water Resources Act*, 1982, and a *Forestry Act*, 1991.[4]

Expanding the legislative network to control the impact of human activities on the environment has provided governments with greater means to protect the environment in its totality.

Strengthening of Normative Content

Hand in hand with a wider variety of legislative initiatives to deal with environmental issues is a strengthening of the content of such legislation. Legislation is being issued that establishes standards of environmental health, criteria for analyzing negative environmental impacts, and limits on potentially damaging activities or substances. Previously laws often did not contain provisions relating to environmental quality criteria and standards, and, therefore, implementation and enforcement was hardly effective as there was no legal obligation to comply with specific technical norms. The attempt at more comprehensive coverage of environmental issues and the strengthening of the normative content of legislation are likely to improve the implementation of environmental policies, facilitate more effective law enforcement and enhance compliance with environmental requirements. Laws and regulations are increasingly containing specific standards such as ambient air or water standards, discharge standards, load limits, and so on.

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3 Constitution of Panama, 1972, Article 110.

4 Ben Boer, ed., Strengthening Environmental Legislation in the Pacific Region, (Apia: South Pacific Region Environmental Programme, 1993), pp. 159-160.

Use of Economic Instruments for Environmental Management

An attempt has been made to determine the costs of environmental degradation and to impose those costs on those that create the problems. This is often referred to as "the polluter pays principle". The use of economic incentives includes everything from taxes on gasoline in an attempt to reduce the public demand, to tax incentives granted to companies that invest in environmentally friendly technologies, to offering grants or low interest loans to companies to facilitate a transfer to less environmentally damaging processes. Other economic instruments include the adoption of "eco-labelling" in an attempt to encourage voluntary clean ups in exchange for consumer preference, and the development of national environment funds to provide for the capital costs of constructing major treatment facilities or to cover the costs of environmental emergencies.

The creation of a pool of funds that can be drawn upon by governments where necessary to deal with environmental concerns is a relatively new phenomena. These funds are a source of financing independent of other sources of government revenue and are often financed by funds received from polluting industries or activities. In Thailand the National Environment Quality Act, B.E. 2535 (1992) established an Environment Fund composed of money from the Oil Fuel Fund, the government budget, service fees and fines, and donations from international sources. The money is to be used for investment in and operation of public waste water treatment or waste disposal systems, air treatment equipment, or loans to the private sector where there is a legal responsibility for providing for air, water or waste treatment equipment for the enterprise.[5] In the Philippines, rather than a government established fund, the legislation provides for an Environmental Guarantee Fund to be established by certain companies. The companies are required to set up a private trust fund under the management of the company and the community and supervised by government into which negotiated amounts are deposited daily or weekly to cover the cost of environmental programmes, monitoring, rehabilitation and compensation for damages caused by a company's project.[6]

Many countries have instituted a policy of the "polluter pays". For example, in Korea, the Solid Waste Management Act revised in 1991, introduced a comprehensive system for the deposit of expenses for the collection and disposal of wastes. The Minister of Environment can order manufacturers and importers of certain products and containers to deposit money for waste collection and disposal expenses to the Solid Waste Management Fund. When the manufacturers and importers collect and return wastes from their products or containers to the designated places the Fund reimburses the deposit. This way, the party responsible for creating the environmental problem, in this case waste, is also responsible for paying for the disposal of the waste.

The polluter pays principle has been implemented in many creative ways including: user fees to cover the cost of establishing and operating waste treatment services[7]; imposing taxes on disposable items[8]; charging fees to enterprises and institutions for permission to discharge pollutants in excess of the prescribed national or local discharge standards and imposing responsibility on the polluters for eliminating and controlling the pollution[9]; taxing enterprises for the amount of pollutant emitted or charging license fees for certain activities harmful to

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5 Arts. 22-31.

6 Randall Abate and Elissa C. Lichtenstein, eds., Environmental Regulation in Pacific Rim Nations, (Washington: American Bar Association, 1993), p. 98.

7 National Environmental Quality Act, B.E. 2535 (1992), Arts. 88-89.

8 In 1992 the Korean government was considering a disposable product charge on items such as wooden chopsticks, diapers, razors and paper cups. Sang Don Lee, "The Effect of Environmental Regulations on Trade, Cases of Korea's New Environmental Law" presented at American Bar Association Conference on Trade and the Environment in Pacific Rim Nations, Hong Kong, 1993.

9 The income derived from the fee levied for the excessive discharge of pollutants must be used for the prevention and control of pollution and shall not be appropriated for other purposes. The Environmental Protection Law of the People's Republic of China, 1989, Art. 28.

the environment[10]; or charging polluters expenses for measures to prevent or mitigate environmental pollution caused by their activities.[11]

Another novel approach is the eco-mark programme. Such a programme was commenced in Korea in 1992 launched by the Ministry of Environment to encourage the development of environmentally sound products. Products which have been identified as environmentally friendly may bear a mark indicating such designation.[12]

Incorporation of International Norms into National Legislation

States are increasingly recognizing that many environmental problems have a transboundary effect and that, in order to deal with such immense problems, it is essential to take action at the international level. The number of international environmental instruments has expanded at an exponential rate with more nations playing an active role in negotiating and drafting the instruments. More and more States are ratifying these instruments and are working to incorporate the obligations under those instruments into national law and institutions.

The developing countries have thus far generally played a limited role in the negotiation of international environmental conventions. This is primarily as a result of the limited human and financial resources available in the developing world to facilitate attendance at, and effective participation in, international fora. There are exceptions to this of course. Many of the African countries were very vocal at the negotiation of the Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal. Dissatisfied with the provisions of the Convention, they negotiated and adopted the Bamako Convention on the basis of fears that African countries would become the dumping ground for waste from industrialized countries. Another example is the conclusion of the South Pacific Nuclear Free Zone Treaty (Rarotonga Treaty) by nations in the South Pacific in response to the long history of the use of island atolls in the region for testing nuclear devices. The Latin American and Caribbean countries are playing an increasingly important role in the establishment and enforcement of multilateral agreements in the field of the environment. Their contribution to preparing the new Law of the Sea is particularly well known.

The record of participation (in the sense of being a party to) international environmental agreements is also unimpressive. Few developing countries have signed, ratified or acceded to major international environmental agreements. For example, the countries of the Latin America and Caribbean region participate in no more than 25 per cent of the existing global environmental instruments[13]. Again, the record indicates that countries have adopted those conventions in which they have a particular interest. Many small island States, for example, have ratified or acceded to the United Nations Framework Convention on Climate Change, as they feel

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10 China has begun taxing enterprises according to the volume of sulphur dioxide emitted and established a licensing system for taking water from lakes, rivers and underground sources. Gunther Handl, ed., Yearbook of International Environmental Law, Volume 4, 1993 (Oxford: Clarendon Press, 1994) pp. 437-438. Also in Malaysia fees attached to licenses are dependent on a range of considerations including location of industry, quantity of waste discharged, the pollutant or class of pollutants discharged, the existing level of pollution. Environmental Quality Act, 1974, Art. 17.

11 In Korea under Article 7 (Liability of Person causing Pollution for Expenses) of the *Basic Environmental Policy Act*, Law No. 4257, Aug. 1, 1990 as amended by Law No. 4492, Dec. 31, 1991 it states that "Any person who causes environmental pollution due to his act or business activities, shall in principle bear the expenses for the prevention of such pollution, recovery of the contaminated environment and relief of damages. Also in India under Article 9(3) of the *Environment (Protection) Act*, 1986 it states "The expenses, if any, incurred by any authority or agency with respect to the remedial measures to prevent or mitigate the environmental pollution together with interest (at such reasonable rate as the Government, may, by order, fix) from the date when a demand for the expenses is made until it is paid may be recovered by such authority or agency from the person concerned as arrears of land revenue or of public demand." In Malaysia all costs and expenses incurred for removal, dispersal, destruction or mitigation of effects of pollution may be recovered from the person responsible and in the case of oil spills, individuals can be held jointly and severally liable under the *Environmental Quality Act*, 1974, Art.47.

12 Sang Don Lee, "The Effect of Environmental Regulations on Trade, Cases of Korea's New Environmental Law" presented at American Bar Association Conference on Trade and the Environment in Pacific Rim Nations, Hong Kong, 1993.

13 UNEP-ROLAC, "The current Situation of International Environmental Law in Latin America and the Caribbean" (Mexico: UNEP-ROLAC, 1993).

particularly threatened by rising sea levels, which are a likely result of global warming. Many coastal nations have adopted conventions to protect fishing resources such as the Driftnet Convention (Wellington Convention) or against oil pollution such as MARPOL.

However, the costs associated with becoming a party to an international legal instrument has generally discouraged many developing countries. Such costs include direct financial contributions to convention secretariats; undertaking legislative measures to translate international norms into national legislation; establishing and financing administrative structures which may be required under an international treaty, etc. Recently, attempts have been made to draw the developing countries into the international negotiating process and into ratification of the conventions by providing financial assistance to attend negotiations and incentives to implement the instruments by funding research or providing for reduced or zero contributions to the convention fund.

But even where countries have ratified or acceded to international instruments, very few have taken the required legislative and other measures to ensure effective application and implementation at the national level. There are notable exceptions in this regard. For example, in China, the State Council approved "China's State Plan for Phasing Out Ozone Depleting Materials" in 1993 to facilitate implementing the Vienna Convention on Substances that Deplete the Ozone Layer and its Montreal Protocol to which China acceded in September 1989 and June 1991 respectively.[14] In Korea, in December 1990, the Government passed the Act to Regulate the Use of Chemical Substances which Deplete the Ozone Layer in preparation for joining the Vienna Convention and Montreal Protocol, and the Act Concerning the Transboundary Movement and Disposal of Waste was passed in preparation for acceding to the Basel Convention.[15] The necessary elements to implement the CITES Convention to which Vanuatu acceded in 1988 were incorporated in the International Trade (Flora and Fauna) Act, 1991.

Reliance on Anticipatory and Precautionary Mechanisms and Measures

Sustainable development does not happen by accident. The use of planning tools such as the environmental impact assessment allow States to determine and assess the impact of development projects before they are undertaken. Many States have opted to refuse to permit the construction of environmentally damaging facilities rather than have to deal with the problems they may create. States too have begun to recognize that there is a great deal of scientific uncertainty regarding environmental impacts and have adopted the precautionary principle, preferring to forego certain developments where the potential risks could be quite high.

The Environmental Impact Assessment (EIA) process has become, since the 1970s, the predominant tool for incorporating environmental planning into national socio-economic planning. Through this process the potential damage to environmental resources can be evaluated and prevented or substantially minimized. Indeed, the EIA process constitutes the critical link between environment and development since it demands that the process of economic development takes into consideration the ecological perspective of socio-economic transformation. Recent trends in developing countries show an increasing appreciation by governments of the importance of the EIA process. At least 53 developing countries and countries with economies in transition have some form of EIA process whether within framework legislation or in separate specialized EIA legislation. Many other countries are currently working on developing EIA legislation and have requested UNEP's assistance with this task.

Efforts Towards Ensuring Coherence of Legislative Framework

The single most important consequence of the sectoral approach has been the fact that environmental management is fragmented and uncoordinated. Sectoral management diffuses power and responsibility over environmental issues in numerous government departments and local authorities. This ignores the indivisibility of the ecosystem and the linkages inherent therein. Conflicts and jurisdictional overlaps are created amongst

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14 Handl, Yearbook of International Environmental Law, Volume 4, 1993 p. 436.

15 Sang, "The Effect of Environmental Regulations on Trade, Cases of Korea's New Environmental Law".

agencies in cases where the issue has a cross-sectoral character, for example, pollution of environmental media. In addition, some issues may not fall neatly into specific natural resource sectors and hence remain outside the realm of legal regulation, such as environmental impact assessment. The sectoral approach therefore neither reflects a holistic conceptualization of environmental problems nor a coherent and comprehensive strategy for dealing with them. Due to organizational fragmentation, the model creates a need for institutional mechanisms for cross-sectoral co-ordination and harmonization of policies and programmes. Recent developments in the developing countries point towards an appreciation of that imperative by decision-makers.

Over 65 developing countries world wide have enacted national framework legislation. This legislation generally defines the administrative bodies responsible for management of the environment and the specific responsibilities and authority of these bodies. The legislation also generally contains prohibitions and control of pollution which may include emission and discharge standards, designation of protected areas, water resource management, waste management, and/or protection or flora and fauna. Enforcement provisions such as licenses, prohibitions on certain activities, or the penalty for offenses are also generally covered in the framework legislation. Finally, legal processes such as jurisdiction of the authorities, penalties, rules of evidence, or appeals are dealt with. This type of legislation provides the starting point for many countries to deal with environmental issues in a comprehensive manner. With the implementation of framework legislation, developing countries will then be placed in a position where they can further develop the legislation through regulations or build a network of legislation through sectoral laws to deal with more complex issues.

Facilitating Compliance and Enforcement

Passing environmental legislation and developing institutions to address environmental issues is not enough to ensure adequate protection of the environment. It is equally essential to ensure that the legislation is implemented, the authorities are performing their functions, and there is wide spread compliance with the written law. The seriousness with which a particular State views the environmental problems within its borders is demonstrated by the attention it gives to ensuring enforcement of the laws. The number of prosecutions, amount of staff and financial resources dedicated to enforcement, and the harshness of the laws are indications of their commitment. States are adopting new measures to encourage compliance with environmental initiatives by educating the public about environmental law and institutions adopted to deal with the problems, increasing their diligence in enforcing the legislation, and improving the ability of the authorities to tackle the issues through greater training of officials and funding to enforcement agencies. States have also demonstrated the seriousness with which they view environmental damage by imposing increased penalties for breaches and adopting liability schemes that make it easier to bring action against polluters.

The need for trained government officers to enforce the legislation is sorely felt in many developing countries, but this is slowly being addressed. In Syria, for example, the Government increased the number of technical staff at the Ministry of State for Environmental Affairs in 1993[16], and the Taiwanese Government set up training programmes for government environment officials to develop assessment techniques.[17]

Penalties for violation of environmental statutes are being made increasingly onerous. Many States have imposed new types of liability or increased penalties for environmental offenses. In Bahrain, any person found guilty of causing oil pollution to the marine environment or of dumping wastes from ships or land-based sources in Bahrain's territorial waters is liable to a maximum fine of US$132,000. Violators are also responsible for the clean-up of the contaminated area within a specified time.[18]

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16 Handl, Yearbook of International Environmental Law, Volume 4, 1993 p.413.

17 Randall Abate and Elissa C. Lichtenstein, eds., Environmental Regulation in Pacific Rim Nations, (Washington: American Bar Association, 1993), p. 82.

18 The Amiri Decree No. 16/1993 amended some articles of the 1975 Public Health Law No. 3, Handl, Yearbook of International Environmental Law, Volume 4, 1993.

Finally, countries are granting pollution control authorities broad powers in an attempt to control polluting activities. In Malaysia, as with many other countries, the government agencies responsible for protection of the environment are granted authority to enter and inspect premises and equipment and control and monitor, take samples, examine books and records, and take photographs.[19]

Centralization of Management of Environment

As part of the drive to coordinate environmental legislation, there has also been an effort to coordinate administrative regimes for environmental protection. This has been evident in the creation of new government agencies, institutions, and ministries to deal with the issues, the appointment of senior government ministers to be responsible for environmental matters, and the rearrangement of responsibilities of institutions to ensure harmonized environmental management with sufficient authority to address the issues.

In Africa, structural changes in public administration through the establishment of environmental ministries and departments was mostly effected through the constitutional power vested in the executive to establish government ministries and departments. Thus, environmental ministries and departments have been established in Algeria, Benin, Burkina Faso, Burundi, Cameroon, Congo, Côte d'Ivoire, Gabon, The Gambia, Guinea, Kenya, Mali, Mauritius, Niger, Rwanda, Sao Tome and Principe, Seychelles, Sierra Leone, Togo, Tunisia, Tanzania, Uganda, and Zambia.

Various governments have also created senior advisory bodies. The Government of China created a Commission of Environmental Protection under the State Council consisting of administrators from over 40 Ministries and Departments who meet regularly to discuss and decide upon major environmental issues.[20] Plans for environmental protection formulated by the State must then be incorporated into the national economic and social development plans and the State shall adopt economic and technological policies and measures favourable for environmental protection so as to coordinate the work of environmental protection with economic construction and social development.[21]

Establishment of Innovative Dispute Resolution Mechanisms

Environmental problems are in many ways unique and new mechanisms must be adopted to address the issues. One of the problems that is unique to environmental law is the issue of dispute resolution. Traditional methods of dealing with disputes have proven ineffective requiring new means to counter the inadequacies. Class action suits, consumer boycotts, administrative tribunals, standing of individuals to bring claims on behalf of the environment or future generations are some of the means that have been adopted to allow polluters to be punished and to provide justice to those who are injured.

Public interest litigation has been successful in India, for example, where private individuals have challenged government decisions. In India in M.C. Mehta v. Union of India[22], the court accepted a petition for a writ of *mandamus* to restrain a series of tanneries from disposing of effluent into the River Ganges. The Court ordered the closure of the tanneries until such time as primary waste treatment systems were installed, despite the fact that the Court was aware that the order would cause economic hardship. The Court noted Article 48-A of the Constitution which provides that the State shall endeavour to protect and improve the environment and to safeguard the forests and wild-life of the country and Article 51-A which imposes as one of the fundamental duties of every citizen the requirement to protect and improve the natural environment

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19 Malaysia Environmental Quality Act, 1974, Art. 38 or in Sri Lanka, Government officials permitted to enter and inspect premises for compliance under the National Environmental Act No. 47, 1980 as amended by Act No. 56 of 1988, Art. 24A.

20 Abate, Environmental Regulation in Pacific Rim Nations, p.119.

21 Environmental Protection Law of the People's Republic of China, 1989, Art. 4.

22 AIR 1988 SC 1037.

including forests, lakes, rivers, wild-life and to have compassion for living creatures. It is interesting to note that the Court also quoted from the proclamation adopted by the United Nations Conference on the Human Environment held at Stockholm in 1972. In D.D. Vyas v. Ghaziabad Development Authority the court declared that petitioners' standing could not be challenged because they were "public spirited citizens who were rightly reminding the authorities of their duties enshrined in the Constitution".[23]

Conclusion

This introduction has outlined some of the new concepts and principles currently being incorporated in the development of international and national environmental legislation. There have been significant changes in environmental legislation and institutions at both the national and international levels since the Stockholm Conference. More significant, however, are those that have begun to emerge as a result of the adoption of Agenda 21 at the Rio Conference and the attempts to implement the principle of sustainable development. It is possible to identify several emerging trends in this evolution, particularly the adoption of a more holistic approach to environmental protection and planning and the incorporation of this in the legal regime.

Exercises on Emerging Principles and Concepts

1. What does the definition of "sustainable development" encompass? Which document developed and popularized the concept of sustainable development? Is the concept of sustainable development linked to the principles and purposes of the UN Charter? If so, in what way?
2. Explain the concept of "common concerns of mankind"? What two basic assumptions are implicit in the common concern concept? How does the concept contrast with the principle of state sovereignty? What principle of international law has developed to ensure that activities within states do not cause damage to the environment beyond the limits of national jurisdiction? Is the concept of common but differentiated responsibility compatible with that of sovereignty? What are some of the practical difficulties of implementing the concept of common but differentiated responsibilities?
3. What is the scope of partnerships in international environmental law? What are some examples of enabling mechanisms? How do they contribute to sustainable development?
4. How can a state's constitution be helpful in achieving sustainable development? Are constitutional provisions such as those outlined in the chapter effective in promoting sustainable development? On what factors do their effectiveness depend?
5. What is national framework legislation? What does it usually encompass? What should it encompass? What is the difference between framework and specific or sectoral legislation? Is one type of legislation more appropriate than the other? If so, in what way?
6. What was a common problem with environmental legislation in the past? How can improving the normative content of legislation facilitate more effective enforcement and compliance?
7. Describe some of the economic instruments used to impose the costs of environmental degradation on those that create the problems. Are they effective? Are any in place in your country? How do these compare with pools of funds created by governments to deal with environmental concerns? Should private companies be compelled to establish and support funds to cover environmental programmes which monitor, rehabilitate and compensate for damages caused by the company?
8. Name five ways in which the polluter pays principle has been implemented in various countries.
9. What factors discourage developing countries from becoming parties to an international environmental instrument? Even where they are parties, what other problems often result?

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23 **Handl, Yearbook of International Environmental Law, Volume 4, 1993, p.418.**

10. What has become the predominant tool in incorporating environmental planning into national socio-economic planning? What are some of the benefits of environmental impact assessment?

11. How can enforcement and compliance with laws be improved in developing nations? Should environmental violations be made criminal offenses? What are some of the means that have been adopted to enable polluters to be punished and to provide justice to those who are injured by environmentally damaging activities?

12. How does centralizing the management of the environment help achieve goals of sustainable development?

PART II

INTERNATIONAL ENVIRONMENTAL CONVENTIONS AND OTHER MECHANISMS

CHAPTER 4

CONSERVATION OF BIOLOGICAL DIVERSITY AND ITS COMPONENTS

> **If all the beasts were gone, men would die from great loneliness of spirit, for whatever happens to the beasts also happens to the man. All things are connected. Whatever befalls the earth befalls the sons of the earth.**
>
> *Chief Seattle of the Suwamish tribe of the State of Washington, in a letter to the President of the United States, 1855*

INTRODUCTION

Throughout the twentieth century there has been an increase in international law protecting aspects of biodiversity. Initially, the approach adopted was species-specific. Early treaties were negotiated to protect, conserve and manage certain species such as birds,[1] seals,[2] and whales,[3] which were considered valuable to humans.

Since the 1940s, the concern for the conservation of biological diversity began to appear on the agenda of several international organizations, including the United Nations. The focus was usually on the protection of species and their habitat, or occasionally on the management of activities, such as fishing within a certain region, or areas of high value for nature conservation. International environmental agreements resulting from such efforts are:

- Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, 1971 (Ramsar Convention);
- Agreement on Conservation of Polar Bears, Oslo, 1973;
- Convention on the Conservation of European Wildlife and Natural Habitats, Berne, 1979 (Berne Convention);
- Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979 (CMS);
- Convention for the Conservation of Antarctic Marine Living Resources, Canberra, 1980;
- Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 1972 (World Heritage Convention);

There have also been significant attempts at implementing a specific regime for controlling illegal trade in fauna and flora on a global, as well as a regional level, such as the:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973 (CITES); and
- Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora, Lusaka, 1994.

Recently, there has been an important effort to adopt a more comprehensive approach towards the protection and management of biodiversity within the context of sustainable development. This led to the adoption of the Convention on Biological Diversity, Rio de Janeiro, 1992.

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1 Convention for the Protection of Birds Useful to Agriculture, Paris, 1902, in British and Foreign State Papers Vol. 102, p. 969.

2 Treaty for the Preservation and Protection of Fur Seals, Washington, 1911, in British and Foreign State Papers Vol. 104, p. 175.

3 International Convention for the Regulation of Whaling, Washington, 1946 161 UNTS 72.

This section of the Manual concentrates on three important global conventions relating to biodiversity:

- Convention on International Trade in Endangered Species of Fauna and Flora, Washington, 1973;
- Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979;
- Convention on Biological Diversity, Rio de Janeiro, 1992 as well as on a regional agreement implementing CITES;
- Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora, Lusaka, 1994.

There are of course a range of other important global and regional instruments covering various aspects of biodiversity. Further information on instruments which are not dealt with in the Manual may be found in the two volumes of UNEP's Selected Multilateral Treaties in the Field of the Environment.

A. CONVENTION ON BIOLOGICAL DIVERSITY

RATIONALE FOR INTERNATIONAL ACTION

Species extinction is a natural part of the evolutionary process. Due to human activities, however, species and ecosystems are more threatened today than ever before in recorded history. The losses are taking place in tropical forests – where there are 50 to 90 per cent of identified species life – as well as in rivers and lakes, deserts and temperate forests, and on mountains and islands. The most recent estimates predict that, at current rates of deforestation, some two to eight per cent of the Earth's species will disappear over the next 25 years.

While these extinctions are an ecological tragedy, they also have profound implications for economic and social development. At least 40 per cent of the world's economy and 80 per cent of the needs of the poor are derived from biological resources. In addition, the richer the diversity of life, the greater the opportunity for medical discoveries, economic development, and adaptative response to such new challenges as climate change.

Existing conventions addressed specific questions of biodiversity conservation but, because of their piecemeal nature, did not adequately meet the needs of conserving biodiversity worldwide. At the global level, the existing conventions covered only internationally important natural sites (World Heritage Convention) the specific threat of trade in endangered species (CITES), a specific ecosystem type (Ramsar Convention) and a group of migratory species (CMS). In addition there were various regional conventions on the conservation of nature and natural resources, some more comprehensive than others. Even taken together, these international conventions could not ensure global conservation of biological diversity.

Several aspects and facets of biodiversity were not yet addressed in a legally binding instrument, i.e. genetic resources, safety of activities related to modified living organisms, mechanisms for technology transfer, including biotechnology and mechanisms to provide funds to developing countries to help them in conserving their biodiversity.

Furthermore, there was a need to address the conservation of biological diversity, taking into account the developmental perspective. The concept of sustainable development had to be incorporated in the regimes for the conservation of biological diversity.

These factors have stressed the necessity to develop a global regime for protecting biological diversity.

NEGOTIATING PROCESS[1]

Following recommendations from its General Assemblies, in particular in 1984 and 1987, the World Conservation Union (IUCN) had been exploring the possibilities for a treaty on biological diversity and from 1984 to 1989 had prepared successive draft articles for inclusion in a treaty.

In 1987, the UNEP Governing Council recognized the need to increase and streamline international efforts to protect biological diversity. It therefore established an *ad hoc* working group to investigate "the desirability and possible form of an umbrella convention to rationalize current activities in this field, and to address other areas which might fall under such a convention."[2]

It soon became clear that the concept of an umbrella convention which would absorb or consolidate the existing conventions was legally and technically impossible. By early 1990 the *ad hoc* working group had reached a consensus that a new global treaty on biological diversity was urgently needed in the form of a framework treaty, building upon existing conventions.

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1 Lyle Glowka *et al.*, A Guide to the Convention on Biological Diversity, (Gland and Cambridge: IUCN-The World Conservation Union, 1994).

2 See: UNEP Governing Council Decision 14/26 (1987).

In the discussions on the scope of the Convention, it rapidly became apparent that many States were not prepared to consider only the conservation aspects in the strict sense. Some States also were not prepared to limit the discussion to wild resources. The scope for the Convention was gradually broadened to include all aspects and facets of biodiversity, namely: *in-situ* and *ex-situ* conservation of wild and domestic species, sustainable use of biological resources, access to genetic resources and to relevant technology, including biotechnology, access to benefits derived from such technology, safety of activities related to modified living organisms, and provision of new and additional financial support.

With the draft articles developed by IUCN, and the later ones developed by the Food and Agriculture Organization of the United Nations (FAO) before them for consideration, as well as a number of studies commissioned by UNEP, the working group prepared a large number of elements for possible inclusion in a global treaty on biological diversity. The UNEP Secretariat, assisted by a small group of legal experts, then prepared a first draft of the convention based on all the "elements" that had been produced thus far.

The formal negotiation process started in February 1991, when the group was renamed the Intergovernmental Negotiating Committee for a Convention on Biological Diversity (INC).

The main issues were divided between two working groups for discussion article by article. Working Group I dealt with general issues, such as fundamental principles, general obligations, measures for *in-situ* and *ex-situ* conservation and the relationship with other legal instruments. Working Group II dealt with issues of access to genetic resources and relevant technologies, technology transfer, technical assistance, financial mechanisms and international cooperation. Progress was slow and negotiation difficult, especially the final negotiating sessions. The final text was adopted on 22 May 1992. In spite of the tensions in the negotiation, the number of signatures to the Convention in Rio de Janeiro on 5 June 1992 was unprecedented. The Convention on the Conservation of Biological Diversity[3] entered into force only 18 months later, on 29 December 1993.

Major Components of the Convention on Biological Diversity

Objectives

The Convention's objectives are "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources" (Art 1).

The Convention on Biological Diversity is the first global comprehensive agreement to address all aspects of biological diversity:[4] genetic resources, species, and ecosystems. Its objectives are to be achieved through appropriate access to genetic resources, appropriate transfer of technologies, and appropriate funding (Art 1). To this end, the Convention:

- sets forth the concepts which underlie the whole regime established by the Convention: **national sovereignty** (Preamble, Arts 3 and 15, para 1) and **common concern of humankind** (Preamble);
- contains a series of far-reaching obligations related to the conservation of biological diversity and the sustainable use of its components, including:
  - general measures for conservation and sustainable use (Art 6);
  - identification and monitoring (Art 7);
  - *in-situ* conservation (Art 8) and *ex-situ* conservation (Art 9);
  - sustainable use of components of biological diversity (Art 10);

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3 31 ILM (1992) 818.

4 **The Convention defines "biological diversity" to include "the variability among living organisms from all sources including, among other things, 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" (Art 2).**

- specific measures, such as impact assessment (Art 14) incentive measures (Art 11), research and training (Art 12), public education and awareness (Art 13);

- sets up regimes regarding access to genetic resources (Art 15), access to and transfer of technology, including biotechnology (Art 16), and equitable sharing of benefits resulting from the use of genetic material (Art 19, para 2);
- gives considerations to biosafety, i.e. the safe transfer, handling and use of living modified organisms resulting from biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, including the possible development of a protocol on biosafety (Art 19, para 3), and the provision of available information on living modified organisms (Art 19, para 4);
- promotes international cooperation (Art 5; Art 12(c); Art 13(b); Art 17 and Art 18); and
- establishes financial mechanisms for its effective implementation (Articles 20 and 21), and identifies the Global Environment Facility as an Interim Financial Mechanism (Art 39).

Indigenous and Local Communities

The Preamble of the Convention recognizes the close and traditional dependence of many indigenous and local communities on biological resources and the desirability that these communities receive benefits when techniques and knowledge from their traditional practices become more widely used. This is also stressed in Article 8(j) which calls for the respect, preservation and maintenance of the knowledge, innovations and practices of these communities. Article 10, para (c) further requires States to protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.

"National sovereignty" and "common concern of humankind"

The sovereign rights of States over their natural resources are referred to in the Convention not only in the Preamble, but also in Articles 3 and 10(1).

In the Preamble which reflects the background of the Convention, it is stated:

> *Reaffirming that States have sovereign rights over their own biological resources.*

Article 3 reproduces *verbatim* Principle 21 of the Declaration of the United Nations Conference on the Human Environment, Stockholm, 1972, which also recognizes that all states have, in accordance with both the Charter of the United Nations and the principles of international law,[5] the sovereign right to exploit their own resources pursuant to their own environmental policies. Article 3 also states that States have a responsibility to ensure that activities within their jurisdiction or control do not cause environmental damage to the environment of other States or of areas beyond the limits of national jurisdiction. It may be noted that Article 3 is also identical to Principle 3 of the Rio Declaration except for the inclusion in that principle of the words "and developmental" after "environmental".

Article 15(1) also recalls the sovereign rights of States over their natural resources as a basis for the authority to determine access to genetic resources. This emphasis on national sovereignty is balanced by the duties deriving from the fact that the conservation is a common concern to the entire international community as stated in the third recital of the Preamble:

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5 See: United Nations General Assembly Resolution 1803 (XVII) Permanent sovereignty over natural resources. In this Resolution, the UN General Assembly declares that:

> "1. The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their natural development and of the well-being of the people of the State concerned."
>
> [...]
>
> 5. The free and beneficial exercise of the sovereignty of peoples and nations over their natural resources must be furthered by the mutual respect of States based on their sovereign equality"

Affirming that the conservation of biological diversity is a common concern of humankind.

As such, although States have sovereign rights over their own biological resources, they are responsible for conserving their biodiversity and for using the biological resources constituting this biodiversity in a sustainable manner, as developed in Article 6 (General Measures for Conservation and Sustainable Use), Article 8 (*In-situ* Conservation), and Article 10 (Sustainable Use of Components of Biological Diversity).

Conservation of biodiversity and sustainable use of its components

IN-SITU AND EX-SITU CONSERVATION

The Convention creates provisions dealing with *in-situ* and *ex-situ* conservation. *In-situ* conservation which is given a prime role in the convention,[6] is the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings (Art 2). It also extends to domesticated or cultivated species in the surroundings where they have developed their distinctive properties (Art 2).

Contracting parties are required to meet, as far as possible and as appropriate, 13 goals for in-situ conservation (Art 8). These include:

- the establishment of a system of protected areas;
- the development of guidelines for the selection, establishment and management of protected areas;
- the regulation and management of biological resources;
- the promotion of the protection of ecosystems, natural habitats, and maintenance of viable populations of species in natural surroundings;
- the promotion of environmentally sound and sustainable development in areas adjacent to protected areas;
- the rehabilitation and restoration of degraded ecosystems;
- the management and control of the risks associated with the release of living modified organisms resulting from biotechnology (biosafety);
- the control or eradication of alien species which threaten ecosystems, habitats or species;
- the preservation and maintenance of knowledge, innovations and practices of indigenous and local communities relevant for the conservation of and sustainable use of biological diversity; and
- the development or maintenance of necessary legislation to protect threatened species and populations (Art 8).

Ex-situ conservation is the conservation of components of biological diversity outside their natural habitats (Art 2). Contracting parties have the obligation, as far as possible, to implement *ex-situ* conservation measures predominantly for the purpose of complementing *in-situ* measures (Art 9). These obligations include:

- the adoption of measures for *ex-situ* conservation of components of biological diversity;
- creation of facilities for *ex-situ* conservation of and research on plants, animals and micro-organisms;
- the adoption of measures for the recovery and rehabilitation of threatened species; and
- the regulation and management of collections of biological resources from natural habitats for *ex-situ* conservation purposes.

SUSTAINABLE USE OF COMPONENTS OF BIOLOGICAL DIVERSITY

A major area of concern for states when negotiating this Convention was the issue of sustainable development. This was a concept which not only was to apply to development of resources generally but specifically to components of

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6 **"Noting further that the fundamental requirement for the conservation of biological diversity is the in-situ conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings" (Preamble tenth recital).**

biological diversity. The Convention seeks to ensure sustainable use of components of biological diversity through a number of measures.

Provision is made for integrating the consideration of conservation and sustainable use of biological resources into national decision-making and the adoption of measures which avoid or minimize adverse impacts on biological diversity (Art 10, para (a) and (b)). Protection and encouragement are also to be given to the use of biological resources in accordance with traditional cultural practices that are comparable either as conservation or sustainable use requirements (Art 10, para (c)).

Local populations are to be supported in the development and implementation of remedial action in degraded areas where biological diversity has been reduced (Art 10, para (d)). Cooperation is also to be encouraged between governmental authorities and the private sector in developing methods for sustainable use of biological resources (Art 10, para (e)).

Access to Genetic Resources, Access to and Transfer of Technology, Including an Equitable Share of Benefits Resulting From the Use of Genetic Material

Access to genetic resources

A major question during the negotiation of the Convention was the question of access to and use of genetic resources. "Genetic resources" are defined to include genetic material, including materials of plant, animal, microbial or other origin containing functional units of heredity, of actual or potential value (Art 2). However, it extends only to genetic resources which are provided by Contracting Parties that are the countries of origin of such resources, or by parties that have acquired the genetic resources in accordance with the terms of the Convention (Art 15, para (3) and Art 16).

In dealing with this issue, the Convention recognizes that States have the sovereign right and authority to determine access to their genetic resources (Art 15, para (1)). Nevertheless, Contracting Parties are to create conditions so as to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties (Art 15, para(2)). When access is granted to certain genetic resources, it is to be on mutually agreed terms and subject to the prior informed consent of the Party providing the resources (Art 15, para (4) and (5)).

Access to and transfer of technology

Another major issue with which the Convention seeks to deal is the question of access to and transfer of technology which, in the context of the Convention, also includes biotechnology (Art 2). This is considered to be important for the attainment of the objectives of the Convention.

The Contracting Parties undertake to provide access to and to facilitate the transfer to other Parties of technologies that are relevant to the attainment of conservation and sustainable use of biological diversity (Art 16(1)). Special provisions are made for developing countries, which are to be provided with access to such technology on fair and most favourable terms. However, existing patents and other intellectual property rights are to be respected (Art 16, para (2)).

In return for access to genetic resources, the Convention provides that developing countries are to be provided with access to and transfer of technology which makes use of those resources, on mutually agreed terms (Art 16, para (3).

The Contracting Parties are to take legislative, administrative and policy measures so that the private sector facilitates access to, joint development of and transfer of technology for the benefit of the governmental institutions and the private sector of developing countries (Art 16, para (4)).

Equitable share of benefits resulting from the use of genetic material

The Convention also seeks to ensure equitable access to the results of research, development and benefits flowing from the access to genetic resources. Appropriate legislative, administrative and policy measures are to be created and, where appropriate, financial mechanisms (see Arts 20 and 21), so as to share, in a fair and equitable way, the results of research and development and benefits arising from commercial and other utilization of genetic resources with the Contacting Party providing those resources. Such access shall be on mutually agreed terms. In other words, the benefits of commercial and other use are to be shared equitably between the user and the provider of genetic resources (Art 15, para (7) and Art 19, para 2).

International cooperation

Given the ranging nature of the Convention, there are a number of provisions which seek to deal with implementation through international cooperation. As such, provisions are made for international cooperation in the field of research and training, particularly taking note of the needs of developing countries (Art 12, para (a)), and public education and awareness (Art 13, para (b)).

As a means of further enhancing cooperation between States, there are also provisions dealing with the exchange of information relevant to conservation and sustainable use of biological diversity (Art 17) and improved international technical and scientific cooperation (Art 18).

Financial resources and mechanisms

The Convention has some important financial implications and deals with this in some detail. Financial support is to be provided to national activities which are intended to achieve the objectives of the Convention, subject to the capabilities of each Contracting Party (Art 20, para (1)).

Developed country Parties are also to provide financial resources to developing countries to enable them to meet the costs of implementing the terms of the Convention (Art 20, para (2)). A commitment is also given to the development of financial mechanisms to support these goals (Art 21).

The Global Environment Facility (GEF) was identified by Article 39 as the interim financial mechanism for the period between the entry into force of the Convention (29 December 1993) and the first meeting of the Conference of the Parties (28 November-9 December 1994). The Conference of the Parties (CoP) at its first meeting decided that GEF shall continue to serve as the institutional structure to operate the financial mechanism under the Convention on an interim basis, in accordance with Article 39.

In order to guide the GEF in its operation of the financial mechanism, the first meeting of the CoP also determined the policy, strategy, programme priorities and eligibility criteria for access to and utilization of financial resources, namely:

- The GEF should allocate resources to projects that are endorsed and promoted by eligible Parties. The projects should contribute to build cooperation at the sub-regional, regional and international levels in the implementation of the Convention, and to promote utilization of local and regional expertise; and
- Thirteen programme priorities[7] give direction to the GEF. They are flexible to accommodate national priorities and regional needs within the aims of the Convention.

Only developing country Parties are eligible to receive funding. Projects that seek to meet the objectives of the Convention are eligible for financial support from the GEF.

Additional guidance to GEF in the provision of financial resources was given by CoP 3 in its decision III.5.

During its pilot phase, from 1991 to the end of 1994, the GEF endorsed 115 projects, involving a total commitment of $733.35 million from the core fund. Of the spent resources 46 per cent was used to fund 57 projects in the area of biological diversity. Among these projects, were:

- **global projects**, including, among other things, the Global Biodiversity Assessment and support for the preparation of Biodiversity Country Studies;
- **regional projects**, including, among other things, the Institutional Support to Protect East African Biodiversity, the South Pacific Biodiversity Conservation Programme, and the Regional Strategies for the Conservation and Sustainable Management of Natural Resources in the Amazon; and
- **country projects**, ranging from the Trust Fund for Parks and Protected Areas in Peru, to the Red Sea Coastal and Marine Resource Management in Egypt, to the Conservation Training and Biodiversity Action Plan in Vietnam.

At the end of the pilot phase, the GEF was restructured. The new restructured GEF was designed to distribute US$2 billion for a period of three years (1995-1997), for its four focal areas, i.e., biological diversity, climate change, the ozone layer and international waters.

Bodies Established Under the Convention on Biological Diversity

In order to facilitate the implementation of the objectives of the Convention on Biological Diversity, several bodies have been established under the Convention. They include the Conference of the Parties, the Subsidiary Body on Scientific, Technical and Technological Advice and the Secretariat.

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7 In its decision on Financial Resources and Mechanism, the first meeting of the Conferences of the Parties identified the following programme priorities:

- Projects and programmes that have national priority status and that fulfil the obligations of the Convention;
- Development of integrated national strategies, plans or programmes for the conservation of biological diversity and sustainable use of its components in accordance with article 6 of the Convention;
- Strengthening conservation, management and sustainable use of ecosystems and habitats identified by national Governments in accordance with Article 7 of the Convention;
- Identification and monitoring of wild and domesticated biodiversity components, in particular those under threat, and implementation of measures for their conservation and sustainable use;
- Capacity-building, including human resources development and institutional development and/or strengthening, to facilitate the preparation and/or implementation of national strategies, plans for priority programmes and activities for conservation of biological diversity and sustainable use of its components;
- In accordance with Article 16 of the Convention, and to meet the objectives of conservation of biological diversity and sustainable use of its components, projects which promote access to, transfer of and cooperation for joint development of technology.
- Projects that promote the sustainability of project benefits; that offer a potential contribution to experience in the conservation of biological diversity and sustainable use of its components which may have application elsewhere; and that encourage scientific excellence;
- Activities that provide access to other international, national and/or private sector funds and scientific and technical cooperation;
- Innovative measures, including in the field of economic incentives, aiming at conservation of biological diversity and/or sustainable use of its components, including those which assist developing countries to address situations where opportunity costs are incurred by local communities and to identify ways and means by which these can be compensated, in accordance with Article 11 of the Convention;
- Projects that strengthen the involvement of local and indigenous people in the conservation of biological diversity and sustainable use of its components;
- Projects that promote the conservation and sustainable use of biological diversity of coastal and marine resources under threat. Also, projects which promote the conservation of biological diversity and sustainable use of its components in other environmentally vulnerable areas such as arid and semi-arid and mountainous areas;
- Projects that promote the conservation and/or sustainable use of endemic species;
- Projects aimed at the conservation of biological diversity and sustainable use of its components which integrate social dimensions, including those related to poverty.

Conference of the Parties (CoP): The CoP is the decision making body of the Convention. One of its major tasks is to review implementation of the Convention (Art 23).

Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA): SBSTTA has been established to provide scientific and technical assessments of the status of biological diversity and the effect of measures taken in accordance with the Convention, identify appropriate technologies and know-how, provide scientific advice on scientific programmes and international cooperation in research and development, and respond to questions arising from the CoP (Art 25).

Secretariat: A Secretariat provides administrative support to the Convention. Its functions include providing services for meetings of the Conference of Parties (CoP), reporting to the CoP on the execution of its functions, coordination with other relevant international bodies, and any other functions assigned to it by any protocol or by the CoP (Art 24). An Interim Secretariat had been established under the auspices of UNEP (Art 40). At its first meeting, the CoP designated the United Nations Environment Programme to carry out the functions of the Secretariat of the Convention while ensuring its autonomy to discharge the functions referred to in Article 24. The Secretariat is based in Montreal, Canada.

Costs and Benefits of Becoming a Party

The Convention on Biological Diversity is a landmark in the environment and development field. It is the first time that a treaty takes a comprehensive rather than a sectoral approach to the conservation of the world's biodiversity and the sustainable use of its components. It aims at conserving biodiversity while ensuring sustainable use of biological resources which are of paramount importance for developing countries in achieving development and for developed countries in their scientific research programmes. Indeed, the Convention encompasses not only the conservation of biodiversity *per se* and the sustainable use of its components, but also access to genetic resources, the access to technology, and the sharing of the benefits arising from the use of genetic material.

Due to its wide scope, the Convention can be described as a framework agreement. It provides overall policies for the achievement of its objectives and leaves up to individual Parties to determine how most of its provisions are to be implemented. Furthermore, in order to assist parties in the process of implementation, the Convention laid down the basis for increased partnership between developed and developing countries:

- new and additional financial resources shall be provided by developed country Parties to enable developing country Parties to meet the agreed full incremental costs[8] of implementing measures which fulfil the obligations of the Conventions (Art 20);
- each Party shall create conditions to facilitate access to genetic resources for environmentally sound uses (Art 15);
- results of research and development and the benefits arising from the commercial and other utilization of genetic resources shall be shared in a fair and equitable way with the Party providing such resources upon mutually agreed terms (Art 15); and
- access to and transfer of technology to developing countries shall be provided and/or facilitated under fair and most favourable terms while consistent with the adequate and effective protection of intellectual property rights (Art.16).

Measures to be Taken by the Parties

Contracting parties are individually to take appropriate measures to implement the Convention according to their own particular conditions and capabilities. In particular, States are required to:

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8 **The full incremental costs to be covered in each case must be agreed between the developing country concerned and the institutional structure designated by the Conference of the Parties to operate the financial mechanism, the GEF. Such agreement has to be concluded based on the policy, strategy, programme priorities and eligibility criteria established by the Conference of the Parties (see above section on Financial Mechanism).**

- develop, or adapt, existing strategies, plans or programmes for the conservation and sustainable use of biological diversity in accordance with the Convention;
- ensure *in-situ* and *ex-situ* conservation and sustainable use of biological resources in accordance with Articles 7 to 14;
- facilitate access to genetic resources in the terms provided in Article 15;
- take measures to provide access to and transfer of technologies, in particular to developing countries which provide genetic resources (Art 16);
- cooperate with other Contracting Parties or through relevant international organizations for conservation and sustainable use of biological resources (Art 5), particularly regarding the use of scientific advances in biological diversity research (Art 12(c)), the development of educational and public awareness programmes (Art 13(b)), the exchange of relevant information (Art 17) and technical and scientific cooperation (Art 18);
- provide financial support and incentives in respect of national activities which are intended to achieve the objectives of the Convention (Art 20(1)), and developed country Parties are, furthermore, requested to provide new and additional financial resources to enable developing country Parties to meet agreed full incremental costs in implementing the Convention (Art 20(2) to(7)); and
- present to the Conference of Parties reports on measures taken for the implementation of the provisions of the Convention.

Exercises on the Convention on Biological Diversity

Rationale for international action

1. What was the rationale for developing the Convention on Biological Diversity?
2. Prior to the Convention on Biological Diversity, what other international instruments existed to protect biological diversit?

Major components of the Convention on Biological Diversity

3. Rewrite the objectives of the Convention on Biological Diversity in your own words (Art 1).
4. Rewrite the definition of 'Biological Diversity' in your own words. (Art 1)
5. What is the distinction in the Convention on Biological Diversity between "biological diversity" and "biological resources"? (Art 2)
6. Article 3 of the Convention on Biological Diversity restates the right of States to be able to exploit their own natural resources. How does this conflict with the objectives of the Convention found in Article 1? (Arts 1 AND 3)
7. Does the Convention on Biological Diversity make any attempt to balance the sovereign right of States to exploit their resources with the obligation to protect and conserve Biological Diversity? (Arts 3, 5, 6 AND 10)
8. To what extent does the Convention on Biological Diversity apply to areas beyond national jurisdiction? (Arts 1, 3 AND 4)
9. Is the identification and monitoring of components of biological diversity integral to the success of the Convention on Biological Diversity? (Art 7)
10. Why is it important to distinguish between *in-situ* and *ex-situ* conservation? (Arts 8 and 9)
11. Are contracting parties to the Convention on Biological Diversity required to rehabilitate degraded ecosystems? (Art 8)
12. What distinctions does the Convention on Biological Diversity make between the obligations upon states in regard to *in-situ* conservation and *ex-situ* conservation? (Arts 8 and 9)

13. What provisions are included in the Convention on Biological Diversity dealing with impact assessment? (Art 14)

14. What provision does the Convention on Biological Diversity make in relation to the rights and role of indigenous and local communities (Preamble and Arts 1, 4, 8(j), 10(c) and (d), 15 and 16)

15. What provision does the Convention on Biological Diversity make in relation to the role of women? (Preamble)

16. How do the provisions in the Convention on Biological Diversity dealing with access to genetic resources deal with the sovereign right of states over such resources? (Arts 3 and 15)

17. How does the Convention on Biological Diversity deal with access to genetic resources? (Art 15)

18. The Convention on Biological Diversity has detailed provisions dealing with the access to and transfer of technology. Why was it important to have such provisions included in the convention? (Arts 15 and 16)

19. What provisions exist under the Convention on Biological Diversity for the making of financial grants to developing country parties? (Arts 20 and 21)

20. How does the Convention on Biological Diversity cater for developing countries which are environmentally vulnerable? (Art 20 (7)

21. The Convention on Biological Diversity provides a mechanism for access to and transfer of technology. Do these provisions make any allowance for existing patent and other intellectual property rights? (Art 16)

22. What distinction is there in the Convention on Biological Diversity between the role of the conference of parties and that of the secretariat? (Arts 23 and 24)

23. What role is envisaged under the Convention on Biological Diversity for subsidiary bodies giving scientific and technical advice? (Art 25)

Costs and benefits of becoming a Party

24. What are the costs and benefits of becoming a party to the Convention on Biological Diversity?

Measures to be taken by the Parties

25. What obligations are placed upon the parties to the Convention on Biological Diversity to submit reports dealing with their implementation of the convention? (Art 26)

26. What specific obligations does the Convention on Biological Diversity impose on developed country parties in regard to financial assistance for developing country parties? (Preamble and arts 20 and 21)

27. What obligations does the Convention on Biological Diversity impose on contracting parties with respect to the use and releases of living modified organisms resulting from biotechnology? (Arts 8(g) and 19(3))

28. What obligations exist upon the contracting parties to the Convention on Biological Diversity to take into account the needs of least developed countries and small island states, and states that are most environmentally vulnerable? (Preamble and arts 20(5), (6) and (7)

29. What is the extent of the obligations imposed upon contracting parties to the Convention on Biological Diversity in regard to activities within their national jurisdiction? (Arts 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15)

30. What obligations does the Convention on Biological Diversity impose on contracting parties with respect to alien species which threaten ecosystems, habitats or species? (Art 8 (h))

31. Are there any obligations upon contracting parties to the Convention on Biological Diversity to develop national strategies and legal mechanisms for the conservation and sustainable use of biological diversity? What are they? (Arts 6, 8, 9, 10, 11, 15 and 16)

32. The Convention on Biological Diversity requires contracting parties to "as far as possible and as appropriate" implement measures for *in-situ* conservation and *ex-situ* conservation. Is this requirement a hard law objective, or does it allow for considerable variation between the approaches taken by differing states? (Arts 2, 8, 9)

33. Article 9 of the Convention on Biological Diversity requires contracting parties to adopt measures for the *ex-situ* conservation of components of biological diversity, preferably in the country of origin. What implications does this have for state sovereignty? (Arts 3 and 9)

Relationship with other instruments

34. The Convention on Biological Diversity has the potential to overlap with a number of other international conventions dealing with species and habitat protection. What allowance is made for this potential under the convention and what relationship will exist between the various conventions? Give examples (Art 22)

35. What relationship, if any, exists between CITES, CMS and the Convention on Biological Diversity?

Discussion points for small groups

36. Does the focus by CITES on controlling the international trade in endangered species represent a concession that other more traditional means of protecting species are difficult to implement, or does it rather indicate how imposing regulations on trade activities can be more successful?

37. What are some of the necessary factors which will be required to ensure that an 'agreement reached under CMS will be successful?

38. Whales are a migratory species and some species of whale are considered to be endangered. How is it possible to reconcile the relationship which exists between CITES, CMS and the international convention for the regulation of whaling?

39. The Convention on Biological Diversity attempts to define the term 'biological diversity'. Is this definition adequate? Could it be expanded?

40. Why is the Convention on Biological Diversity primarily a framework instrument and not one which seeks to create hard legal obligations? Is the type of legal instrument adopted in this instance a reflection of the subject matter which the negotiators were dealing with, or does it reflect the inability of international law to be able to deal with such issues?

41. How will the Convention on Biological Diversity relate to other existing international instruments which protect aspects of biodiversity? Will it take precedence or operate so as to complement those already existing instruments?

42. The Convention on Biological Diversity provides in article 3 that states have the "sovereign right to exploit their own resources pursuant to their own environmental policies." does this imply that there is a right of development and exploitation of living natural resources and that the convention does not impose an absolute obligation of protection? How is it possible to develop this right against the obligation the convention imposes upon states to protect biodiversity?

43. Article 15 of the Convention on Biological Diversity deals specifically with the issue of access to genetic resources. How important is it to the protection of biodiversity that access to and use of genetic resources be adequately regulated? Why does the convention attempt to create a regime allowing for access to genetic resources by other contracting parties to the convention?

Case studies

44. The sugar toad is primarily found in state A where it is a protected species. State B adjoins state A. State B has developed an extensive canal system for transportation. The sugar toad, while not a native of state B, has thrived in these conditions to such an extent that it is now considered to be a pest and a program of eradication has commenced. Consider the obligations of both state A and state B under the Convention on Biological Diversity with respect to the sugar toad.

45. Vulpinia is a state located in Africa. It has a large and diverse collection of a variety of fauna and flora spread across a variety of ecosystems (wetlands, grasslands, mountains, coastal areas). Vulpinia also has extensive mineral reserves. Following the discovery of a new coal deposit adjacent to sensitive wetlands, the Vulpinian government must decide whether to allow the development to proceed. It has been argued that while destruction of the wetlands would undoubtedly be a loss, there are other fine examples of wetlands within Vulpinia which will still remain. Scientists have proposed that much of the large fauna found in the wetlands area can also be relocated.

    Consider the legal issues which arise from this case in light of Vulpinia's recent accession to the Convention on Biological Diversity. Does the convention force Vulpinia to halt the development, or are their alternative mechanisms which can be applied?

Multiple choice questions

46. Under the terms of the Convention on Biological Diversity, states have an obligation to conserve biological diversity:

    a) through *in-situ* conservation;
    b) beyond areas of national jurisdiction;
    c) within the country of origin of components of biological diversity;
    d) all of the above.

47. Under the Convention on Biological Diversity, parties can only gain access to genetic resources:

    a) which are within their own national jurisdiction;
    b) which have been acquired in accordance with the convention;
    c) in accordance with the national legislation of the state within which the resources are found;
    d) all of the above.

B. CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS (CMS or Bonn Convention)

Rationale for International Action

Animal migration is a global phenomenon. It refers to the periodic movements of animals from one area to another, often in a cyclical and predictable manner. There is a wide variety of animals, inhabiting land, sea and air, which migrate: for example antelopes, dolphins, marine turtles, bats and many species of birds.

Many animals migrate in response to biological requirements, such as the need to find a suitable location for breeding and for raising young, and to find favourable areas in which to feed at other times of the year. In extreme cases, this may require migrating to locations thousands of kilometers apart.

Migration has advantages and disadvantages. It allows a species periodically to exploit resources in areas that would not be suitable for continuous use. However, it means that animals are biologically dependent on the specific sites they find at the end of their journey and along the way. As such, migratory species are especially vulnerable to a wide range of threats, including habitat shrinkage in breeding areas, excessive hunting along migration routes and degradation of feeding grounds.

Migratory species represent a common natural heritage, even more so than indigenous ones. Countries share a common responsibility to undertake co-operative action for their conservation throughout their life-cycle. The need for an international convention to co-ordinate an effective response to these threats was recognized in the early 1970s.

The need for countries to co-operate in the conservation of animals that migrate across national boundaries or between areas of national jurisdiction and the sea was recognized in Recommendation 32 of the 1972 United Nations Conference on the Human Environment. This gave way to the elaboration (creation) of the Bonn Convention which was concluded in 1979 and came into force on 1 November 1983. Since then, its membership has broadened considerably to 50 Parties as of 31 May 1997 from five geographic regions: Africa (17), America and the Caribbean (5), Asia (5), Europe (21) and Oceania (2). A number of other countries will join in the near future.

Major Components of CMS

CMS aims to conserve migratory[1] (avian, marine and terrestrial) species over the whole of their range.

The Convention provides a framework within which Parties may act to conserve migratory species and their habitats by:

1. adopting strict protection measures for migratory species that have been categorized as being in danger of extinction throughout all or a significant proportion of their range (listed in Appendix I of the Convention);
2. concluding Agreements for the conservation and management of migratory species that have an unfavourable conservation status or would benefit significantly from international co-operation (listed in Appendix II to the Convention); and

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1 Migratory species are defined in the Convention as "the entire population or any separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members **cyclically and predictably cross one or more national jurisdictional boundaries**" (Art. 1, para 1(a)); the word "cyclically" relates to a cycle of any nature, such as astronomical (annual etc.), life or climatic, and of any frequency; the word "predictably" implies that a phenomenon can be anticipated to recur in a given set of circumstances, though not necessarily in time (see Resolution 2.2 of the Conference of the Parties, Geneva 1988).

3 undertaking joint research and monitoring activities.

Appendix I: Endangered migratory species

Appendix I lists migratory species which, according to the best scientific evidence available, are endangered[2]. Appendix I currently includes more than 50 species, *inter alia*: the Siberian crane, White-tailed eagle, Hawksbill turtle, Mediterranean monk seal and Dama gazelle.

Additional migratory species can be listed on Appendix I if a Party considers that they are endangered and submits a proposal which meets the requirements of Resolution 1.5 (Bonn, 1985). The supporting statement for the proposal must include specific information concerning taxonomy, biological data, threat data, protection status and needs, Range States, comments from Range States and references. The Conference of the Parties would then decide whether to adopt the listing in accordance with Art. XI.

Migratory species can be removed from Appendix I when the Conference of the Parties determines that[3]

- reliable evidence, including the best scientific evidence available, indicates that the species is no longer endangered; and
- the species is not likely to become endangered again because of loss of protection due to its removal from Appendix I.

Range States (i.e. those states that exercise jurisdiction over any part of the range of a particular migratory species) are obliged to[4]:

- prohibit the taking (i.e. hunting, fishing, capturing, harassing and deliberate killing[5]) of animals of Appendix I species, with few exceptions[6]; and
- endeavour to conserve and restore important habitats of Appendix I species, to counteract factors impeding their migration and to control other factors that might endanger them.

Appendix II: Migratory species to be the subject of Agreements

CMS provides for the development of specialized regional Agreements for individual species or, more often, for a group of species listed at Appendix II. In this respect, CMS is a framework Convention since it provides for separate internationally legally binding instruments between Range States[7] of certain migratory species or groups of species. Parties to such Agreements do not have to be Parties to the parent Convention.[8]

Appendix II lists migratory species which (1) have an unfavourable conservation status[9] that require international Agreements for their conservation and management, and (2) have a conservation status which would significantly benefit from the international co-operation deriving from an international Agreement.[10] Parties within whose territory such migratory species occur shall endeavour to conclude "AGREEMENTS" pursuant to Art. IV, para 3 or "agreements" persuant to Art.IV, para 4.[11]

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2 Art. III, para 2)

3 Art.III, para 3

4 Art. III, para 4)

5 Art. I, para 1 (i)

6 Art. III, para 5

7 defined in Art. I, para 1 (h) of the Convention

8 Art.V, para 2

9 Conservation status refers to all the influences upon a migratory species affecting its long-term distribution (Art.1, para.1 (b)).

10 Art IV, para 1

11 The writing "Agreement" with a capital "A" refers to both AGREEMENT and agreement

Agreements can range from legally binding multilateral treaties to less formal memoranda of understanding. The object of such Agreements is to restore the migratory species to a favourable conservation status or to maintain it at that status.[12] If the circumstances are warranted, a migratory species can be listed both in Appendix I and Appendix II (Art. IV, para 2).

"AGREEMENTS" (ART. IV, PARA 3; ART. V)

The more formal and comprehensive AGREEMENT should, *inter alia*:[13]

- deal preferably with more than one species (para 3),
- cover the whole of the range of the species concerned (para 2),
- include all necessary instruments to make the AGREEMENT operational and effective (para. 4 and 5). In substance, AGREEMENTS should provide for:

  (i) co-ordinated species conservation and management plans;
  (ii) conservation and restoration of habitats;
  (iii) control of factors impeding migration;
  (iv) co-operative research and monitoring; and
  (v) exchange of information and public education.

"agreements" (ART. IV, PARA 4)

The Convention also provides for agreements for the conservation of any population or geographically separate part of the population of any species of wild animals which periodically cross jurisdictional boundaries (Art. IV, para 4). This flexibility provides for the development and conclusion of targeted treaties which can be the most effective instrument for the conservation and management of certain species or groups of species. Under this category of "agreement", the geographic coverage does not have to extend to the whole of the migration range of the species concerned, nor does the species have to be listed in Appendix II of the Convention; the species does not even have to fall within the narrow definition of "migratory".

For more information about the interpretation of agreements and AGREEMENTS see Resolutions 2.6 and 3.5 of the Conference of the Parties (Geneva, 1988 and 1991).

MEMORANDA OF UNDERSTANDING

CMS also provides for alternative, legally less binding international instruments to achieve objectives similar to those of Agreements. A typical example is a "Memorandum of Understanding" (MOU). This may be converted into a more formal Agreement if the members agree, or incorporated as an Action (or Conservation) Plan in a broader and more comprehensive Agreement. The aim of a MOU is to co-ordinate short-term measures to be taken by the Range States at the administrative and scientific levels, in some cases on the basis of already existing commitments. This allows for the conclusion of a MOU between the Ministries of the Range States concerned (which avoids lengthy ratification procedures) with a view to initiating immediate concerted protection measures for seriously endangered species until a more elaborate conservation strategy can be prepared and adopted. A MOU describes the actions to be taken collectively and more specific measures to be implemented in each country. MOUs are specifically based on Resolution 2.6 (Geneva, 1988), paragraph 3, and for the time being are directed towards immediate protection measures for endangered species.

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12 Art.V, para 1

13 (Art.V)

Seven Agreements have already been concluded regarding species listed in Appendix II. They are:

1. Agreement on the Conservation of Seals in the Wadden Sea, 1990

Denmark, Germany and the Netherlands concluded an agreement on the conservation of Wadden Sea seals (*Phoca vitulina*) in October 1990, which entered into force a year later.

It provides for the development of a conservation and management plan, co-ordination of research and monitoring, prohibition of taking (with few exceptions), habitat protection, reduction of pollution and public awareness initiatives. The conservation and management plan outlines in simple terms the specific efforts that are needed to implement various aspects of the agreement, indicates what is presently being done, and outlines specific prescriptions to be undertaken by the Parties.

The agreement was concluded in response to a dramatic decline in the Wadden Sea seal population, as a consequence of the sudden death of thousands of individuals in 1988. So far, the agreement has shown encouraging results. Co-ordination and cooperation among the Range States has intensified considerably through the implementation mechanisms of the agreement. According to the Wadden Sea Secretariat, the seal population has since recovered and has re-established itself at a stable level.[14]

2. Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas, 1991 (ASCOBANS)

This agreement was prepared by the CMS Secretariat originally in 1986-87 with expert advice from various sources, including members of a Scientific Council working group. It was finally concluded as an Article IV(4) agreement in September 1991. The agreement opened for signature in March 1992 and it entered into force on 29 March 1994. Belgium, Denmark, Germany, the Netherlands, Poland, Sweden and the United Kingdom are Parties to the agreement. The United Kingdom presently hosts the agreement secretariat[15], which became operational on a provisional basis in June 1992, and was formally established at the first session of the Meeting of Parties in September 1994.

The agreement encourages co-operation among Range States with respect to habitat conservation and management, measures against pollution, surveys and research, and public information. The Advisory Committee, established by the first Meeting of the Parties, has already stimulated international co-operation within and national implementation of a joint research programme. The assessment of the population and distribution of small cetaceans in the North Sea and western Baltic Sea, as well as research, monitoring and awareness programmes in individual Range States have been effected. By-catch in fishing nets, considered to be one of the greatest threats facing small cetaceans in the agreement area and the reduction of disturbance to cetaceans by human activities are among the items emphasised by the Advisory Committee.

The Government of Sweden hosted the first session of the Meeting of the Parties in Stockholm in September 1994. The Government of Germany has offered to host the second session of the Meeting of the Parties in Bonn in November 1997.

3. AGREEMENT on the Conservation of Bats in Europe, 1991 (EUROBATS)

This AGREEMENT was concluded in September 1991 in association with the third meeting of the Conference of the Parties to CMS. It opened for signature in December 1991 and entered into force on 16 January 1994. To date, thirteen Range States – the Czech Republic, Denmark, France, Germany, Hungary, Ireland, Luxem-

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14 More detailed information can be received from the Common Secretariat for the Cooperation on the Protection of the Wadden Sea. Mr. Jens Enemark, Virchowstr, 1, D-26382 Wilhelmshaven, Tel. (49 4421) 410 55, Fax (49 4421) 44 766

15 ASCOBANS Secretariat, Sea Mammals Research Unit, c/o British Antarctic Survey, Cambridge, U.K. Tel/Fax: (+441223) 30 12 82

bourg, the Netherlands, Norway, Poland, Portugal, Sweden and the United Kingdom – are Parties to the AGREEMENT. Belgium has also signed, but their formal ratification is still pending.

The United Kingdom established an interim secretariat in February 1992 to help promote the AGREEMENT, and the secretariat remained active there until the end of 1995. Following the first session of the Meeting of the Parties in July 1995, hosted by the United Kingdom, the Parties accepted an offer from the Government of Germany to establish a permanent secretariat[16] in co-location with the UNEP/CMS Secretariat in Bonn.

The Advisory Committee met in 1996 and early 1997 and discussed its work programme. It decided, *inter alia*, to emphasise the harmonisation of methodologies and research methods, thus trying to facilitate transboundary research and monitoring. Various international projects will address bat conservation problems. For example, a European handbook of field identification and counting/monitoring bats will be produced. There are research and conservation projects for various species as well as various projects to be implemented in Central and Eastern European countries, including also regions in non-Party Range States.

The second session of the Meeting of Parties is provisionally scheduled to take place in Bonn in October 1998.

4. AGREEMENT on the Conservation of African Eurasian Migratory Waterbirds, 1995 (AEWA)

This AGREEMENT, the largest of its kind developed so far under CMS, was concluded on 16 June 1995, when representatives of over 66 countries met in The Hague, Netherlands. The AEWA covers 172 species of birds ecologically dependent on wetlands for at least part of their annual cycle, including many species of pelicans, storks, flamingoes, ducks and geese. The AGREEMENT concerns 117 countries (plus the European Union) from Europe, parts of Asia and North America, the Middle East and Africa. In fact, the geographic area covered by the AEWA stretches from the northern reaches of Canada and the Russian Federation to the southernmost tip of Africa.

The AGREEMENT provides for co-ordinated and concerted actions to be taken by the Range States throughout the migration systems of the waterbirds to which it applies. Parties to the AGREEMENT are called upon to engage in a wide range of conservation actions which are described in a comprehensive Action Plan. This detailed plan – the product of extensive negotiations and discussions among governments, as well as interested conservation and user groups – addresses such key issues as: species and habitat conservation, management of human activities, research and monitoring, education and information, and implementation.

A number of important tasks were assigned to the first session of the Meeting of the Parties to the AGREEMENT. This is likely to be held during the course of 1999 (i.e. a year after the AGREEMENT is expected to enter into force), and possibly in conjunction with the sixth meeting of the Conference of the Parties to CMS. The tasks include the establishment of a Technical Committee and the creation of a permanent AGREEMENT secretariat.

The Government of the Netherlands is providing an interim secretariat[17] for three years, and the permanent secretariat functions will subsequently be assumed by the Secretariat of the parent Convention. The Depositary, the Ministry of Foreign Affairs of The Netherlands, opened the AGREEMENT for signature on 15 August 1996 after having provided the AGREEMENT text in its four official languages (Arabic, English, French, and Russian). The AGREEMENT will enter into force after it has been ratified by fourteen Range States or regional economic integration organizations (seven from Africa and seven from the rest of the AGREEMENT area).

A growing number of Range States and the European Community more and more use the AGREEMENT as a basis for their activities on both the national and international levels. Activities that can be divided in Species conservation, Habitat conservation, Research and Monitoring programmes, etc. Good examples are the publication of the African Waterfowl Census (Wetlands International, 1996), Atlas of Anatidae Populations in

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16 Full address: Mr. Eric Blencowe, EUROBATS Secretariat, Martin Luther King Str.8 D-53175-Bonn; Tel. (+49228) 815 2420/Fax: (+49228) 815 2445

17 Full address: Mr. Bert Lenten, AEWA interim secretariat, c/o Ministry of Agriculture, Nature Management & Fisheries, Directorate for Nature Conservation, P.O. Box 20401, NL-2500 EK The Hague, Tel: (+3170) 379 2982-3591 Fax: (+31 70) 379-3751.

Africa and Western Eurasia (Wetlands International, 1996), and the action plans for Globally Threatened Birds in Europe (Council of Europe, 1996). Furthermore projects are already envisaged to develop regional capacity for monitoring, awareness, the knowlwedge on management of wetlands, etc. Also projects are envisaged to monitor and survey large important wetlands e.g. the Niger Delta in Mali. Range States have been using the AEWA framework to prepare various species conservation plans. Most of them will serve as models to facilitate implementation of the AGREEMENT after its entry into force.

5. Agreement on the Conservation of Cetaceans of the Mediterranean and Black Seas (ACCOBAMS), 1996

An important breakthrough for the conservation of cetaceans of the Mediterranean and Black Seas was achieved in Monaco from 19 to 24 November 1996 with the conclusion of an intergovernmental agreement aimed at reducing threats to cetaceans in these waters. Among other things, the agreement will require signatories to protect dolphins, porpoises and other whales, and to establish a network of protected areas important for their feeding, breeding and calving. Representatives of over 20 Mediterranean and Black Sea countries, together with observers from numerous intergovernmental and non governmental organisations, participated in the signatory meeting.

The agreement – known by its acronym "ACCOBAMS" – is the first of its kind to bind the countries of the two subregions to work together on a problem of common concern. The agreement calls on its members to implement a comprehensive Conservation Plan and to enforce legislation to prevent the deliberate taking of cetaceans in fisheries by vessels under their flag or within their jurisdiction, and to minimize incidental catches. Governments also undertake to assess and manage human-cetacean interactions; to carry out research and monitoring, to develop information, training and public education programmes; and to put in place emergency response measures.

Officials of eleven governments signed the agreement already in the closing session of the meeting. The accord is expected to enter into force in 1997, once it has passed the necessary parliamentary review in the countries concerned. Significantly, it is also open to membership of non-coastal States ("third countries") whose vessels are engaged in activities which may affect cetaceans.

The Government of the Principality of Monaco acts as Depositary for the agreement, the official text of which will be made available in due course in the Arabic, English, French, Russian and Spanish languages.[18]

6. Memorandum of Understanding concerning Conservation Measures for the Siberian Crane (*Grus leucogeranus*), 1993

The Memorandum of Understanding (MOU) aims at ensuring the survival of the West- and Central Asian populations of the Siberian crane, which are on the brink of extinction. At present, there are five signatory countries, including three non-Parties to CMS: India, the Islamic Republic of Iran, Kazakstan, Pakistan and the Russian Federation. The International Crane Foundation, the Wild Bird Society of Japan and the UNEP/CMS Secretariat also signed. Further efforts are being made to encourage the other remaining Range States (Afghanistan, Azerbaijan, Turkmenistan and Uzbekistan) to join.

From 15 to 19 May 1995, the Secretariat organised in Moscow, in conjunction with the All-Russian Research Institute of Nature Conservation and the International Crane Foundation, a meeting of Siberian crane experts and representatives from eight of the nine Range States concerned. The meeting can be regarded as a milestone in the international efforts to safeguard and rebuild the remaining Siberian crane populations.

A follow-up workshop was held in Bharatpur, India, from 4 to 7 November 1996. Its purpose was to give a significant impetus to regional collaboration by focusing and carefully targeting conservation activities in order to maximize their effectiveness. The workshop recommended that the Secretariat approach the Chinese

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18 **Meanwhile, the Final Act of the conference to conclude the Agreement (including the text of the Agreement itself), as well as the report of the negotiation meeting in the English and French languages may be obtained by writing to the UNEP/CMS Secretariat.**

authorities about the possible involvement of that country, which is important for the eastern population of Siberian cranes. In late Spring 1997, the Secretariat recirculated the Memorandum of Understanding, together with an extensive conservation plan for each of the Range States and participating organizations.

The beginning of 1996 brought with it some excellent news. Nine Siberian cranes were located on their traditional wintering grounds at Fereidoonkanar in the Islamic Republic of Iran. In January, the Secretariat was able to facilitate a joint mission of Russian, Finnish and Iranian experts – part of a co-ordinated effort to obtain critical information on the cranes' hitherto unknown migration routes. The experts succeeded, for the very first time, in attaching a satellite transmitter to one of the wild birds at Fereidoonkanar and in releasing two birds which had been raised in captivity by the International Crane Foundation in the United States. Data on the migration routes taken by the wild birds will be of enormous benefit to conservation efforts.

February 1996 brought even better news from India: four Siberian cranes from the dwindling central population arrived at Keoladeo National Park, where they had not been seen for the last two winters. Among them was a young bird which had been banded by Russian scientists in Siberia the previous summer – concrete evidence of the crane's 5,500 km southerly migration.

The arrival of the cranes attracted enormous attention from the local population and re-invigorated interest in the crane-conservation activities.

7. Memorandum of Understanding concerning Conservation Measures for the Slender-billed Curlew, (*Numenius tenuirostris*), 1994

The Memorandum of Understanding (MOU) aims at safeguarding the species of the Slender-billed curlew which is estimated to have declined in number to 200-300 individuals (1994).

As of 30 September 1995, fifteen Range States (Albania, Bulgaria, Croatia, Cyprus, Egypt, Georgia, Hungary, Islamic Republic of Iran, Kazakstan, Morocco, Oman, Romania, Spain, Ukraine and Uzbekistan) as well as Bird Life International, the International Council for Game and Wildlife Conservation (C.I.C.) and the UNEP/CMS Secretariat have signed the document.

The Secretariat is also undertaking efforts to encourage the initiation of concrete supportive projects for this species in several of the Range States, and is maintaining close contact with various organizations, scientific institutions and national authorities that are already involved in such action, including BirdLife International (Cambridge, U.K.), the Royal Belgian Institute for Natural History (Brussels), the International Council for Game and Wildlife Conservation (C.I.C.) and Euronatur (Radolfzell, Germany). BirdLife International has recently produced a first draft of a comprehensive longer-term Action Plan for the species, which is called for under the terms of the MOU. Concrete activities have already been undertaken or are currently under way in Albania, Bulgaria, Greece, Italy, Morocco, Russia and Ukraine. CIC is expected to carry out a multinational campaign aimed at raising awareness among hunters. In addition, the Secretariat is seeking financial assistance from external sources with a view to helping to put immediate measures into effect along the birds' migration routes in central Asia and at their wintering ground.

In early 1996, the Secretariat produced and distributed a status report on this endangered species. Within the framework of the MoU and the Action Plan, the Secretariat is planning to hold, in autumn 1998, a symposium of country representatives and experts. Its aim is to facilitate the coordination of monitoring efforts and to intensify ongoing protection measures.

Under its so-called "Life Programme", the European Union is financing a protection and monitoring project in Southern Europe, with a particular emphasis on Greece. Considerable efforts have been undertaken to discover the breeding area of the Slender-billed curlew. In 1996 and 1997, the Russian Conservation Union sent expeditions to the steppes area of southwest Siberia, the moor region of the taiga. Although the breeding areas still have not been found, good news has been received from Iran, where the Persian Gulf wintering areas of the bird (up to 50 individuals) were discovered.

Increased co-operation for the conservation of species listed in Appendix II is being achieved by CMS and its Parties. Be it cetaceans of the Black and the Mediterranean Seas or migratory water-birds of the Asia-Pacific region or even marine turtles on the West African coast, the right instruments are being developed which would avoid serious declines of their populations.

Agreements and Memoranda of Understanding are being considered or developed for the conservation of several species or group of species and various other activities are being undertaken in order to initiate or improve the conservation and management of migratory species throughout the world. Also, CMS has to deal with the "management" of migratory species which have increased their numbers in such a way that they have become a danger to other endangered species or are causing unjustifiable damage.

Houbara Bustard (*Chlamydotis undulata macquenii*), Asian population

Houbara bustards are migratory birds which in former times covered almost all steppe and desert areas of Asia and North Africa. They are part of our common natural heritage and, for several reasons, of economic value. However, owing to land degradation and over-hunting the species has disappeared in some regions, and in other regions it has depleted dramatically in numbers. Concerned about the risk that the Asian sub-species *Chlamydotis undulata macqueenii* might become seriously endangered, scientists urged Range States to take measures for the conservation and more sustainable use of the species.

Although the species is legally protected in the majority of its Range States, the protection measures employed are not sufficient to reverse the trend described above. Therefore, a co-operative approach of the Range States to better conserve and manage the species throughout its migration range should urgently be undertaken.

Following recommendations by the Scientific Council (Bonn, Germany, May 1993) and the CMS COP at its fourth meeting (Nairobi, Kenya, June 1994), and the Houbara Bustard Working Group of the IUCN Species Survival Commission (Muscat, Oman, January 1996), the Kingdom of Saudi Arabia has taken the lead in the development and negotiation of an Agreement among the Range States. In late September 1996, the Government of the Kingdom of Saudi Arabia distributed its proposal for an Agreement to the Governments of those countries which by then had been identified as Range States for the migratory populations of the species.

The responsible authority for wildlife conservation of Saudi Arabia, assisted by the UNEP/CMS Secretariat and international legal experts, will, by autumn 1997, revise the Agreement proposal. The Houbara Bustard Working Group of the IUCN Species Survival Commission is called upon to develop a comprehensive Action Plan. Both documents will be submitted to the Range States and thereafter discussed in a meeting. In the meantime, the members of the Working Group are requested to contribute to the elaboration of an Action Plan which will be annexed to the Agreement proposal.

Great Bustard (*Otis tarda*) in Central Europe

The Great bustard is one of the most endangered birds in Europe. In large regions of its traditional European range the species has already vanished. Without active protection measures, the species is doomed to disappear. The remaining population is dispersed in several small populations and many animals migrate.

Based on recommendations of the CMS Scientific Council and the Conference of the Parties[19], a Hungarian expert has drafted a Memorandum of Understanding aimed at conserving the middle European population of this species. This draft, which is being received at present, will soon be submitted for discussion to the authorities of the Range States and the relevant international governmental and non-governmental organizations.

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19 Recommendation 4.2 Nairobi (1994)

Great Cormorant (Western European Population)

The European population of the Great cormorant (*Phalacrocorax carbo*) has recovered significantly due to strict protection over the last decades as well as some other favourable conditions. In fact, its numbers have increased to such an extent that other problems are now surfacing: there have been complaints that the birds are causing severe damage to fish ponds and to the environment. Although the CMS text emphasises the protection of endangered species and the conservation of species which have an unfavourable conservation status, the management, including sustainable use, of species with a favourable conservation status also belongs within its scope.

There are, however, two other cormorant species which are endangered and which need protection. The Pygmy cormorant (*Phalacrocorax pygmaeus*) and Socotra cormorant (*Phalacrocorax nigrogularis*) potentially share a certain part of their migration range with that of the Great cormorant.

Following Recommendation 4.1 (Nairobi, 1994), an open Working Group of the Range States met twice in order to further the elaboration of an International Conservation and Management Plan for these three cormorant populations. However, the issue seems to be too controversial to receive quick and substantive results.

The Secretariat would hope that the Conservation and Management Plan, or at least a guideline be developed soon. It could serve as a model for other actions of this kind undertaken in favour of cormorants in other regions. It could also serve as a model for the coordinated and concerted management of other species which have a favourable conservation status.

Marine Turtles

Marine turtles have been around for over a hundred million years, overcoming a number of global natural disasters. The eight species remaining today are endangered due to a number of human-caused factors. Five of these species are listed in the CMS appendices. The CMS COP has identified them as a group of species which deserves priority action. The Secretariat, assisted by the experts of the Scientific Council and in cooperation with the Marine Turtle Working Group of the IUCN Species Survival Commission, has taken initial steps towards this aim in the Indian Ocean region.

Several CMS-sponsored workshops bringing together scientists and government experts of western and northern Indian Ocean Range States have contributed to the setting up of numerous conservation activities which are presently under way. Examples of these are the production of a national marine turtle plan in Kenya, and the development of a formal regional CMS Marine Turtle Action Plan for the Northern Indian Ocean. These plans could provide a framework and overall strategy for future national and international conservatiion efforts in the Indian Ocean. The objective is to provide participants the opportunity to begin to standardize regional research methodology, prioritize conservation and management activities, promote capacity building, foster collaboration and co-operation among marine turtle conservationists and managers and make recommendations for future activities. Once elaborated into formal project proposals, some of these activities may warrant additional financial support from CMS.

Sahelo-Saharan Ungulates

Eight species of the family "*Bovidae*" are listed in Appendix I of the Convention. Six of them have been observed in the Sahelo-Saharan region. Some of those species are extinct or in danger of extinction due to excessive hunting activities in the past few decades. The CMS Scientific Council expressed the urgent need to elaborate an Action Plan to ensure the survival of this species and the Conference of the Parties, at its fourth meeting in Nairobi, gave its support to developing a concerted action plan. The Royal Belgian Institute of Natural Science (IRSNB) applied for funds from the European Union necessary to initiate the implementation of conservation actions identified in the sub-project and workshop financed by the CMS Trust Fund. The Institute will now work in conjunction with the CMS Secretariat towards the common goal of achieving an Agreement for the conservation of Sahelo-Saharan ungulates on a regional basis.

Albatross

This is a very particular bird who will not hesitate to travel thousands of kilometers to forage for food to feed its chick. Distances of more than 15,200 km and periods of up to six weeks have been recorded for a single foraging trip during incubation. Albatross breed in colonies in oceanic islands where they raise only one chick, fed and considerably protected by both parents. If they survive childhood into adult life, they can reach a natural longevity. Ages up to 58 years have been recorded and it is estimated that ages of up to 80 years are frequent.

Once they reach adulthood, they face few risks in life, but human beings are changing this pattern. Of the 14 species of albatross in the world's oceans, particularly the Southern Seas, many of the breeding colonies are protected. Yet, they face high mortality in the oceanic foragiing zones, mostly due to human-related factors. The main cause of death is long-line fishing: birds try to feed on the bait, get hooked and drown.

The CMS is working to find solutions to this problem. All albatross species have been proposed for inclusion in the CMS appendices and a study being undertaken in the waters of Uruguay with an aim to find solutions is being supported by CMS. It is hoped that an agreement will be developed to ensure the conservation of these species.

CMS: Organizational Structure

In order to facilitate the implementation of the objectives of CMS, several bodies have been established under the Convention. They are:

- **Conference of the Parties (CoP)** The CoP is the decision making body of CMS which meets at intervals of between 21/2 and three years to review the implementation of the Convention and to decide on priorities for future work.[20]
- **Standing Committee** The Committee provides policy and administrative guidance between regular meetings of the Parties.[21] It consists of one representative of every global region, of the Depositary and of the country which plans to host the next meeting of the COP.
- **Scientific Council** The Council gives advice on scientific matters. It consists of one expert coming from most of the Parties as well as a small number of specialists appointed by the COP.[22]
- **Secretariat** A Secretariat under the auspices of UNEP provides administrative support to the Convention. Its functions include developing and promoting Agreements, processing information, liaising with governments and organizations, servicing meetings and carrying out essential administrative tasks assigned to it by the Convention[23] and the Conference of the Parties.[24] The German host government invited the Secretariat to move at the end of 1996 into the new UN premises in Bonn to join other UN-based organizations such as the UN Volunteers and the Secretariat of the United Nations Framework Convention on Climate Change.

In addition, a number of working groups have been established under the auspices of the CoP to promote work on Agreements for several groups of species.

Benefits of Participation in CMS

Regarding Appendix I species

CMS plays a unique role in focusing attention on the conservation needs of endangered species listed in Appendix 1. Many of them are not dealt with adequately by other global wildlife conventions owing to

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20 See Art.VII and the resolutions adopted in the four meetings 1985, 1988, 1991, 1994.

21 The Standing Committee was established by resolution 1.1 of the Conference of the Parties to CMS

22 Art.VIII.

23 See Article XI.

24 In various Resolutions.

limitations in their scope or taxonomic coverage.

Regarding Appendix II species

Agreements are readily adaptable to regional needs, as they can be tailored to suit different taxonomic groups and regional variations. They are intended to cover the entire range of the species for which conservation action is needed. Therefore, unlike bilateral arrangements between countries, gaps in geographic coverage can be reduced to a minimum. Multilateral agreements allow for better coordination of conservation efforts and the pooling of expertise, thereby reducing duplication of effort. Their cost-effectiveness is also attractive to governments; significant cost-savings can be realized because conservation plans for many species can be incorporated into a single Agreement with common administrative arrangements. In addition, CMS Agreements may stand a greater chance of attracting financial support from international funding agencies because they reflect the common will of many countries to take joint actions to conserve important components of biodiversity.

The implementation of the Agreements concluded so far have demonstrated an increased awareness in governmental and supra-national bodies of the conservation needs for the species concerned and the willingness to sponsor conservation activities in developing countries. For species which have regained a favourable conservation status, management measures, including sustainable utilization, may be taken under the Convention and/or the specific Agreement.[25]

Measures to be Taken by the Parties to CMS

Measures regarding Appendix I species

Parties that are Range States for Appendix I species shall endeavour to provide immediate protection for migratory species included in Appendix I[26] through:

- conservation and, where feasible and appropriate, restoration of those habitats of the species which are of importance in removing the species from the danger of extinction (Art.III, para 4 (a));
- prevention of, removal of, compensation for or minimization of, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species (Art.III, para 4 (b)); and
- to the extent feasible and appropriate, prevention, reduction or control of factors that are endangering or are likely further to endanger the species, including strict control of the introduction, or control or elimination, of already introduced exotic species (Art. III, para 4 (c));

Parties that are Range States for Appendix I species shall prohibit the taking of animals belonging to such species. Exceptions listed in Article III, para. 5 may be made to this prohibition. In such cases, Parties should as soon as possible inform the UNEP/CMS Secretariat of such exceptions (Art.III, para 7);

Measures regarding Appendix II species

Parties that are Range States for Appendix II species shall endeavour to conclude AGREEMENTS where these would benefit the species, and should give priority to those species with an unfavourable conservation status (Art. IV, para 3);

Measures regarding other species

Parties are encouraged to take action with a view to concluding Agreements for any population or any geographically separate part of the population of any species or lower taxon of wirld animals, members of which periodically cross one or more national jurisdictional boundaries (Art. IV, para 4);

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25 See Art. II, para 3 (c)

26 Art. II, para 3 (a)

27 Art. II, para 3 (a)

Further actions

Parties should promote, co-operate in and support research relating to migratory species.[27] In order to report on implementation of the Convention, Parties:

- shall keep the CMS Secretariat informed about the migratory species listed in Appendices I and II for which they consider themselves to be Range States;
- that the Range States for Appendices I and II species should inform the CoP through the Secretariat of measures taken to implement the provisions of the Convention for these species;

Relation to Other Global Conventions

CMS is the only global (and UN based) intergovernmental organization which is established exclusively for the conservation and management of migratory species. Although migratory species in general are included in the Convention on Biological Diversity (CBD) and migratory fish species are covered by the UN Convention on the Law of the Sea (UNCLOS), these conventions do not provide for the special instruments through which necessary conservation work may be done. Therefore, Article 5 of CBD and Articles 65 and 120 of UNCLOS call on their Parties to implement co-ordinated international conservation measures, including sustainable use, for migratory species through existing international legal instruments; the most appropriate instruments in this respect are found in CMS and the respective regional Agreements under its auspices. In order to gain synergy and avoid possible duplication of work, the secretariats of CMS and CBD have signed a Memorandum of Co-operation.

Other global wildlife conventions, such as the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention Concerning the Protection of the World Cultural and Natural Heritage, have their special fields of application with little overlap with CMS. It may, however, arise that regional agreements concluded under the auspices of CMS to a certain extent overlap some global or regional convensions. As an example, the African-Eurasian Waterbird Agreement has some overlap with the Berne Convention on the Conservation of European Wildlife and Natural Habitats, and Ramsar Conventions, namely in the scope of habitat conservation. For this reason, the CMS Secretariat has created a basis of communication and cooperation with the secretariat of the Berne Convention.[28] On 18 February 1997, the CMS signed a Memorandum of Understanding with the Ramsar Bureau.

Challenge for the Future

- Agreements already in force show encouraging results.
- There is a growing membership in the Convention and Agreements concluded so far.
- Many conservation activities have been undertaken by the Contracting Parties.
- Efforts to link implementation of Agreements in developing countries to GEF funding.
- Activities for greater co-operation and synergy with the Ramsar Bureau, CITES, CBD and Berne Secretariats and other conventions.
- CMS to become the special instrument for the implementation of CBD.
- CMS could become a network for all regional Agreements aiming to conserve migratory species throughout their migration range.

Annex I

Reasons for international action to conserve migratory species:

Migratory species are:

- even more so than resident species part of the **common natural heritage**
- part of the world's **genetic resources**

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28 cf recommendation given in the AEWA Final Act

- involved in intricate **interrelationships with resident plant and other animal species**, which are still fairly unknown and thus require research and monitoring
- **indicators** for the **interdependance of and linkages between ecosystems**
- **indicators for ecological change**, e.g. climate
- **beneficial for mankind**, e.g. dolphins show fishermen the fish shoals, birds consume insects harmful to agricultural crops, other species are interesting for tourism, hunting or other uses
- **vulnerable as a result of their long migrations** – regular re-location carries many risks
- **require concerted action** in many countries for their conservation and
- so far, on a global scale, are benefitting from only **isolated conservation measures in the various countries** as they deem it appropriate. Migratory animals often arrive in huge numbers for very short, seasonal periods, owing to the availability of natural resources, causing huge damage to local populations. They are, therefore, often regarded as pest species and are eliminated in considerable numbers (e.g. birds because of crop damage, dolphins and seals because they reduce fish harvests). **Concerted/cooperative** research, monitoring and conservation **actions** would be more **efficient and cost effective** than individual measures in the Range States concerned.

ANNEX 2

Costs and benefits of participation in the Convention by States, particularly DCs and CECs

- costs

  internal: implementation of the Convention and Agreements (as far as the country is a Party thereto), in particular:

  - protection of endangered species (Appendix I of CMS), legislation and enfircement
  - appropriate conservation measures for species with unfavourable conservation status (Agreements for Appendix II species)
  - personnel capacity for implementation on governmental, scientific and enforcement levels

  external:

  - representation in meetings of COP and ScC
  - cooperation with other Parties and organizations to enhance the conservation of the species concerned
  - personnel capacity (relatively minimal)

- benefits (general)

  - international cooperation provides information and incentives for national conservation work (research, monitoring, legislation, enforcement, raising of public awareness etc.)
  - international legal framework raises awareness in public institutions (more attention to the conservation items, provision of staff and financial resources), thus: better basis for the work of specialists

- benefits for developing countries and countries with economies in transition

  - funding of small projects by the Convention's or Agreement's Trust Funds
  - funding of larger projects by international/supra-national and bilateral funding-institutions
  - assistance for participation in meetings of COP and ScC/working groups.

ANNEX 3

Obligations assumed by a State when it becomes a Party to CMS

- Nomination of a "Focal Point" (Parties can nominate a second focal-point if they wish)
- Nomination of a "Scientific Councillor" and, if so desired, an alternate
- Participation of a government representative in the meetings of COP
- Participation of the Scientific Councillor in the meetings of the ScC
- Payment of relatively modest annual contributions to the CMS Trust Fund (administered by UNEP)
- Protection of Appendix I species in accordance with Art. III of CMS
- Active participation in the development of proposals for inclusion of species in the Appendices
- Active role in the development, conclusion and implementation of regional Agreements (as far as the Parties are Range States for the species concerned), and political commitment to becoming a Party; internal legislative and enforcement measures to conserve the species, and international cooperation.

Exercises on the Convention on the Conservation of Migratory Species of Wild Animals

Rationale for international action

1. What are the major threats to Migratory Species?

Major components of CMS

2. What is the objective of CMS?
3. How does CMS define 'Migratory Species'? (Art 1)
4. What are the fundamental principles of the CMS? (Art 2)
5. What protection is granted under CMS to species which have been listed in appendix i? (Art 3)
6. What are 'range states' under CMS and what role do they play? (Art 1 and 4)
7. What are the different types of agreements under CMS?
8. How is an agreement for certain Migratory Species under CMS to be implemented? (Art 5)
9. What are the bodies established under CMS? What are their functions?

Costs and benefits of becoming a party to CMS

10. What are the benefits of becoming a party to CMS?

Measures to be taken by the parties to CMS

11. What specific obligations does the CMS impose on signatory states? (Arts 2, 3, 4 and 5)

Relation with other global conventions

12. Is there the potential for CMS to overlap and conflict with other treaties and conventions dealing with habitat and species protection?
13. What are the major distinctions between CITES and CMS?

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

Rationale for International Action

There are over 13,000 known species of animals and birds, as well as thousands of reptiles, amphibians and fish, millions of invertebrates and some 250,000 flowering plants. Extinction is a natural feature of the evolution of life on earth. But in recent times, humans have been responsible for the loss of most of the animals and plants that have disappeared. Gone for ever, for example, are 17 species or subspecies of bears, five of wolves and foxes, four of cats, ten of cattle, sheep, goats or antelopes, five of horses, zebras and asses, three of deer, and an indeterminable number of plants, including at least one slipper orchid. The last dodo, a large flightless bird, was killed in Mauritius in 1681, while the passenger pigeon, whose huge flocks darkened the skies of North America barely a hundred years ago, was also wiped out for food early this century.

The two major factors in the decline in numbers of species of wild plants and animals are the loss of habitat and increased exploitation for trade. Trade has become a major factor, as improvement in transport facilities has made it possible to ship live animals and plants and their products anywhere in the world. A dramatic example is the vicuna, a gazelle-like relative of the camels which lives in the high Andes. Because of its exceptionally fine and warm wool, which has been in great demand in North America and Europe, nearly a half million were slaughtered after the Second World War before Peru pioneered protection in the 1960s to save the species.

The international trade in endangered species is a highly lucrative business, estimated as third in dollar value, after illegal traffic in arms and drugs. It involves a wide variety of species, both as live specimens and as products, and concerns millions of animals and plants every year. As the commercial trade in pets, clothing, medicine and other uses was leading to the over-exploitation of many species, threatening their survival, a legal instrument was deemed necessary.

Negotiating Process

In 1963 the General Assembly of the International Union for Conservation of Nature and Natural Resources, now the World Conservation Union or IUCN, adopted a resolution calling for an international convention for the protection of endangered species in wildlife, the primary focus of which should be on the regulation of export, transit and import of specimens of rare or threatened wildlife species, rather than the protection of habitats, wildlife management or control of wildlife capture and killing methods.

Further to Recommendation 99.3 of the United Nations Conference on the Human Environment held in Stockholm, 88 countries discussed a draft convention at the conference of the plenipotentiaries held in Washington D.C. in February-March 1973.

On 3 March 1973, 21 countries signed the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which entered into force on 1 July 1975. As of February 1997, there were 134 Parties to CITES.

Major Components of CITES

Objective

The objective of CITES is to prevent international trade from threatening the survival of wild fauna and flora.

To achieve the above objective, CITES has established an international network for the control of international trade of live and dead animals and plants and of parts and derivatives thereof.[1] Control of international trade in endangered species is primarily done through government permits/certificates required for such trade. Monitoring international trade is based on Trade Records.

The above network is made up of correspondents designated by the Parties at the national level. Each Party must designate one or more Management Authorities to issue permits/certificates on behalf of this Party, as well as one or more Scientific Authorities to be consulted in certain cases before permits/certificates are issued.

Any international trade, meaning any export, re-export or introduction from the sea, of species included in the appendices to the Convention, requires Management Authority to issue a permit or certificate, depending on the individual case.

Specific control procedures have been developed under CITES for each of the following three categories of threatened species:

1 those threatened with extinction that are or could be affected by trade (Appendix I);
2 those not necessarily in danger of extinction but which could become so if trade in them were not strictly regulated (Appendix II); and
3 those which individual Parties to the Convention choose to make subject to regulations and which require the cooperation of the other Parties in controlling trade (Appendix III).

Furthermore, control procedures for species listed in these Appendices vary depending on the type of international trade: export, re-export[2] or introduction from the sea.

Appendix I : Species threatened with extinction

Appendix I lists approximately 800 species threatened with extinction which are or may be affected by trade (Art II, para 1). Among those listed are all apes, lemurs, the giant panda, many South American monkeys, great whales, cheetah, leopards, tiger, all rhinoceros, the African elephant, many birds of prey, cranes, pheasants and parrots, all sea turtles, some crocodiles, tortoises and lizards, giant salamanders, the coelacanth and some mussels, orchids, cycads and cacti.

Trade in these species is subject to particularly strict regulation in order not to further endanger their survival (Art III). Regulation is achieved by requiring export and import permits for the trade in Appendix I species, or any derivative thereof (Art III).

Regarding the export of specimens, there are four basic conditions (Art III, para 2) which must be met before an export permit will be granted for species listed at Appendix I:

- a Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species;
- a Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora;
- a Management Authority of the State of export is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment; and
- a Management Authority of the State of export is satisfied that an import permit has been granted for the specimen.

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1 **"Parts" include: skins or parts of skins, skeleton or bones, shells, horns, tusks, teeth, feathers, eggs, meat and wood.**

"Derivatives" include: blood, urine, musk, objects made from parts (pianos with ivory keys, musical instruments made of rosewood, furniture with sea turtle scales, handbags, fur coats, belts, watch straps, shoes, gloves, etc) medicines containing CITES species, perfume made from CITES species, and preparation from meat.

2 **"Re-export" means export of any specimen that has previously been imported.**

This last condition, which is specific to species listed in Appendix I is very important. In order to meet this condition, an import permit must be granted by a Management Authority of the State of import, which may only be done once the following conditions (Art III, para 3) have been met:

- a Scientific Authority of the State of import has advised that the import will be for purposes which are not detrimental to the survival of the species involved;
- a Scientific Authority of the State of import is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it; and
- a Management Authority of the State of import is satisfied that the specimen is not to be used for or primarily used for commercial purposes.

Both exporting and importing States – in other words, both producer and consumer countries – share a joint responsibility in controlling trade in endangered species of wild fauna and flora. Furthermore, an import permit may be issued only when the specimen is not primarily used for commercial purposes, as trade for commercial purposes in species listed at Appendix I is prohibited.

Appendix II : Species at serious risk

Appendix II lists thousands of species which, although not currently threatened with extinction, may become threatened without strict regulation of their trade (Art III). The list includes, among others, all species in the following group which are not already in Appendix I: primates, cats, otters, whales, dolphins and porpoises, birds of prey, tortoises, crocodiles, cacti and orchids, as well as many other species, such as fur seals, the black stork, flamingos, cranes, birds of paradise, some snails, butterflies, corals and some species of trees. Furthermore, to prevent threatened species from being traded under the guise of non-threatened species similar in appearance, some of the latter are also included in this Appendix.

Regulation is not as strict as for species listed in Appendix I. Regarding the export of specimens, the Convention requires export permits for trade in Appendix II species, or any derivative thereof. Nevertheless, no import permit is required.

Like international trade in Appendix I species, the export permit may be issued once a Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species and a Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora and is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment.

Nevertheless, unlike for international trade in Appendix I species, no import permit needs to be granted. Thus, only the State of export is responsible for controlling international trade in Appendix II species. Further, commercial trade in Appendix II species is allowed.

Appendix III : Species listed for protection at a national level

Appendix III lists species which any Party may identify as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation and needing the cooperation of other Parties in the control of trade (Art II, para 3).

Regulation is not as strict as for species listed in Appendix II. Regarding the export of specimens of Appendix III species, export permits are only required from the Party which included the species in Appendix III (Art V).

Like international trade in Appendix II species, the export permit may be issued once a Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora and is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment.

Nevertheless, unlike for international trade in Appendix II species, it is not necessary for a Scientific Authority of the State of export to advise that such export will not be detrimental to the survival of that species.

Control of international trade with non-Parties

CITES allows trade between non-Parties, provided that the non-Party has comparable documentation as required under the Convention (Art X). After abuses of this provision and to prevent State Parties from seeking routes to, from, or through States who are not Parties to the Convention, the Conference of the Parties to CITES decided in its Resolution 8.8 to:

- direct the Secretariat to request and compile details and changes regarding authorities competent to issue comparable documentation and scientific institutions capable of advising on the detrimental effect of export; and
- recommend that Parties only accept documentation from a non-Party if its competent authorities and scientific institutions are included in the most recent updated list of the Secretariat, or after consultation with the Secretariat.

Monitoring of international trade

Under CITES, records of trade must be kept by all parties and be reported to the Secretariat of the Convention on an annual basis. The annual reports of all Parties together should provide statistical information on the total volume of world trade under CITES which is invaluable for assessing the conservation status of species, spotting problems and prompting remedial action. In this process, the CITES Secretariat is assisted by the Wildlife Trade Monitoring Unit[3] and the IUCN/Worldwide Fund for Nature (WWF) TRAFFIC[4] network in collecting and analyzing data on world trade in wildlife.

Bodies Established Under CITES

In order to facilitate the implementation of the objectives of CITES, several bodies have been established under the Convention.

Conference of the Parties (CoP)

The CoP, which is the plenary non-standing body of CITES, meets every two to three years in order to: review the progress made towards the restoration and conservation of Appendices I, II and III species; consider any reports presented by the Secretariat or any Party; and make recommendations for improving the effectiveness of the Convention (Art XI, para 3). The CoP also considers and adopts amendments to Appendices I and II in accordance with Article XV. To assist it in performing its functions, the CoP has established four committees: the Animals Committee, the Plants Committee, the Nomenclature Committee and the Identification Manual Committee.

Standing Committee

This Committee, which is the non-plenary standing body, meets to provide guidance and follow-up between meetings of the Conference of the Parties. The Committee reviews matters such as information submitted to the Secretariat concerning the non-compliance of a Party.

Secretariat

In addition to the performance of its functions listed in Article XI, para 2, the Secretariat provides permanent assistance to Parties through:

- provision of regular information on recent developments which have occurred under the Convention;

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3 Wildlife Trade Monitoring Unit is a part of the World Conservation Monitoring Centre in Cambridge, England.

4 Trade Records Analysis of Flora and Fauna in Commerce.

- publication of technical documents; and
- training of personnel responsible for implementation of the Convention.

Costs and Benefits of Becoming a Party

CITES is the only global convention which aims at controlling international trade in endangered species of wild fauna and flora. Such control is a necessity since international trade is the second major threat to the survival of species of wild animals and plants.

In order to achieve effective control, the CITES Secretariat is providing permanent technical support to the Parties by, among other things:

- providing advice to Parties on numerous matters, such as the drafting of national legislation for the implementation of the Convention or the validity of a permit or certificate;
- training personnel responsible for the implementation of the Convention, especially in the field of enforcement, i.e., Management Authorities, Scientific Authorities, police and customs officials;
- publishing a technical book on the Convention in several languages which includes, among other things, a consolidated set of resolutions adopted by the Conference of the Parties and an Identification Manual; and
- organizing information and public awareness campaigns.

For Parties in whose territory the survival at the national level of a species is threatened by international trade, CITES provides that such species may be added to Appendix III. Once listed in Appendix III, the import by any Party of any specimen of that species requires the prior presentation of a certificate of origin or an export permit, where the import is from the Party which has included that species in Appendix III. This enables the Party which includes a species in Appendix III, to benefit from the cooperation of other Parties in the control of international trade in that species.

Measures to be Taken by the Parties to CITES

Enforcement of CITES is the responsibility of the Parties. Each Party to CITES shall take appropriate measures to enforce the provisions of CITES and prohibit trade in specimens in violation thereof. To this end, Parties shall:

- penalize trade in, or possession of such specimens, or both (Art VIII, para 1 (a));
- provide for the confiscation or return to the State of export of such specimens (Art VIII, para 1 (b)). A Management Authority shall be entrusted with the confiscated specimen, and shall, after consultation with the State of export, return them to that State, or to a rescue centre (Art VIII, para 4) designated by the Management Authority to look after the welfare of living specimens (Art VIII, para 5);
- maintain records of trade in specimens of Appendices I, II and III species (Art VIII (c) para 6); and
- transmit to the Secretariat an annual report on trade records and a biennial report on legislative, regulatory and administrative measures to enforce the Convention (Art VIII (7)).

Regarding management and institutional arrangements, Parties should:

- designate one or more Management Authorities competent to grant permits or certificates on behalf of that Party, as well as one or more Scientific Authorities (Art IX, para 1);
- inform the Depositary, when depositing its instruments of ratification, acceptance, approval or accession, of the details of the Management Authority authorized to communicate with other parties or the Secretariat (Art IX, para 2); and
- inform the Secretariat of any change regarding any Management Authorities and Scientific Authorities, and upon request, provide the Secretariat with the impression of stamps, seals or other devices used to authenticate permits or certificates(Art IX para 3 and 4).

When becoming Parties to CITES, States should enact implementation legislation providing for essential requirements, which should then be supplemented by detailed regulations.[5] In developing such legislation, particular consideration should be given to the main problems encountered in implementing CITES:

- lack of, or insufficient national legislation, particularly regarding penalties;
- issuance of irregular documents;
- lack of, or insufficient border control;
- lack of, or insufficient coordination with enforcement agencies, including customs and police;
- insufficient communication with CITES Secretariat; and
- lack of, or insufficient control of, internal trade.

In accordance with the provisions of the Convention and the recommendations adopted by the Conference of the Parties to CITES, such legislation should deal with several issues, as noted below.

Field of application

The legislation should:

- apply to all species listed in the three Appendices to CITES (except for those on which the Party concerned has entered a reservation). It should refer to three lists corresponding to the three CITES Appendices. These lists should be capable of being amended by regulations; and
- define "specimen", "export", "re-export", "import" and "introduction from the sea" in the same way as found in in Article I of CITES.

Management and Scientific Authorities

The legislation should designate one or more Management and Scientific Authorities, and define their mode of appointment, functions, powers and duties, including the:

- power to amend or revoke permits or certificates in some circumstances and to refuse foreign permits in particular cases;
- power to mark, or cause to be marked, any specimen to assist in its identification; and
- duty to submit to the Secretariat the reports called for by Article VIII, para 7.

Permit and certificates

The legislation should:

- set the conditions required for the issuing of permits;
- include provisions on the form and validity of permits and certificates;
- require valid CITES documentation for specimens in transit;
- require comparable documentation from non-Parties; and
- not allow other exceptions to permit requirements other than those allowed by the Convention.

Controls and enforcement

The legislation should:

- identify any competent authority to which permits and certificates must be presented, as well as providing the identified authority with the appropriate competence;

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5 See: Cyrille De Klemm, *Guidelines for Legislation to Implement CITES*, (Gland: IUCN -The World Conservation Union, 1993).

- prohibit the possession, transport, sale, offering for sale, and purchase of any specimen of CITES-listed species without the required permits;
- designate all the agencies and classes of officers that are responsible for the enforcement of the legislation, as well as specify their powers;
- spell out actions or omissions which constitute offences against the legislation, and require appropriate penalties, including administrative penalties; and
- provide for confiscation, return or disposal of illegally traded specimens.

Miscellaneous

The legislation should provide for appropriate financial arrangements to support the administrative and legal infrastructure necessary for the implementation of the legislation.

Exercises on the Convention on International Trade in Endangered Species of Wild Fauna and Flora

Rationale for international action

1. Which are the major threats to the survival of species of wild fauna and flora?

Major components of CITES

2. What is the objective of CITES?
3. What mechanisms does CITES use to protect species through the question of trade? (Arts 3, 4, 5, 6, and 8)
4. What is the distinction between appendix I and appendix II species listed in CITES? (Arts 3 and 4)
5. What benefits are there to a contracting party to CITES to have a certain species listed in appendix iii? (Art 5)
6. Under which conditions may a party trade with a non-party?
7. How does CITES succeed in monitoring international trade?
8. What should be the functions of the management authorities?
9. What should be the functions of the scientific authorities?
10. What are the main functions of the Secretariat to the Convention? (Art 7)

Costs and benefits of becoming a party

11. What are the benefits of becoming a party to CITES?
12. What kind of assistance may be provided to parties?

Measures to be taken by the parties to CITES

13. What are the main obligations imposed on signatory states by CITES? (Arts 2(4) and 8 and the convention generally)

National legislation to effectively implement CITES

14. What is the effect of the convention on domestic legislation? (Art 15)
15. What are the major problems encountered in implementing CITES?
16. What are the essential elements to be considered in domestic legislation to implement CITES?

D. LUSAKA AGREEMENT ON COOPERATIVE ENFORCEMENT OPERATIONS DIRECTED AT ILLEGAL TRADE IN WILD FAUNA AND FLORA (Lusaka Agreement)

Rationale for International Action

Illegal trade in wild fauna and flora in Africa has continued virtually unabated, notwithstanding the existence of effective international instruments such as the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the 1992 Convention on Biological Diversity (CBD). Interpol's newly established Sub-Group Wildlife Crime has reported that the annual value of illegal international wildlife trade has been estimated at US$ 5 billion, second in monetary value only to the illegal world trade in narcotics. The international crime syndicates have been taking advantage of poor working conditions and limited resources of national law enforcement agencies by providing monetary incentives, arms and ammunition to poachers. Several Governments have realized that individual efforts by a Government and the traditional enforcement methods are no longer capable of providing effective protection to African species from the illegal trade carried out by international organized crime syndicates. The need for closer cooperation among designated national law enforcement agencies to save African wild fauna and flora brought about the adoption of the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (hereinafter referred to as Lusaka Agreement). The signatories to the Lusaka Agreement resolved that increased cooperation in the field of wildlife protection, by undercutting the activities of smugglers along common borders, is one of the possible solutions to the problem.

Negotiation Process

The Lusaka Agreement was initiated by senior wildlife law enforcement officers from Botswana, Kenya, Mozambique, South Africa, Swaziland, Tanzania, Uganda and Zambia attending the first African Wildlife Law Enforcement Co-operation Conference. The Conference was held under the auspices of Zambia Ministry of Tourism in Lusaka from 9 to 11 December 1992.

Discussions at the Lusaka Conference focused on the problems faced by national law enforcement agencies in attempting to combat international wildlife smuggling syndicates, in particular the lack of formal means to enable cross-border cooperation. A proposal was put forward to set up a multi-national Task Force to operate in the region within the terms of an Agreement negotiated between the Parties. The Conference agreed unanimously that this was the most important proposal to come out of the three Working Groups at the meeting and, accordingly, formulated the first draft of the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora. The Agreement was endorsed by Zambia, Kenya, Tanzania and Uganda. South Africa expressed support but determined it could not endorse a text which was not legally developed and negotiated. The CITES Standing Committee endorsed the Agreement and encouraged support for it on both occasions when it met in 1993.

Meanwhile, the draft text was revised by a Working Group which met in Nairobi from 26 to 27 June 1993. It included senior law enforcement officers from the eight countries attending the December 1992 Conference and experts from UNEP's Environmental Law and Institutions Programme Activity Centre (ELI/PAC). Similarly, the CITES Secretariat, the United States Fish and Wildlife Service (USFWS), the Foundation for International Environmental Law and Development (FIELD) and a South African Ministry of Foreign Affairs observer participated in the Working Group. The Initial Negotiating Text of the Agreement produced by this Working Group provided the basis for negotiation at the First Expert Group meeting.

Immediately following the Working Group meeting, Zambia, together with Kenya, Tanzania and Uganda, presented the Draft Negotiating Text to the UNEP Conference Between the Rhinoceros Range States, Consumer States, and Donors on Financing the Conservation of the Rhinoceros (Nairobi, 28 June - 1 July 1993). A resolution, approved by consensus, endorsed the need for the Lusaka Agreement, and requested UNEP to undertake a coordinating role in finalizing the Negotiating Text. UNEP thus took the leadership of bringing governments together, and in setting a coordinating secretariat in ELI/PAC to service the negotiating process.

The First Expert Group meeting was held in Nairobi from 7 to 11 March 1994. It was attended by Kenya, Lesotho, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Uganda and Zambia. Also participating were observers from Zimbabwe, the CITES Secretariat, Interpol, USFWS and donor countries which had been approached for funds to support the negotiations. This meeting substantially improved the draft Agreement earlier developed. An Initial Negotiating Text as Revised[1] during the meeting was approved.

The Second Expert Group met in Nairobi from 30 May to 3 June 1994. It was attended by Kenya, Lesotho, Mozambique, South Africa, Swaziland, Tanzania, Uganda and Zambia. Following national elections, Malawi was unable to attend, but contributed its legal comments on the Negotiating Text agreed by the First Expert Group meeting. All remaining matters of substance concerning the Agreement and operation of the Task Force were resolved, and the Final Draft Negotiating Text as Revised at the meeting was agreed upon.[2] Similarly, preliminary discussions on the budget likely to be required for the first year of operation of the Task Force and on arrangements for an Interim Secretariat to implement the Agreement were discussed.

The Third Expert Group meeting and the Ministerial meeting to adopt the Agreement were held in Lusaka, Zambia from 5 to 9 September, 1994. On 5 and 6 September, experts finalized the draft text of the Agreement and discussed interim arrangements for its implementation. This last Expert Group meeting was then followed by a meeting of Ministers from participating countries, namely on 8 and 9 September, when the Agreement was adopted and opened for signature. Three resolutions, including one on implementation, were passed unanimously. These, together with the text of the Agreement, are attached to the Lusaka Final Act which was agreed by the Ministerial Meeting.

The Agreement was open for signature in Lusaka on 9 September 1994. It was then signed by six countries: Kenya, Republic of South Africa, Swaziland, Tanzania, Uganda and Zambia. Although Lesotho and Mozambique participated in the negotiations, for reasons beyond their control, they could not sign the Agreement at the signing ceremony. Since then Ethiopia has also signed the Agreement. The Agreement was closed for signature on 13 March 1995. Nevertheless, the Agreement is open for accession by any African State (as per Article 12). Instruments of ratification, acceptance, approval or accession should be deposited with the Secretary General of the United Nations who is mandated, in accordance with Article 15, to carry out depositary functions for the Agreement. So far a number of signatory States have advised UNEP that they are carrying out the formalities of ratification. The Agreement entered into force, pursuant to Article 13, on the 10 December 1996, i.e., the 60th day after the deposit of the fourth ratification instrument. Five governments have to date ratified/acceded to the Agreement. They are Kenya, Lesotho, Tanzania, Uganda and Zambia.

Interim Arrangements

Resolution 1, paragraph 2, invited the Executive Director of UNEP to facilitate the early ratification and entry into force of the Agreement, and in liaison with the Organization of African Unity to encourage and assist African States to become Parties to the Agreement. Paragraph 3 calls upon Governments, particularly donor Governments, to make financial contributions to the Executive Director of UNEP as are required during the interim period with a view to ensuring the full and effective participation of all African States in the Agreement. Resolution 2, paragraph 1, calls upon all African States to sign and become Parties to the Lusaka Agreement

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1 UNEP/ELI/PAC/LAEG 1/7

2 UNEP/ELI/PAC/LAEG. 2/5/Rev.2

and to implement its provisions. Paragraph 2 recommends that until the Agreement enters into force and the Task Force is established, all signatory States shall promote cooperation in law enforcement consistent with the spirit of the Agreement. CITES and Interpol were major partners in the development of the Lusaka Agreement and are still partners with UNEP in its implementation.

Implementation

A treaty is, of course, not an end in itself. Implementation must be embarked upon. The Lusaka Agreement was negotiated in record time, but will it be the same with implementation? A number of signatory States have indicated that they are in an advanced stage of the ratification process. It is their hope that many other African States will accept and accede to the Agreement. On the part of UNEP, work has started in earnest and continues. The Treaty has been sent to other regions through UNEP's Regional Directors, and Ambassadors in Nairobi have been briefed on it.

Major Components of the Agreement

Objectives

The Agreement states as its objective in Article 2, to reduce and ultimately eliminate illegal trade in wild fauna and flora[3] and to establish a permanent Task Force[4] for this purpose. It seeks to do so without compromising national sovereignty. The problem of illegal trade that deprives African States of their legitimate resources for their people is still a reality within, and beyond, the African Continent. With political will among Governments and their peoples, the problem will be contained. The Lusaka Agreement is an effort in that direction.

Obligations of the Parties

The obligations of the parties are set forth in Article 4(1) to 4(10). The underlying theme is cooperation and action to implement the Agreement. Each party to the Agreement is obliged to:

- investigate and prosecute cases of illegal trade;
- provide relevant information and scientific data to the Task Force;
- provide technical assistance to the Task Force;
- encourage public awareness campaigns;
- pay its annual assessed contribution to the budget of the Task Force; and
- return to the country of original export or country of re-export any specimen of species of wild fauna and flora confiscated in the course of illegal trade.

To make the Agreement effective at the national level, parties are required to adopt and enforce legislative and administrative measures to give effect to the Agreement.

Bodies established under the Agreement

The Task Force

The Task Force, a unique permanent multi-national institution composed of law enforcement officers from each of the Parties which is capable of operating in a transboundary manner against international wildlife smuggling rings, is established under Article 5. Its functions, as detailed in Article 5(9), include:

- to facilitate cooperative activities among the National Bureaux in carrying out investigations pertaining to illegal trade;

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3 **Wild fauna and flora have been defined under Article 1 to mean "wild species of animals and plants subject to the respective national laws of the Parties governing conservation, protection and trade".**

4 **The Task Force is elaborated in Article 5.**

- to investigate violations of national laws pertaining to illegal trade, at the request of the National Bureaux or with the consent of the Parties concerned, and to present to them evidence gathered during such investigations;
- to collect, process and disseminate information on activities that pertain to illegal trade, including establishing and maintaining databases;
- to provide, upon request of the Parties concerned, available information related to the return to the country of original export, or country of re-export, of confiscated wild fauna and flora; and
- to perform such other functions as may be determined by the Governing Council.

The Task Force comprises Field Officers[5], one of them to be appointed Director by the Governing Council, an Intelligence Officer and such other Officers as the Governing Council may appoint. These officers should be seconded to the Task Force by the Parties, and they will retain their national law enforcement powers in their respective countries.

It is important to underline the importance of Article 5(13) which states that, "The Task Force shall not undertake, or be involved in any intervention, or activities of a political, military, religious or racial character." Its activities are therefore to be strictly within the ambit of the Agreement.

NATIONAL BUREAU

The Task Force should work in close liaison with the National Bureau[6] to be established or designated by each Party and notified to the Depositary within two months of the date of entry into force of the Agreement for the Party (in accordance with Article 6). For the purpose of the Agreement, the functions of the National Bureau shall be:

- to provide and receive from the Task Force information on illegal trade; and
- to coordinate with the Task Force on investigations that involve illegal trade.

Although UNEP is yet to be officially notified by the depositary as required under Article 6(1)(d) of the Agreement, the following are the national entities designated by the Parties to the Agreement. The Government of Zambia's National Bureau is the National Parks and Wildlife Service, a department under the Ministry of Tourism. Kenya has designated the Kenya Wildlife Service. For Tanzania, it is the Department of Wildlife under the Ministry of Natural Resources and Tourism. Uganda has recently established the Uganda Wildlife Authority as its National Bureau. For Lesotho, the focal point is, provisionally, the National Environment Secretariat.

GOVERNING COUNCIL

Article 7(1) to (9) provides for, among other things, the establishment of the Governing Council. Each Party is a member of the Governing Council, represented at the Ministerial level. The Council is the highest policy-making organ. Parties are represented on the Governing Council by Ministers who are accompanied by "high ranking officials dealing with wildlife law enforcement affairs" or officers whose duties are connected with the activities of the Task Force or experts in the subjects on the agenda.

CONFERENCE OF THE PARTIES

The Executive Director of UNEP was mandated under Article 7(3) to convene the first meeting of the Governing Council of the Parties to the Agreement within three months after its entry into force. This meeting was held in Nairobi at UNEP Headquarters from 10 to 14 March 1997. During this meeting, the Governing Council decided, pursuant to Article 7(6), on the following:

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5 **A Field Officer will be, in accordance to Article 1, a member of a Government organization, department or institution who is employed as a law enforcement officer with national law enforcement jurisdiction and who is seconded to the Task Force.**

6 **"National Bureau" has been defined in Article 1 to mean, "a governmental entity with the competence encompassing law enforcement, designated or established by a Party to this Agreement".**

- rules of procedure for its meetings;
- the location of the seat of the Task Force;
- terms and conditions of service of both the officers and the supporting staff;
- financial rules of the Task Force;
- operational rules of the Task Force;
- intervals of the ordinary meetings of the Council;
- approval of the initial budget required to establish and operate the Task Force;
- the financial contributions of each Party and mode of payment; and
- deferral, however, of the appointment of Task Force officers, including the Director, until a later date.

However, during other ordinary meetings, the Council shall, among other things:

- determine the general policies of the Task Force based on the reports to be submitted by the Director;
- review the implementation of the Agreement;
- consider renewal or termination of officers' terms of service upon expiration; and
- consider and adopt amendments to the Agreement.

FINANCIAL ARRANGEMENTS

Financial provisions are covered in Article 8. For the Task Force to operationally and effectively fulfil its mandate, it will be the obligation of each Party to make necessary agreed contributions to the budget of the Task Force. Nevertheless, the Task Force may receive other extra-budgetary resources such as grants, donations, technical assistance and funds for projects. In the initial stages, it is hoped that donors who have shown willingness to cooperate will be forthcoming in finances, equipment and training. During the negotiation phase several donors: The United Stated, Canada, the United Kingdom, Norway and Denmark were supportive of UNEP's efforts to realize the Agreement. During the interim period to the first Council meeting, the Governments of The Netherlands and the United Kingdom have been supporting its activities.

Costs and Benefits of Becoming Party to the Agreement

Costs

Although Parties to the Agreement will benefit through their cooperative joint efforts to reduce and ultimately eliminate illegal trade in wild fauna and flora, those benefits will not accrue without costs. Some of the issues that may arise include:

- Inability of most of the Parties to the Agreement to make timely or any payment of their assessed contributions to the budget of the Task Force, notwithstanding the advantages to be gained in the long run;
- Inadequate enforcement of the legislative and administrative measures which could hamper the smooth implementation of the Agreement;
- Lack of necessary incentives provided by national authorities to local communities to encourage public reporting of illegal trade which could hamper full realization of the fruits of the Agreement; and
- Continued bribery and corruption by the international smuggling syndicates which may still continue for some time to come, irrespective of the existence of the Agreement, due to the profitability of illegal trade in wild fauna and flora.

Benefits

Notwithstanding the costs involved with becoming a Party to the Agreement, there are benefits as well. Each country would, therefore, need to weigh the benefits against the costs involved in making a decision to become a party or not. The benefits would include:

A. Provision of an avenue for cooperation among the State Parties to reduce and ultimately eliminate illegal trade. No State alone can do this;
B. Return of species of wild fauna and flora which are confiscated in the course of illegal trade;
C. Establishment of a multi-national Task Force with the power to carry out cross-border operations which will facilitate the work of national law enforcement agencies and would therefore jointly be able to control the smuggling of African species by international wildlife crime syndicates;
D. Ability to solicit funds and technical assistance for the multi-national Task Force from the donor community under the Agreement rather than each national law enforcement agency seeking funds and/or assistance to deal with the same problem in an uncoordinated manner; and
E. Increased support for the harmonization of national wildlife laws and implementing regulations.

Relations With Other Relevant Instruments

Once the Lusaka Agreement is in force, it will no doubt reinforce CITES and CBD. CITES has established the legal framework whereby participating States to the Convention have agreed to regulate international trade in certain species of wild animals and plants as specified in the Appendices to the Agreement. Nevertheless, the practical aspects of creating the necessary infrastructure to control this trade is left to the countries concerned. They must take appropriate measures to enforce the provisions of the Convention and to prohibit trade in species (Article VIII of CITES). The Lusaka Agreement, as an offshoot of CITES, seeks to implement the provisions of CITES by conducting undercover investigations in close cooperation with designated national law enforcement agencies in Africa. However, unlike CITES, which lists specific species under the Appendices, the Lusaka Agreement is broad in scope as it deals with the illegal trade of all species of wild fauna and flora at the regional level. The Lusaka Agreement has therefore attempted to make CITES more effective and it is hoped that it will serve as a blueprint for similar cooperative regional law enforcement efforts in other parts of the world. Likewise, the Agreement will implement and reinforce the CBD which aims at, among other things, creating awareness of the need to conserve and sustainably use biological resources before they are further and irretrievably diminished or lost.

Challenges for the Future

Poor countries of Africa depend on natural resources such as wildlife for their economic advancement. Potential benefits from such a resource depend on the ability to secure the future of the wildlife through effective law enforcement with the support, as appropriate, of donors. An important avenue of cooperation in law enforcement matters has therefore opened in Africa in the Lusaka Agreement. Through the Agreement, Africa will, hopefully, be able to contribute to sustainable development necessary to revitalize the countries against over-exploitation of wild fauna and flora through illegal international trade. UNEP hopes that it will serve Africa well and be emulated by other regions similarly plagued by such illegal trade.

Exercises on the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora

Rationale for international action

1. What were the motivations for developing the Lusaka Agreement?

Major components of the agreement

2. What is the objective of the Lusaka Agreement?
3. What are the obligations assumed by a party to the agreement?
4. Which bodies will be established under the agreement? What are their functions?

Costs and benefits of becoming party to the agreement

5. What are the costs and benefits of becoming a party to the Lusaka Agreement?
6. What is the relationship between CITES and the Lusaka Agreement?

CHAPTER 5

ATMOSPHERE PROTECTION

INTRODUCTION

The protection and use of the atmosphere creates a variety of problems for international law since, being a dynamic airmass, it cannot be equated with other forms of natural resources. Instead it needs to be conceptualized as a single shared, or common, resource, part of the "common heritage of humanity".[1] The earth's atmosphere cannot, therefore, be divided by the territorial boundaries of nation States or subject to sovereign rights of exploitation by individual nations.

The global atmosphere comprises the gases surrounding the earth. The make-up of these gases is thought to be about 80% water vapour, 12% carbon dioxide, 7% sulphur dioxide and 1% nitrogen and other trace gases. The earth's atmosphere therefore exists in a delicate state of equilibrium. A disturbance to its equilibrium impacts upon the atmospheric balance and the intricate balance of the biosphere as a whole. These consequences have increasingly been demonstrated by global events during the past few decades and have posed new challenges to the international institutions charged with regulating the problem.

The activities of human populations have significant impacts upon the atmosphere. The emissions of gases into the earth's atmosphere disturbs the existing atmospheric balance either directly (for example, by the emission of CO_2 into the atmosphere) or indirectly (for example, by the emission of foreign gases such as chloroflurocarbons into the atmosphere or the emission of pollutants into the earth's waters where they are introduced into the atmosphere through the process of evaporation) altering the relative concentrations of existing atmospheric gases.

International action to protect the global atmosphere has focussed primarily on three issues:

- transboundary air pollution;
- depletion of the ozone layer; and
- climate change.

Transboundary air pollution

The pollution of the earth's atmosphere was first seen as having international dimensions in the *Trail Smelter* arbitration (1938-1941) between Canada and the United States of America. This case arose because of the transboundary impact caused by pollutants which were being emitted into the atmosphere by a lead and zinc smelter located in Trail, British Columbia. In this case it was held that:

> ***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 or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.***[2]

This statement has come to be accepted as a rule of customary international law.

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1 "Common heritage" is a relatively new concept which has, to date, been applied only to the non-living resources of the high seas and the moon. The principle identifies a shared responsibility for the natural environment. The common heritage equally benefits all States and all States are equally responsible for its conservation. It is not widely accepted as an international legal concept and has been explicitly rejected by a number of States including the United States. A similar term, "common concern" is growing in international popularity, identifying a common interest, as opposed to ownership or responsibility; "common concern" is found in both the Convention on the Conservation of Biodiversity as well as the Convention on Climate Change.

2 35 AJIL (1941) 716.

The main sources of atmospheric pollution are: (1) SO_2 and NO_x from the burning of fossil fuels for power generation and industrial use; (2) vehicle exhaust emissions, which emit carbon dioxide (CO_2), sulphur dioxide (SO_2) and nitrous oxides (NO_x); and (3) accidents which release pollutants into the atmosphere. An example of the latter is the nuclear power plant accident at Chernobyl which released a radioactive cloud over Europe.[3]

Pollutants are distributed in the atmosphere according to the prevailing weather patterns. They can be dispersed thousands of kilometres from the original source, rendering their emission relevant to neighbouring nations. The greatest transboundary impact is achieved when SO_2 and NO_x react with water vapour in the air to form acidic compounds which fall back down to earth as "acid rain". Acid rain increases the acidity of soil and water, leaching nutrients from the ground, contaminating water supplies, affecting crops and wildlife, accelerating the decomposition of building materials and releasing toxic metals.

To effectively regulate this problem it is necessary for neighbouring states to cooperate on a bilateral and regional basis, because it is these states which share common airmasses. As a result, many initial efforts to regulate transboundary air pollution have been between neighbouring states or at the regional level. A prime example is the 1979 Convention on Long-Range Transboundary Air Pollution and its protocols, developed under the auspices of the United Nations Economic Commission for Europe.

Ozone depletion and climate change

In the 1980s the international community gradually realized that there was a global threat to the earth's atmosphere. A "hole" in the earth's stratospheric ozone layer which protects life from the harmful effects of the sun's ultraviolet radiation was detected over Antarctica in 1985. This was linked primarily to the emission of chloroflurocarbons (CFCs) into the atmosphere. CFCs disturb the natural equilibrium regulating the concentration of ozone in the upper atmosphere. The decline in the earth's ozone layer has deleterious effects on many life forms. CFCs are also a significant contributor to the so-called "greenhouse effect" which is believed to contribute to the gradual warming of the planet with consequent impacts upon the climate, rainfall and sea-levels. The primary greenhouse gas is carbon dioxide (CO_2) a by-product of the burning of fossil fuels. Since the Industrial Revolution (circa 1850) the concentration of CO_2 in the earth's atmosphere has increased by some 30%.

The impact of the depletion of the ozone layer and the greenhouse effect is inherently global, damaging the whole of the earth's atmosphere. Moreover, it is worth noting that the geographic **sources** of CFCs and CO_2, which are predominantly developed countries of the northern hemisphere, have little relationship to the geographic area of their **effects.** The ultimate impact is upon the long-term sustainability of life on earth.

International action to combat depletion of the ozone layer and climate change are discussed in more detail within the following segments of this chapter.

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3 Kiss and Shelton, International Environmental Law, at 228.

A. PROTECTION OF THE OZONE LAYER

VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER

Rationale for International Action

Life on earth has been safeguarded for thousands of years because of the ozone layer. This layer acts as a shield to protect the Earth against harmful ultraviolet radiation from the sun. If the ozone layer were to disappear, the sun's ultraviolet light would sterilize the surface of the globe, annihilating all terrestrial life.

Ozone is a form of oxygen with three atoms (O_3) instead of the normal two (O_2) that we breathe. Near the Earth's surface ozone is an increasingly troublesome pollutant, a constituent of photochemical smog and of the cocktail of pollutants popularly know as acid rain. But safely up in the stratosphere, 15 to 50 kilometres above the Earth's surface, ozone, by forming a fragile shield against ultraviolet light, is as important to life as oxygen itself.

The ozone layer screens out almost all the harmful ultraviolet rays of the sun. The shorter the wavelength of ultraviolet radiation, the greater the harm it can do to life, and the better it is absorbed by atmospheric components such as oxygen which absorbs the UV-C. Relatively short ultraviolet radiation, known as UV-C, is lethal to living things and is almost totally screened out. Longer wavelength ultraviolet, UV-A, is relatively harmless, and is almost entirely allowed through. In the middle lies UV-B, less lethal than shorter wave radiation but still dangerous; the ozone layer absorbs most of it.

Any damage to the ozone layer will lead to increased UV-B reaching the Earth's surface, which has a potential to cause considerable harm to the environment and life on Earth. The effects of increased UV-B include:

- health problems:
  - skin cancer. A sustained 1 percent decrease in ozone would lead to about a percent increase in the incidence of skin cancer;
  - cataracts. A one percent decrease in ozone has been predicted to be associated with a 0.6 to 0.8 per cent increase in cataracts and may result in 100,000 to 150,000 additional cases of cataract blindness; and
  - depressed immunity to disease;
- plant life: increased UV-B radiation could cause changes in the chemical composition of several species of plants resulting in decreased crop yields and damage to forests;
- aquatic ecosystems: similarly, UV-B radiation also affects ocean life causing damage to aquatic organisms to a depth of 20 meters in clear waters. It is particularly harmful to small creatures such as plankton, fish larvae, shrimps, crab, as well as aquatic plants. As such, countries which rely heavily on fish as an important source of food could be seriously affected; and
- material: UV-B radiation contributes to the fading and cracking of paints and plastics.

Furthermore, ozone depleting gases also contribute to the "greenhouse effect" leading to the gradual warming of the planet which may have significant effects for life on earth (see section on the United Nations Framework Convention on Climate Change).

Due to human activities, ozone in the stratosphere is decreasing. According to the 1994 report of the Scientific Assessment Panel, the overall decline in ozone levels in the northern hemisphere is about 6 percent per decade in winter and spring and 3 per cent per decade in summer and fall. In the southern hemisphere the trend is between 4 to 5 per cent per decade. Over Antarctica, the depletion of the ozone layer during the Antarctic spring is dramatic. In 1995, ozone had depleted by 60 percent from previous observations creating a hole covering more than 20 million square kilometres. Ozone losses have also been detected in the Arctic during the winter.

Chlorofluorocarbons (CFCs) and halons have now been shown to be the primary cause of the depletion of the ozone layer. CFCs are used by both the industry and consumers due to their "miracle" features: extremely volatile, inert and immensely stable, neither inflammable nor poisonous, easy to store and cheap to produce. As such, they are used as working fluid for refrigeration (25 percent), i.e. fridges, freezers and air conditioners (25 percent), aerosols (27 percent), blowing foams (25 percent) for various uses from buildings and cars to fast food containers, and for cleaning (16 percent) and other purposes (7 percent). Being both highly unreactive and insoluble, CFCs are not readily decomposed in the lower atmosphere (the troposphere) and are thus able to be transported into the stratosphere. CFCs are broken down by ultra-violet light, a photochemical reaction which produces free chlorine atoms. A single chlorine atom can destroy up to 100,000 molecules of ozone by a series of chain reactions. A chain reaction means that the chlorine atom used to break down the first molecule of ozone is re-formed by the end of the reaction and is able to destroy another molecule of ozone, and so the process continues. Once in the upper atmosphere CFCs can last for between 70 and 150 years.

Aware of these factors, the international community recognized in the late 1970s the need to take measures to protect the ozone layer.

Negotiation Process

In 1975, the World Meteorological Organization (WMO) conducted the first international assessment of the global ozone situation. The alarming results demonstrated the need for swift response and led to the creation of a Plan of Action on the Ozone Layer, a collaboration of UNEP and WMO. In 1981, UNEP set up the Ad Hoc Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer (hereafter the Working Group).

Two main hindrances to an effective international agreement existed. First, the ozone layer is always changing, and a successful solution had to evolve with these changes. Therefore, the people creating the control measures had to have comprehensive, accurate, and current information available to them. As the problem is global, this entails utilizing information from all countries, including those who cannot afford expensive monitoring and those who place a high emphasis on protecting the confidentiality of those emitting harmful substances. The second hurdle was how to stimulate broad adherence, given the differing situations of countries and the substantial costs of protecting the ozone layer. Given these two challenges, the draft Convention necessarily underwent many changes during the drafting process.

In 1985, the Plenipotentiaries adopted the Vienna Convention for the Protection of the Ozone Layer.[4] As of late 1996, there were 159 Parties to the Vienna Convention.

Although the concept of a subsequent Protocol and Annexes, detailed in Articles 8, 9 and 10 of the eventual Convention, was not suggested immediately, the idea was eventually widely supported. This was because a future Protocol would allow for more comprehensive and effective regulation, and Annexes, being easily adaptable, would provide better flexibility. Additionally, an uncomplicated amendment mechanism allowed for constant evolution of the treaties, which was necessary to take into account current information.

Most countries, even early in the negotiation process, realized that effective control measures were necessary. However, they would be impossible to implement globally unless developed countries assisted in the process. This not only entails financial assistance, but also the transfer of technology, equipment, and facilities. This led to the inclusion of Articles 4 and 5 which require cooperation in the legal, scientific, and technical fields.

Major Components of the Vienna Convention

The Vienna Convention for the Protection of the Ozone Layer is a framework Convention. It establishes no specific controls on ozone depleting substances. Instead it establishes a general obligation upon the parties to protect the ozone layer for the sake of "human health and the environment" (Art 2). It emphasizes the need for international cooperation "[a]ware that measures to protect the ozone layer from modifications due to

4 26 ILM 1529 (1987).

human activities require international cooperation and action, and should be based on relevant scientific and technical considerations" (Preamble).

Because of the framework nature of the Vienna Convention, the substantive mechanisms are found in the Montreal Protocol which was adopted in 1987 and further amended and adjusted since 1990.

Objectives

The Vienna Convention aims at protecting "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" (Art 2).

Obligations/mechanisms to achieve the objectives

Parties are requested to take appropriate measures in accordance with the provisions of the Convention (Art 2). In accordance with the means at their disposal and their capacities, these measures shall include:

- adoption of appropriate legislative and administrative measures (Art 2(2));
- cooperation:
  - on research and scientific assessment (Art 3(1)), systematic observations (Art 3(2)) and information exchange (Art 3(3) and Art 4(1));
  - in the development and transfer of technology and knowledge (Art 4(2));
  - in the formulation of agreed measures, procedures and standard for the implementation of the Convention;
  - transmission of information on measures adopted in implementing the Convention (Art 5).

Bodies established under the Vienna Convention

To ensure the effective implementation of the Convention, two bodies have been established.

Conference of the Parties (CoP): The CoP has to keep under continuous review the implementation of the Convention, including several functions specified in Article 6(4).

Secretariat: The Secretariat has to arrange for and service meetings, prepare and transmit reports on countries' implementation of the Convention and on its own activities, as well as ensuring coordination with other relevant international bodies.

MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER, AND ITS AMENDMENTS

Rationale for International Action

The Vienna Convention, in providing a framework for action to protect the ozone layer, neither specifies particular measures to be taken, nor mentions any substance that might harm the ozone, except in Annex I to the Convention, where chemicals that should be monitored are listed (Art 3 and Annex 1). The 1985 Vienna meeting considered the necessity for more concrete action but failed to achieve agreement on a protocol. But the meeting did ask Dr. Mostafa Tolba, UNEP's Executive Director, to convene another full-scale conference to adopt a protocol on ozone depleting substances, if possible in 1987.

Negotiation Process

Three main issues faced the experts at the negotiating sessions. First, as broad adherence to the Protocol was extremely important, the Contracting Parties to the Vienna Convention were very concerned about the economic ability of developing countries to implement controls while improving the standard of living for their

citizens. Second, flexibility was a primary concern in order to ensure that the controls take advantage of new scientific and technological information in the control measures as well as adapt to the changing needs of the contracting Parties. The third issue was determining the actual details of the phase-out. This was dependent on the economic feasibility of phasing out or substituting chemicals, as well as the rate of new scientific developments.

During the negotiation process, there was much debate about how to measure production and consumption. It was finally decided not to count substances destroyed by approved technologies, so "production" is the amount of controlled substances produced minus the amount destroyed by technologies approved by the parties. Additionally, exports of controlled substances are not included in the calculation of "consumption" which is defined as production plus imports minus exports of controlled substances. The definition of "controlled substance" was also modified to include substances existing in a mixture (as well as alone). The purpose of this change was to include the many isomers and other potentially threatening mixtures of controlled substances (see Art 1).

The most noticeable change during the negotiations was the addition of new substances. Originally, scientists were concerned about chlorofluorocarbons (hereafter CFCs) 11 and 12. Then CFCs 113, 114 and 115 and halons 1211, 1301 and 2402 were added. Methyl chloroform, carbon tetrachloride, methyl bromide, HCFCs and finally HBFCs were put in the annexes containing ozone-depleting substances to be controlled. As flexibility is of the utmost importance, in order to consider the latest scientific information, the annexes are amended as necessary.

Article 2 provides for the control measures to be implemented by the parties. This Article underwent the most debate and discussion because of the conflicting desires of the negotiators to mandate measures strict enough to effectively protect the ozone layer, and flexible enough to encourage global adoption of the Protocol. Eventually, participants agreed to a 20 percent reduction (of 1986 levels) of Annex A substances by 1993, and 50 percent by 1998. The stricter London Amendment to the Protocol in 1990 mandated a total phase-out of all substances in Annex A by the year 2000 (2005 for methyl chloroform). The Copenhagen Amendment in 1992 required: a phase-out of halons by 1994; CFCs, carbon tetrachloride and methyl chloroform by 1996; and a freeze on the production and consumption of methyl bromide at the 1991 levels.

The requirements for qualifying as an Article 5 exemption country were controversial. After lengthy discussion and argument, this exemption permitted developing countries, who did not consume more than 0.3 kg/capita of the controlled substances in Annex A and 0.2 kg/capita of the substances in Annex B, to delay the implementation of control measures.

Article 8, which governs non-compliance with the Protocol, was somewhat controversial. In 1990, the Parties adopted an interim non-compliance procedure and delayed final decision-making about this area until later negotiations. In 1992, the Parties adopted the Non-Compliance procedure and created the Implementation Committee to deal with cases of non-compliance.

Article 10 permits any Party, operating under Article 5, to request technical and financial assistance in order to implement the Protocol and obliges all Parties to cooperate in its implementation. The London Amendment contains a specific reference to the expeditious transfer of technology to Article 5 countries, demonstrating the negotiators' concern about their capability to carry out effective controls. The Multilateral Fund for the implementation of the Montreal Protocol was set up in the present form in Copenhagen in 1992.

The Montreal Protocol on Substances that Deplete the Ozone Layer was adopted in 1987. As of mid-1997, there are 162 Parties to it.

Major Components of the Montreal Protocol

The discussions below are on the Montreal Protocol as amended by the 1990 London Amendment[5] and the 1992 Copenhagen Amendment.[6]

Objectives

The Montreal protocol aims at reducing the consumption and production of ozone-depleting substances.

Obligations/mechanisms to achieve the objectives

To achieve its objectives, the Montreal Protocol regulates certain ozone-depleting substances by:

- setting up control measures among Parties (Art 2) and with non-Parties (Art 4);
- regulating the level of consumption of:
  - CFCs (Art 2A);
  - halons (Art 2B);
  - other fully halogenated CFCs (Art 2C);
  - carbon tetrachloride (Art 2D);
  - 1,1,1 - trichloroethane (methyl chloroform) (Art 2E);
  - hydrochlorofluorocarbons (Art 2F);
  - hydrobromofluorocarbons (Art 2G); and
  - methyl bromide (Art 2H);
- requesting parties to report data on their production, imports and exports of the controlled substances (Art 7);
- promoting research, development, public awareness and exchange of information (Art 9);
- establishing a financial mechanism, namely the Multilateral Fund, to meet all agreed incremental costs of Parties operating under Article 5(1) (Art 10);
- establishing an Implementation Committee (Decisions II/5 and IV/5 of the Meeting of the Parties); and
- requiring all Parties to take every practicable step to transfer the best available, environmentally safe substitutes and related technologies to parties operating under Article 5(1).

Control measures

AMONG PARTIES

Each Party has to phase-out ozone-depleting substances listed in Annexes A to C and E in accordance with the schedules given in Articles2 and 2A to 2H. These schedules have been revised three times during the London Meeting in 1990, the Copenhagen Meeting in 1992 and the Vienna Meeting in 1995. These revisions have accelerated the phase-out of listed ozone-depleting substances.

The Protocol recognizes that all Parties have the obligation 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 (Preamble). However, the Protocol differentiates the level of obligation between Parties that are developing countries and whose annual calculated level of consumption of controlled substances in Annexes A and B is less than 0.3 kg per capita and 0.2 kg per capita, respectively – that is, Parties operating under Article 5(1) – and other Parties. The former ones are entitled to delay their compliance with the control measures set out in Articles 2A to 2E by ten years. As such, the concept of **common but differentiated responsibility** has been fully incorporated into the Montreal Protocol.

WITH NON-PARTIES

Each Party must ban the import and export of any controlled substances after a specified period for each substance or group of substances.

5 **London Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer. UNEP/ OZ. L.Prot. 2/3 (Annex II)**

6 **Montreal Protocol Parties: Adjustments and Amendments to Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen 32 ILM 874 (1993).**

Provisions are also made on the ban of import of products containing controlled substances and products produced with, but not containing, controlled substances from non-Parties (Article 4).

Nevertheless, such import or export from a non-Party may be permitted if that State is determined by a meeting of the Parties to be in full compliance with Articles 2, 2A to 2E and 2G and has submitted data to that effect as specified in Article 7.

FINANCIAL MECHANISM

A Multilateral Fund has been established as a financial mechanism for the implementation of the Montreal Protocol (Art 10(2)). The Fund aims at,among other things:

- meeting, on a grant or concessional basis as appropriate, and according to criteria decided upon by the Parties[7], the agreed incremental costs[8];
- financing clearing-house functions to identify and facilitate possible technical cooperation to assist Parties operating under Article 5(1).d.

The Fund operates under the authority of the Parties who decide on its overall policies (Art 10(4)). The development and monitoring of the implementation of specific operational policies is left to the Executive Committee.[9]

The Fund is financed by contributions from Parties not operating under Article 5(1).

BODIES ESTABLISHED UNDER THE MONTREAL PROTOCOL

To ensure its effective implementation, several bodies have been established under the Montreal Protocol.

Meeting of the Parties (MoP): The MoP has to keep under continuous review the implementation of the Protocol, including several functions specified in Article 10(4).

Secretariat: The Vienna Convention and the Montreal Protocol share the same secretariat, called the Ozone Secretariat. The Secretariat under the Montreal Protocol has similar functions as those under the Vienna Convention. The Ozone Secretariat is based at UNEP headquarters in Nairobi, Kenya.

Implementation Committee: The Second Meeting of the Parties adopted procedures for non-compliance, including the establishment of an Implementation Committee. The Committee has to receive, consider and report to the Meeting of the Parties on reservations expressed by one or more Parties regarding another Party's implementation of its obligations under the Convention, as well as on information reviewed or observations made by the Secretariat regarding information it receives pursuant to Articles 7 and 9. The Meeting of the Parties may then decide upon and call for steps to bring about full compliance with the Protocol, including measures to assist the Party's compliance with the Protocol.

Executive Committee of the Multilateral Fund: The Executive Committee consists of seven Parties operating under Article 5(1), and seven Parties from the group of Parties not so operating. The functions of the Committee include: to develop the plan and budget of the Multilateral Fund and monitor expenditures incurred under the Fund; to develop the criteria for project eligibility, to review the performance reports on the implementation of activities supported by the Fund; to review any disagreement by a Party operating under Article 5(1), on small projects; and to report to the meeting of the Parties on its activities. The Committee meets at least twice a year.

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7 **The Fourth Meeting of the Parties included in the functions of the Executive Committee the development of criteria for project eligibility and guidelines for the implementation of activities supported by the Multilateral Fund. The criteria for project selection under the Multilateral Fund, as well as the guidelines for presentation of projects and criteria for project approval, are given in Section 2.9 on the Multilateral Fund in the Handbook for the International Treaties for Protection of the Ozone Layer, Ozone Secretariat, Fourth Edition, 1996.**

8 **An indicative list of the categories of incremental costs is at Annex VIII to the Report of the Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen, 23-25 November 1992 or in Section 2.9 of the Handbook for the International Treaties.**

9 **The Terms of Reference of the Executive Committee are given at Annex X to the Report of the Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen, 23-25 November 1992.**

Exercises on the Vienna Convention for the Protection of the Ozone Layer

1. Name the five substances that are thought to modify the chemical and physical properties of the ozone layer. (See Annex I, Vienna Convention for the Protection of the Ozone Layer.)
2. Referring to Exercise 1, what are the human activities which produce or contribute to the generation of these substances?
3. Does ozone depletion affect only those countries close to the Antarctic?
4. Name three specific adverse effects of ozone depletion on human health.
5. Is ozone depletion also a contributor to the "greenhouse effect"?
6. How is Principle 21 of the Stockholm Declaration applied in the context of the Vienna Convention for the Protection of the Ozone Layer ? (Preamble)
7. Briefly summarise the general obligations of Parties to the Vienna Convention for the Protection of the Ozone Layer (Art. 2).
8. If your country has adopted measures under Article 2(2 (b))of the Vienna Convention on the Protection for the Ozone Layer, list those measures.
9. What obligations does the Vienna Convention for the Protection of the Ozone Layer require to be fulfilled in relation to research and systematic observations? (Art. 3)
10. On what basis can Parties to the Vienna Convention for the Protection of the Ozone Layer insist that information they supply to relevant data collection bodies should remain confidential (Article 4 and Annex II)?
11. What are the main functions of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer? (Art. 6)
12. Which bodies, agencies and States which are not Parties to the Vienna Convention for the Protection of the Ozone Layer can attend and participate in meetings of the Conference of the Parties? (Art. 6)

Exercises on the Montreal Protocol on Substances that Deplete the Ozone Layer

1. What are the main measures required of Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer ? (Art. 2)
2. The Montreal Protocol has been adjusted three times and twice amended in London in 1990 and in Copenhagen in 1992. What are the differences between adjustments and amendments? (Art. 9 of the Vienna Convention and Art. 2(9) of the Montreal Protocol)
3. What are the implications of "Industrial Rationalization" under Article 1 of the Montreal Protocol on substances that Deplete the Ozone Layer? (SEE ARTICLE 2 PARAGRAPHS 2, 3, 4, 5, 7, 8 AND 9.)
4. How are control levels calculated under the Montreal Protocol on Substanced that Deplete the Ozone Layer ? (Art. 3)
5. What adjustments to the Montreal Protocol on Substances that Deplete the Ozone Layer were made at the second meeting of the Parties in London in 1990? (See 1990 London Adjustments to the Montreal Protocol on substances that Deplete the Ozone Layer).
6. What adjustments to the Montreal Protocol on Substances that Deplete the Ozone Layer were made at the fourth meeting of the Parties in Copenhagen in 1992? (See 1992 Copenhagen Adjustments to the Montreal Protocol on Substances that Deplete the Ozone Layer).

7. In what ways does the Montreal Protocol on Substances that Deplete the Ozone Layer attempt to control trade with non-Parties? (NB Refer to 1990 London Amendments and 1992 Copenhagen Amendments for revised Article 4 of the Montreal Protocol.)

8. How do you see the concept of **common but differentiated responsibility** incorporated in the Montreal Protocol?

9. What measures does the Montreal Protocol on substances that Deplete the Ozone Layer provide for developing countries? (NB Refer to 1990 London Amendments and 1992 Copenhagen Amendments for revised Article 5 of the Montreal Protocol.)

10. What are the "transitional substances" mentioned in the 1990 London Amendment? (NB refer to the 1990 London Amendments, ANNEX C)

11. What are the main features of the financial mechanism provided in article 10 of the Montreal Protocol on Substances that Deplete the Ozone Layer? (NB refer to 1990 London Amendments for revised Article 10 of the Montreal Protocol.)

12. Which countries are eligible for funding by the Multilateral Fund? Is your country eligible for such funding? If yes, did your country already apply for funding?

13. What is it meant by the phrase "agreed incremental costs"?

Discussion Points for Small Groups

14. "Ozone depletion is a problem of truly global dimensions. The failure of even one nation, particularly a high, or potentially high, producer of CFCS, can diminish the success of international cooperation." Discuss.

15. "A strong mechanism is needed to ensure compliance with the Vienna Convention and the Montreal Protocol." Discuss.

Readings from Resource Materials for Ozone Depletion

1. P. Birnie and A. Boyle, Protecting the global atmosphere: (1) Ozone depletion, pp 404-411.

2. UNEP, Action on Ozone, (Nairobi: UNEP's information and Public Affairs, September 1993) (booklet supplied).

3. A. Gallagher, The "New" Montreal Protocol and the International Law for the Protection of the Global Environment, Houston Journal of International Law, vol. 14 (1992) (selected passages)

4. Ozone Secretariat, Handbook for the International Treaties for the Protection of the Ozone Layer 4th ed. (Nairobi: Ozone Secretariat, 1996).

B. INTERNATIONAL LAW OF CLIMATE CHANGE

The following is a partial reprint of the article "The United Nations Framework Convention on Climate Change: A Commentary" by Daniel Bodansky[1] (18 Yale Journal of International Law 451, 492-558 (1993) *Reprinted with permission.*

COMMENTARY

Broadly speaking, the Convention [United Nations Framework Convention on Climate Change] can be separated into four parts: (1) the introductory provisions, setting forth the basic definitions, principles, and objectives of the Convention; (2) the commitments relating to the sources and sinks of greenhouse gases; scientific cooperation, public information, and education; and financial resources and technology transfer; (3) institutional and procedural mechanisms to implement the Convention; and (4) final clauses dealing with such matters as protocols and annexes, amendment, ratification, and entry into force.

The following sections do not attempt to provide a definitive interpretation of the Convention. Rather, they provide a reader's guide, explaining the background and rationale of the Convention's provisions, and highlighting the alternative formulations proposed and the compromises reached. For the Climate Change Convention, like other international agreements, two factors complicate the interpretive task. First, words were debated and selected as much for their political as for their legal significance. Indeed, proposed formulations often took on a talismanic quality, only distantly connected to the actual meaning of the words. Linguistic debates became a proxy for political confrontation, with success or failure measured not just by the substantive outcomes, but also by the inclusion or exclusion of particular terms. For example, developing and developed countries argued for hours over whether economic development should be characterized as "essential" or a "prerequisite" for developing countries' response measures. Delegations often sought to introduce identical language in different parts of the Convention or to move language from one part of the Convention to another, not to effect particular legal consequences, but to highlight certain provisions for political reasons.

Second, the Convention represents a carefully balanced compromise. Many of the Convention's provisions do not attempt to resolve differences so much as paper them over, either through formulations that preserved the positions of all sides, that were deliberately ambiguous, or that deferred issues until the first meeting of the COP [Conference of the Parties]. Although such devices may make it impossible to determine what a provision "means," the ambiguities are constructive: by making agreement possible, they allow further discussions to be carried out by other means, particularly in the process of interpreting and implementing the Convention. From this perspective, the Convention represents not an end point, but rather a punctuation mark in an ongoing process of negotiation.

A. Framework vs. Substantive Approach

In establishing the INC [Intergovernmental Negotiating Committee], the U.N. General Assembly charged it with drafting "an effective framework convention on climate change, containing appropriate commitments."

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This mandate left open a fundamental question that ran throughout the negotiations: was the INC's task to draft a framework convention – that is, a largely procedural convention, establishing a basis for future action – or a substantive convention committing states to specific measures and policies?

Early proposals for the climate change negotiations focused on the framework convention/protocol approach, which had been used with considerable success to deal with the problems of acid rain and depletion of the ozone layer. Under this model, states first negotiate a framework convention, establishing general obligations concerning such matters as scientific research and exchange of information, as well as a skeletal legal and institutional framework for future action. States later develop specific pollution control measures (including emissions limitations targets) and more detailed implementation mechanisms in protocols.

The framework convention/protocol model serves two basic functions. First, it allows work to proceed in an incremental manner. States can begin to address a problem without waiting for a consensus to emerge on appropriate response measures, or even before there is agreement that a problem exists. Lawmaking can thus proceed "amidst great uncertainty." For example, when both the ECE [United Nations Economic Commission for Europe] Long-Range Transboundary Air Pollution Convention (LRTAP) and the Vienna Convention for the Protection of the Ozone Layer (Vienna Ozone Convention) were adopted, some states remained unconvinced of the need for action. Nevertheless, even skeptical states acquiesced in the adoption of these conventions, since the conventions did not commit them to any specific measures. Later, when the scientific evidence became stronger, protocols could be adopted more quickly, since the framework conventions had cleared away many of the preliminary procedural and institutional issues.

Second, the framework convention approach can produce positive feedback loops, making the adoption of specific substantive commitments more likely. Scientific research and assessments carried out under the convention help reduce uncertainties and lay a basis for action. The institutions established by the framework convention play a catalytic role by collecting data, providing technical assistance, and issuing reports. The meetings held under the convention provide a forum for discussions among the technical elites in different countries, and serve to focus international public scrutiny on countries that lag behind an emerging international consensus. In effect, once a framework convention is adopted, the international lawmaking process takes on a momentum of its own. States that were initially reluctant to undertake substantive commitments, but that acquiesce in the seemingly innocuous process set in motion by the framework convention, feel increasing pressure not to fall out of step as that process gains momentum.

Despite the advantages and historical successes of the framework convention/protocol model, many countries wanted the INC to produce more than a framework convention. Given the perceived urgency of the problem as well as the extensive preparatory work of the IPCC [Intergovernmental Panel on Climate Change], they viewed the two-step, framework convention/protocol process as unnecessarily slow. This desire for a more elaborate convention manifested itself in both working groups. In Working Group I, some states argued that the INC should not only adopt general commitments to promote scientific research, exchange information, and so forth, but also set specific targets and timetables to limit greenhouse gas emissions, possibly in protocols developed concurrently with the framework convention. In Working Group II, states disagreed about whether the Convention should establish only a skeletal structure (for example, a conference of the parties and secretariat), leaving the elaboration of this structure to the COP as the need arose, or set forth more developed implementation mechanisms at the outset.

States did not necessarily fall on the same side of the framework/substantive convention split for commitments and for mechanisms. At one extreme, some oil-exporting states favored at most a barebones convention that set general principles rather than specific commitments and that did not establish subsidiary bodies to the COP or binding dispute settlement procedures. In contrast, the United States supported what it characterized as a "process-oriented convention," which, although limited on the commitments side, established quite ambitious implementation mechanisms, including advisory committees on science and implementation; detailed provisions on scientific research, information exchange, and education; and flexible noncompliance procedures. Many developing countries expressed support for specific commitments, as long as those

commitments were differentiated so as to apply primarily to developed countries. However, they questioned many of the more detailed procedural proposals, including those for the creation of subsidiary institutions to the COP. Finally, the European Community, generally joined by Austria, Sweden, Switzerland, AOSIS [Association of Small Island States], and the CANZ group (Canada, Australia, and New Zealand), supported detailed provisions on both substantive commitments and procedural mechanisms, including a specific commitment by developed countries to stabilize emissions of carbon dioxide at 1990 levels by the year 2000, a scientific advisory committee, an implementation and/or executive committee, and binding dispute-settlement procedures.

The debate between the framework and substantive approaches persisted right up to the end of the INC, when the INC considered whether the title of the Convention should be, the "U.N. Convention on Climate Change," or, as was ultimately agreed, the "U.N. Framework Convention on Climate Change." In the end, the Convention lies somewhere between a framework and a substantive convention. It establishes more extensive commitments than those contained in LRTAP or the Vienna Ozone Convention, but falls short of the type of specific emissions control measures contained in the Sulfur Dioxide or Montreal Protocols. While there are few procedural or institutional innovations in the Convention, it does establish scientific and implementation committees and provides for scientific assessment, reporting and review of greenhouse gas levels, financial and technical support to aid implementation, and a financial mechanism.

B. Definitions (Article 1)

Article 1 contains a brief list of terms and their definitions. The terms defined represent only a fraction of the terms proposed for definition during the negotiations. The phrase "adverse effects of climate change" is defined so as to exclude the direct or indirect costs of measures to mitigate climate change, which could potentially be viewed as an indirect result of climate change. Instead, it is limited to "changes in the physical environment or biota" that have "significant deleterious effects." Notably, the Convention defines "climate change" quite stringently, limiting it to changes that are "attributed directly or indirectly to human activity" and are "in addition to natural climate variability." "Emissions," in contrast, is defined broadly to include releases of both greenhouse gases and precursors of greenhouse gases. The definition of "greenhouse gases", by not excluding gases controlled under other agreements like the Montreal Protocol, implicitly includes them.

C. Preamble, Objective, and Principles

The Convention includes not only a Preamble but also articles setting forth the "ultimate objective" of the Convention and outlining general principles to guide the parties in implementing its provisions. Ordinarily, the material included in these articles, which states the intent of the parties and the context of the Convention, would be contained in the Preamble. By instead placing these provisions in the operative part of the Convention, some states sought both to highlight these provisions and to elevate their legal status. Whether this strategy proves effective is a question for the future.

1. PREAMBLE

Preambles to international agreements generally state the background, purposes, and context of the agreement. The Preamble to the Climate Change Convention refers to several existing or emerging concepts of international environmental law, including the characterization of climate as the "common concern of mankind," Principle 21 of the Stockholm Declaration (in the slightly modified form of the Rio Declaration on Environment and Development), and the principle of inter-generational equity.

Several paragraphs address particular concerns of developing countries. Perhaps the most significant of these is paragraph 3, which notes [that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs.

While this paragraph contains much that is of interest to developing countries, it represents a substantial compromise on their part. Developing countries had sought inclusion of the "main responsibility" principle,

which posits that since the climate change problem results primarily from the overconsumptive and profligate lifestyles of developed countries, developed countries bear the main responsibility for combating it. The first clause of paragraph 3, reflecting only the first half of this principle, appears as a neutral factual statement, severed from the corollary that "developed country parties should take the lead in combating climate change," which appears only later in the Convention. Similarly, the reference in the second clause to "per capita emissions" is all that remains of an Indian proposal that the Convention should promote the convergence of greenhouse gas emissions at a common per capita level. Finally, the concluding clause, referring to the growth in emissions of developing countries, was originally proposed as a principle and phrased in mandatory rather than descriptive terms.

The Preamble also addresses developing country concerns by tying the level of response measures to the "differentiated responsibilities and respective capabilities" of the parties; reaffirming the principle of sovereignty; recognizing that "standards applied by some countries may be inappropriate and of unwarranted economic and social costs to other countries, in particular developing countries"; taking into "full account the legitimate priority needs of developing countries for the achievement of sustained economic growth and the eradication of poverty"; and recognizing that developing countries in particular need access to resources required to achieve sustainable development and that, in order to progress towards that goal, "their energy consumption will need to grow."

However, the Preamble does not include several provisions supported by developing countries, such as references to the need for "adequate, new and additional financial resources" and transfer of technology on "preferential, concessional and non-commercial terms"; a paragraph recognizing that improvement in the international economic environment is a "prerequisite" for enabling developing countries to address climate change; and language opposing any new "conditionality" in aid or development financing. Other noteworthy provisions of the Preamble stress the importance of basing response measures on "scientific, technical and economic considerations"; recognize the "no regrets" principle (i.e., that some actions to address climate change can be justified in their own right independent of the climate issue); and contain the only surviving reference in the Convention to energy efficiency.

2. OBJECTIVE (ARTICLE 2)

Article 2 establishes the "ultimate" objective of the Convention as stabilization of greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system. This level is to be achieved "within a time frame sufficient to allow ecosystems to adapt naturally to climate change ... and to enable economic development to proceed in a sustainable manner."

By recognizing the need eventually to stabilize atmospheric concentrations of greenhouse gases, the objective acknowledges climate change as a problem and helps legitimize it as a matter of international concern. Some commentators have interpreted Article 2 as favoring prevention of, over adaptation to, climate change. The text, however, appears to be neutral on this question, since it condemns only those interferences with the climate system that are "dangerous." To the extent that adaptation to climate change is possible, such change could be viewed as benign.

The exact legal status of the Convention's stabilization objective may be the subject of future discussion. Some early proposals relating to the objective phrased it as a collective commitment, binding on all the parties. Although the Secretariat categorized the proposals on objectives as "general obligations" in a compilation document, as ultimately adopted Article 2 uses declarative language and does not characterize the objective as a commitment. Also unclear is whether Article 2 falls under the category of "object and purpose" contained in the Vienna Convention on the Law of Treaties. If so, signatories to the Climate Change Convention would have a duty not to defeat the stabilization objective. In what may have been an attempt to prevent "objective" from being equated with "object and purpose," the Convention adds the qualification "ultimate."

3. PRINCIPLES (ARTICLE 3)

Most developing countries supported the inclusion of an article on general principles, arguing that such an article would serve as the lodestar or compass to guide the parties in implementing and developing the Convention. Some even argued that the Convention should include only principles and leave commitments

to future protocols. In contrast, developed countries generally questioned the inclusion of a principles article. The United States in particular insistently opposed its inclusion, arguing that its legal status was unclear. The United States maintained that if the principles merely stated the intentions of the parties or provided a context for interpreting the Convention's commitments, they served the traditional functions of the preamble, and placing them in the operative part of the Convention would be unnecessary and even misleading. On the other hand, the United States argued, if the principles were themselves commitments, they should be designated in the Convention as such.

The U.S. reasoning, however, fails to take into account that principles may serve a third function, different from those of either preambles or commitments: unlike preambular paragraphs, principles embody legal standards, but the standards they contain are more general than commitments and do not specify particular actions. As Ronald Dworkin explains, both legal principles and legal rules point to particular decisions about legal obligation in particular circumstances, but they differ in the character of the direction they give. Rules are applicable in an all-or-nothing fashion.... [A principle] states a reason that argues in one direction, but does not necessitate a particular decision.... All that is meant, when we say that a particular principle is a principle of our law, is that the principle is one which officials must take into account, if it is relevant, as a consideration inclining in one way or another.

Because of the open-ended character of principles, a government cannot be certain of where they will eventually lead. This may explain why the United States, which is deeply skeptical of the international lawmaking process, opposed a principles article and preferred more clearly enunciated commitments.

Although developing countries ultimately prevailed in obtaining the inclusion of a principles article, the United States successfully pressed for several changes to Article 3 to reduce its potential legal implications. First, a chapeau was added, specifying that the principles are to "guide" the parties in their actions to achieve the objectives of the Convention and to implement its provisions. Second, the term "states" was replaced by "Parties." Finally, the term "inter alia" was added to the chapeau to indicate that the parties may take into account principles other than those listed in Article 3 in implementing the Convention. These three modifications were intended to forestall arguments that the principles in Article 3 are part of customary international law and bind states generally. Instead, the principles clearly apply only to the parties and only in relation to the Convention, not as general law.

Developing countries also had to compromise on the substance of the principles. In some cases, Western opposition led to the transfer of proposed principles to the preamble; in other cases, principles proposed by developing countries were not included in the final text at all. In general, Western countries were able to define the principles more narrowly than in the parallel negotiations on the Rio Declaration, possibly because the INC was a less politicized, less public forum than the UNCED [United Nations Conference on Environment and Development] Preparatory Committee.

As adopted, the first principle reiterates several concepts contained in the preamble: the principle that the climate should be protected for the benefit of present and future generations, the principle of common but differentiated responsibilities and respective capabilities, and the related principle of equity. The final sentence, which states that "developed country Parties should take the lead in combating climate change and the adverse effects thereof," was supported by both developing and developed countries, although they disagreed on why developed countries should take the lead. Developing countries argued that developed countries should so do because they bear the "main responsibility" for the climate change problem. Developed countries (in particular, the United States) opposed this reasoning, but agreed to take the lead because of their greater financial and technical capabilities. Article 4, which defines the respective commitments of developing and developed countries, fleshes out this principle in further detail.

The second principle gives "full consideration" to the specific needs and special circumstances of developing country parties, especially those that are vulnerable to the adverse effects of climate change, and parties that would have to bear a disproportionate or abnormal burden under the Convention. The latter category singles out, but is not limited to, developing countries.

The third principle, the precautionary principle, states that where there is a threat of serious environmental harm, scientific uncertainty should not be used as a reason to postpone precautionary measures to prevent the harm. Various formulations of the precautionary principle now appear regularly in international environmental agreements and declarations. In the INC, the main issue was whether to include a reference to "cost-effectiveness" and thereby introduce economic considerations into what otherwise is a purely environmental standard. The SWCC [Second World Climate Conference] Ministerial Declaration had spoken of "cost-effective" precautionary measures, and the G-77 proposal on principles used a similar formulation. At the final session, the INC Chair dropped any reference to cost-effectiveness from the precautionary principle in his compromise draft, both because of opposition by some European states and because his draft included a separate principle on cost-effectiveness. After attempts by the United States and Saudi Arabia to reintroduce the concept were met with opposition, the United States proposed combining the precautionary principle paragraph with the separate paragraph in the Chair's text on cost-effectiveness, and the INC accepted this compromise. The principle, as adopted, also endorses the comprehensive approach and joint implementation.

The fourth principle is that of sustainable development. Initially, developing countries pressed for inclusion of a principle recognizing that "the right to development is an inalienable human right" and that "[a]ll peoples have an equal right in matters relating to reasonable living standards." Meanwhile, some developed countries wished to include a principle that states have a duty to aim at sustainable development. Both proposals raised serious problems for some delegations. On the one hand, the United States has long refused to accept the "right to development" as advanced in the human rights field, on the grounds that it is vague and could be used by developing countries to demand financial assistance from developed countries. In contrast, developing countries, fearing that "sustainability" might become a new conditionality on financial assistance and ultimately inhibit their development plans, have traditionally expressed doubts about the concept of "sustainable development."

The Convention finesses both issues by stating that "the Parties have a right to, and should, promote sustainable development," thereby addressing the concerns of both developing and developed countries. The Convention speaks of a "right," thereby satisfying developing countries, but the right relates to the "promotion of sustainable development," which is arguably different from the traditional "right to development" of the 1986 U.N. Declaration. With respect to sustainable development, paragraph 4 states that parties "should promote sustainable development," an important recognition by developing states but less than the "duty" sought by developed countries. This paragraph also contains a number of caveats that address developing country concerns, including the recognition that environmental policies and measures should be "appropriate for the specific conditions of each party" and should be integrated with national development plans, and that "economic development is essential for adopting measures to address climate change."

The final principle concerns the need for a supportive and open international economic system, and addresses in particular the relationship between environmental measures and trade, an increasingly contentious issue. The principle reiterates the rule contained in the General Agreement on Tariffs and Trade (GATT) prohibiting measures that "constitute a means of arbitrary or unjustifiable discrimination between countries . . . or a disguised restriction on international trade." It is neutral in effect, since it does not define what types of trade measures constitute "arbitrary or unjustifiable" discrimination or are a disguised restriction on trade. Thus, it neither condones nor forbids using trade measures of the sort contained in the Montreal Protocol to enforce the Convention.

D. Commitments

Like other international environmental agreements, the Convention creates differentiated obligations for developing and developed states. The commitments are organized in a complicated structure, consisting of (1) general commitments, which apply to all parties, both developed and developing; (2) specific commitments on sources and sinks, which apply to the parties listed in Annex I (OECD [Organization for Economic Cooperation and Development] member states and the former Eastern bloc); and (3) specific commitments on financial resources and technology transfer, which apply to the parties listed in Annex II (OECD countries). This structure reflects the INC's initial premise that developing countries would not assume the same commit-

ments as developed countries. The general commitments are qualitative not quantitative in nature and relate to such matters as greenhouse gas inventories, national strategies, reporting, cooperation in scientific research, and information exchange. The specific commitments, on the other hand, include the obligations of OECD countries to provide financial resources and technology to developing countries. Although a weak set of specific commitments for developing countries were also suggested originally, they were eventually abandoned. Thus, the Convention includes specific commitments only for developed countries.

The linkages between the general and specific commitments proved troublesome during the negotiations. Virtually all delegations agreed that the ability of developing countries to undertake general commitments would depend upon the specific commitments of developed countries to provide financial resources and technology. Almost perversely, however, some developing countries also insisted on linking their general commitments with the specific commitments of developed countries to limit greenhouse gas emissions. As a result, when the compromise on targets and timetables reached by developed countries in the final round of the negotiations proved quite weak, a domino effect ensued. Developing countries, led by India, argued that the general commitments had to be correspondingly circumscribed, to preserve what they regarded as the proper balance and differentiation between the commitments of developed countries and those of developing countries.

1. CLASSES OF PARTIES

Developing countries account for an increasing share of greenhouse gas emissions and are expected eventually to exceed the emissions of OECD countries. Nevertheless, it became clear at the outset of the negotiations that developing countries would not accept any quantitative limits on their greenhouse gas emissions for fear that such limitations would impede their economic progress. The negotiators therefore recognized a need to exempt developing countries from any quantitative limits. Until the final negotiating session, however, delegations still had not decided how to determine the classes of parties and the obligations of each. Most developing states argued that the Convention should recognize only two economic categories, "developed" and "developing." Other developing states, including AOSIS, supported a more complex and multivariate differentiation, focusing on special vulnerability to climate change. Several developed states proposed the additional categories of "newly industrialized states" and "countries with economies in transition" (i.e., the states of eastern Europe and the former Soviet Union). In the end, although the Convention uses "developed" and "developing" countries as the primary categories, it also recognizes two additional categories: "countries with economies in transition" and "least developed states."

Proposals on how to define these categories broke down into three types: defining "developed" and "developing" countries by objective criteria, such as per capita income; listing particular states to which specific commitments would apply; or using a combination of the first two methods. The definition method has the benefit of flexibility, since, as countries meet the definition of "developed country," they would automatically become subject to the specific commitments. On the other hand, the list method avoids ambiguities about whether a state meets the definition of "developed."

The INC ultimately decided to use lists rather than definitions to fix the scope of application of the Convention's specific commitments. The specific commitments on sources and sinks of greenhouse gases apply only to states listed in Annex I, which includes two general categories of states: members of the OECD and countries with "economies in transition." The specific commitments on financial resources and technology transfer, in contrast, apply to parties listed in Annex II, which includes OECD members but not economies in transition. Although the lists have several anomalies, the simplicity of the list method promises to minimize conflicts. Both annexes will be reexamined by the end of 1998 with a view to amendments, but a party may be added to an annex only with its approval.

Countries with economies in transition are indicated by an asterisk in Annex I. Although there was no question about which states qualify as economies in transition, their legal status posed a problem. Several eastern European states (Romania and Poland in particular) objected to being characterized as "developed," fearing that such a label might subject them to financial or other additional obligations in the future. By

referring to "the developed country Parties and other Parties included in annex I," Article 4(2) allows these states to argue that they are not developed.

"Least developed states" is not defined in the Convention, nor are states falling into this category listed. The term is likely to be interpreted by reference to the U.N. General Assembly's list of "least developed countries." Least developed states are to receive special consideration for funding and technology transfer, and are allowed to file their initial report under Article 12 "at their discretion" rather than within a specified time frame.

2. GENERAL COMMITMENTS (ARTICLES 4(1), 5, 6, AND 12(1))

From the beginning, the negotiators viewed general commitments as qualitative rather than quantitative in nature. An extensive list of general commitments was proposed, including use of best available technology to limit greenhouse gas emissions; promotion of energy efficiency and conservation; development of renewable energy sources; promotion of sustainable forest management; removal of subsidies that contribute to global warming; harmonization of national policies, taxes, and efficiency standards; internalization of costs; and development and coordination of market instruments. During the negotiations, these proposals were slowly pared away (in some cases, becoming specific commitments) or watered down, and the general commitments became general not only in their application to all parties, but also in their content.

Perhaps the most important general commitments to survive the negotiating process are those designed to promote long-term national planning and international review of national actions – in essence, those embodying the concept of "pledge and review." Article 4(1) requires each party to develop, periodically update, and publish national inventories of greenhouse gas emissions and removals by sinks, using "comparable methodologies" to be agreed on by the COP. These inventories are to lay the basis for national planning and to provide more accurate information for use in future scientific assessments of the greenhouse problem. Each party must also formulate, implement, and regularly update programs to mitigate and adapt to climate change, and communicate information to the COP on its national inventories and the steps it has taken to implement the Convention. The COP is then to review the national reports and assess the parties' implementation, the overall effects of the measures taken pursuant to the Convention, and the progress towards meeting the Convention's objective.

The negotiators heavily debated each of these general commitments. Some developed states argued that parties should be required to use the same methodology to prepare greenhouse gas inventories, so that the inventories would be fully comparable; in contrast, developing countries felt that the same methodologies might not be appropriate for all countries. Similarly, some developing countries argued that national planning requirements should include the formulation and implementation only of programs, not of "strategies," and that provisions to communicate information should be voluntary rather than mandatory. In the end, developing countries agreed to a limited reporting requirement in return for a commitment by developed countries to pay the full costs of the reports.

In contrast to these provisions, which survived the negotiations relatively intact, the general commitments relating to sources and sinks were progressively weakened. Oil-producing states such as Saudi Arabia and Kuwait objected to the regulation of sources, while countries with large forests such as Malaysia and Brazil fought substantial commitments on enhancing sinks. As a result, Article 4(1)(c) (dealing with greenhouse gas emissions) makes no mention of energy efficiency measures or renewable energy sources, and seems to place all relevant economic sectors (energy, transport, industry, agriculture, forestry, and waste management) on an equal footing. Similarly, Article 4(1)(d) fails to single out forests for special consideration in requiring states to promote the sustainable management and enhancement of sinks and reservoirs.

The commitments relating to research and systematic observation were modeled on similar provisions of earlier framework conventions. These provisions, as well as those on education, training, and public awareness were comparatively non-controversial. At the final session, an annex setting forth detailed priorities for research and systematic observation was dropped. Although the proposed annex was not particularly controversial and may be revived by the COP once the Convention enters into force, some delegations felt that they did not have sufficient time to consider it adequately in the INC.

Other general commitments relate to adaptation and to integration of climate change considerations into each party's social, economic, and environmental policies and actions. Earlier drafts had contained a requirement for environmental impact assessments (EIA), but the negotiators accommodated U.S. objections by referring to EIA only as one possible method to integrate climate considerations into policymaking. Some developing countries objected to a proposed general commitment to "coordinate" or "harmonize" economic and administrative instruments, such as taxes, subsidies, and charges. As a result, it was ultimately modified and made a specific commitment.

The general commitments are qualified in several ways so as to make them acceptable to parties with different circumstances. In carrying out their commitments, parties may "take into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances." Moreover, the Convention specifically recognizes the financial and technical limitations of developing countries and their priorities of "economic and social development and poverty eradication." Nevertheless, although developing countries had sought to make their commitments legally contingent on the provision of adequate financial resources and technology, the Convention adopts a more neutral formulation, which makes the factual observation that developing country performance "will depend" on the fulfillment of developed country commitments. Similarly, developing countries had sought language suggesting that they would implement climate change measures only to the extent that the measures were "without detriment" to their national development goals and policies. As adopted, the Convention provides simply that developing country implementation "will take fully into account" their socio-economic priorities.

3. SPECIFIC COMMITMENTS ON SOURCES AND SINKS (ARTICLES 4(2) AND 12(2))

The Convention's provisions on specific commitments set forth three basic requirements relating to sources and sinks. First, each party listed in Annex I must adopt national policies and measures to limit greenhouse gas emissions and to protect and enhance its sinks and reservoirs. This requirement is similar to the general commitments discussed above (which are applicable to all parties). Second, Annex I parties are subject to more stringent reporting requirements, both in terms of timing and content. They must communicate initial reports within six months of the Convention's entry into force, whereas other parties have three years to complete their reports. Moreover, Annex I parties' reports must contain detailed information on policies and measures, as well as on the projected effects on emissions by sources and on removals by sinks, and should take into account the "best available scientific knowledge." To this end, the COP is to adopt and periodically review methodologies for these calculations. Finally, Annex I parties must coordinate relevant economic and administrative instruments and identify and periodically review their policies and practices that contribute to increased greenhouse gas emissions (e.g., subsidies and energy pricing policies). These last commitments were originally proposed as general commitments, but were changed to specific commitments because of objections by several developing countries.

a. Targets and Timetables

In connection with the specific commitments to adopt and report on national policies and measures, the Convention establishes a quasi-target and quasi-timetable for greenhouse gas emissions. The targets and timetables issue was perhaps the most controversial in the entire negotiation. Although, in common parlance, the term "target" means an object or goal, in the context of international environmental negotiations the phrase "targets and timetables" means quantitative limitations, including those that are legally-binding commitments. In recent years, targets and timetables have become the preferred form of international regulation of atmospheric pollution. They tend to be easier to negotiate than uniform international regulatory rules, because they allow countries to choose how to meet overall national emissions levels, for example, by direct regulation, market mechanisms, or taxes. Several key precedents for the Convention used a targets and timetables approach, notably the Montreal Protocol and the Sulfur Dioxide and Nitrogen Oxide Protocols to the LRTAP. Significantly, both direct international regulation and taxation were discussed only marginally in the INC.

International targets and timetables for limiting greenhouse gas emissions could be set on a variety of bases. A per capita target would favor countries with populations that are large relative to their overall emissions,

including most developing states and countries that rely on non-fossil fuels such as hydroelectricity or nuclear power. Alternatively, setting targets on the basis of gross domestic product (GDP) would favor countries that use energy efficiently (i.e., that use relatively little energy per unit output). Both the per capita and GDP approaches have strong policy justifications. Proponents of the per capita approach justify it on the equitable principle that "every human has an equal right to use the atmospheric resource." A GDP-based target, in contrast, would promote the objective of economic efficiency. Both approaches, however, raise the same dilemma. On the one hand, if the per capita or per unit GDP target were set at a level that would stabilize global emissions, countries that have higher than average emissions rates, like the United States would have to reduce their emissions very substantially; such a target would therefore be politically infeasible. On the other hand, if the target were set high enough to make it acceptable to the United States, then global emissions could increase substantially, as states with low emissions rates increase theirs to U.S. levels. Because of such difficulties in obtaining agreement on a per capita or per unit GDP formula, states have tended to negotiate either country-by-country targets or uniform targets based on historical or current emissions levels (sometimes referred to as the "grandfathered emissions" approach). The INC took the latter course, following the precedents of the Sulfur Dioxide, Nitrogen Oxide, and Montreal Protocols, all of which established targets keyed to a base-year emissions level.

Both before and during the negotiations, most Western states pressed vigorously for the adoption of an internationally-defined stabilization target and timetable to stabilize greenhouse gas emissions, particularly carbon dioxide emissions. For example, the European Community supported an immediate commitment by developed countries to stabilize carbon dioxide emissions at 1990 levels by the year 2000. In fact, many OECD countries unilaterally adopted national targets and timetables. The main holdout against the adoption of targets and timetables was the United States, which derided the targets and timetables adopted by most other countries as political in nature, not backed by concrete measures designed to achieve them. The United States opposed targets and timetables for greenhouse gas emissions as premature. It criticized the EC proposal as a rigid and inequitable "top-down" approach, given the differences between countries in national circumstances and implementation costs. The United States argued that the Convention should instead adopt a "bottom-up" approach that encourages the development of better information, national strategies, and action plans.

Although the target and timetable issue is often portrayed as a battle between the United States and the rest of the world, the situation was in fact more complicated. Other industrialized countries did agree with the United States about the need for a long-term planning process. Moreover, while the United States was one of the few industrialized countries to flatly oppose targets and timetables, other OECD states proposed varying formulations of the target and timetable. These differences concerned the strictness of the legal obligations, the types of gases covered, a focus on net or gross emissions, and joint implementation. For example, the CANZ group and Finland favored establishing a stabilization target for all greenhouse gases not controlled by the Montreal Protocol rather than for just carbon dioxide, while Japan supported a "best efforts" approach rather than a firm commitment to limit greenhouse gas emissions. The United Kingdom and, to some extent, Japan attempted to mediate between the European Community and the United States – Japan by proposing the "pledge and review" formula at the June 1991 session, and the United Kingdom by proposing the "phased, comprehensive approach" in the spring of 1991, by supporting "pledge and review," and finally by brokering the ultimate deal of a "quasi-target" and "quasitimetable" in May 1992.

A compromise was finally reached in two highly ambiguous subparagraphs of Article 4(2). By way of setting a quasi-target, Article 4(2) states that developed countries are to adopt and report on national policies to limit emissions and enhance sinks with the "aim of returning to" 1990 emissions levels. Although this phrase has been equated with stabilization, the term "return" unlike "stabilize" does not necessarily have an ongoing temporal dimension. Thus, a state could potentially argue that, once it had achieved a "return" to 1990 levels, emissions increases would be allowed. The "time-table" is even more ambiguous: the Convention simply states that developed countries recognize that a return by the year 2000 to earlier (unspecified) emissions levels would contribute to a modification of longer-term emissions trends.

Article 4(2)'s quasi-target and quasi-timetable are not only highly ambiguous, but also heavily qualified. Because some eastern European countries were concerned about meeting the quasi-target (although most use

energy inefficiently and have ample room for improvement), the COP is to allow countries with economies in transition "a certain degree of flexibility." The Convention does not limit the type of "flexibility" that may be accorded, but identifies the baseline emissions level as a potential subject of flexibility. Additionally, the quasi-timetable is to take into account differences in the parties' starting points and approaches, economic structures, and resource bases; the need to maintain strong and sustainable economic growth; available technologies and other individual circumstances; and the need for equitable and appropriate contributions by each party to the global effort.

Indeed, it is questionable whether the Convention creates a legally binding target and timetable at all. Article 4(2) states that parties "shall" adopt national policies and take corresponding measures to mitigate climate change, and "shall" communicate information on these policies and measures and on the resulting projected emissions. For the quasi-target and quasi-timetable, however, the Convention uses less obligatory language. The target is phrased as an "aim," and the verbs used to characterize the timetable are all descriptive rather than imperative. These ambiguous formulations allow states to put their own spin on the requirements imposed by Article 4(2). Indeed, within days after the Convention was adopted, various countries advanced divergent interpretations. For example, President Bush's domestic policy advisor stated, "there is nothing in any of the language which constitutes a commitment to any specific level of emissions at any time." In contrast, the chief British negotiator characterized the provisions as "indistinguishable" from an absolute guarantee. These widely divergent interpretations illustrate the limitations of the quasi-target and quasi-timetable contained in Article 4(2).

The Convention does provide for the periodic review of the adequacy of the quasi-target and quasi-timetable. The first review is to take place at the COP's inaugural session (which will take place one year after the Convention's entry into force); the second, not later than December 31, 1998; and subsequent reviews, at regular intervals. The reviews are to be based on the best available scientific information, as well as relevant technical, social, and economic information. The COP is to take "appropriate" action based on the reviews, but the Convention does not stipulate whether such action is likely to lead (through an amendment) to stricter or more lenient targets and timetables, or whether protocols might be needed to supplement the parties' obligations.

b. Comprehensive Approach To Emissions Limitation

Before the United States introduced the "comprehensive approach" in a submission to the IPCC in December 1989, the tendency in climate change discussions had been to consider each source and sink of greenhouse gases individually, focusing primarily on reducing carbon dioxide emissions from the energy and transportation sectors. In contrast, the comprehensive approach considers collectively all sources and sinks of different greenhouse gases in formulating policy. Under the comprehensive approach, global warming potentials are calculated for each greenhouse gas to permit emissions of different gases to be compared according to a single metric. States may then take measures to limit their net contribution to the greenhouse effect, either by controlling their aggregate emissions or by enhancing their sinks. Supporters of the comprehensive approach, which included CANZ and most Nordic countries, justified the approach on both economic and environmental grounds. Economically, the comprehensive approach allows states to choose which gases and sinks to focus on, so that they may determine for themselves which abatement measures are most cost-effective. Environmentally, it eliminates incentives to switch from one type of polluting activity to another by focusing on aggregate levels of greenhouse gas emissions rather than any specific gases, sinks, or activities.

Initially, supporters of the comprehensive approach differed about whether to include greenhouse gases controlled under other legal instruments. The United States sought to include CFCs in the comprehensive calculations, although they are already scheduled to be phased out under the Montreal Protocol. Others opposed the inclusion of these gases, arguing that crediting states under the Convention for actions already required under the Montreal Protocol would constitute "double counting" and would allow certain states to increase substantially their emissions of carbon dioxide. The INC seemed to favor the latter approach, although by the end of the negotiations, new scientific evidence made the controversy over CFCs moot.

Delegations at the INC generally accepted the theoretical merits of the comprehensive approach, and it is mentioned favorably in both the preamble and the principles article. In the context of targets and timetables, however, some delegations argued that the comprehensive approach, however theoretically desirable, was infeasible because of insufficient knowledge about the sources, sinks, and global warming potentials of greenhouse gases other than carbon dioxide. In response, some observers suggested that the comprehensive approach could be phased in, beginning with sources and sinks that are well understood and adding others as knowledge about them improves. Ultimately, the INC adopted somewhat ambiguous language in Article 4(2), which refers to "levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol" without specifying whether emissions levels of greenhouse gases should be considered collectively (i.e., the comprehensive approach), or whether each gas should be accounted for separately. In any event, the formulation is notable for singling out carbon dioxide and for clearly excluding greenhouse gases controlled by the Montreal Protocol.

The comprehensive approach raised another issue: some states argued that the Convention should focus on gross greenhouse gas emissions; others advanced a standard of net emissions, derived by subtracting the removal of greenhouse gases by sinks from total emissions by sources. The United States, CANZ, Finland, and Brazil were among those nations that pushed for a net emissions approach, and successfully achieved its inclusion in Decision 1/1 of the INC. Others such as Switzerland, Germany, and Austria argued that a net emissions approach, like the comprehensive approach generally, is theoretically sound but impractical at the present time because of uncertainties about the amounts of greenhouse gases removed by sinks. The net emissions approach also implicated highly contentious questions about whether to include sinks located in the global commons (i.e., ocean and atmospheric sinks), and, if so, how to allocate them. The INC did not resolve these questions and ultimately rejected the proposal to define "sinks."

As with so many other issues, the Convention reflects a compromise on the net emissions issue. Without explicitly setting either a net or gross standard, the Convention refers several times to "emissions by sources and removals by sinks" as a package; nevertheless, Article 4(2)'s quasi-target and quasi-timetable relate only to emissions.

c. Joint Implementation

Since greenhouse gases remain in the atmosphere for a long time and migrate globally, where emissions are reduced makes little difference to the greenhouse effect. This suggests a further extension of the comprehensive approach: namely, focusing on greenhouse gas emissions on a regional or group basis, rather than on a country-by-country basis, so that countries may implement their emissions limitations jointly. Joint implementation can take two forms: (1) setting umbrella or joint targets that apply to a group of countries collectively (creating "bubbles"), or (2) granting credits to a party in achieving its own emissions target for projects it undertakes in other countries. The main rationale for joint implementation is cost-effectiveness. Because of differing national circumstances, the costs of abatement measures can vary substantially by country. If greenhouse gas emissions can be reduced more cheaply in country A than in country B, then allowing B to take advantage of this cost differential by funding an emissions reduction in A is more efficient than requiring B to achieve the same reduction at home. Such a scheme would reduce the costs of implementing the Convention while advancing its ultimate goals.

A primary issue in designing a system of joint implementation is determining its scope of application. One approach would permit joint implementation at the regional level. For example, the EC policy of stabilizing carbon dioxide emissions at 1990 levels by the year 2000 provides for joint implementation within the European Community. Alternatively, joint implementation could be permitted among all countries that are subject to specific quantitative commitments to limit emissions and enhance sinks – that is, among developed states.

A third option would permit joint implementation on a general basis, among both developing and developed states. Proposed by Norway, this last scheme would be most economically efficient, since developing countries tend to use energy less efficiently than developed countries and can attain emissions reductions more cheaply. It would also have the added benefit of encouraging the transfer of substantial financial resources and

technology from developed to developing countries pursuant to joint projects undertaken in developing countries. To protect against possible abuse, however, the scheme would have to set clear baselines from which to measure the emissions reductions in developing countries that a developed country could count towards meeting its target. Otherwise, a developing country could simply say that it planned to increase its emissions, and then agree not to do so as part of a "joint" project with a developed country seeking to reduce its calculated level of emissions. Besides raising the possibility of fraudulent collusive agreements, critics objected that joint implementation between developing and developed countries would be unethical, since it would allow a developed state to make its reductions abroad instead of taking responsibility at home. As a compromise, Germany suggested that the credits given for emissions reductions in developing countries be discounted so as to encourage developed countries to take domestic measures unless joint implementation is substantially cheaper. This would make joint implementation attractive only when the cost differential in developing countries exceeds the discount rate.

Ultimately, the proponents of joint implementation prevailed in the INC. The Convention endorses the general concept of joint implementation, by stating that "efforts to address climate change may be carried out cooperatively by interested Parties," and by permitting states to "implement . . . policies and measures jointly with other Parties." Since these provisions do not restrict which states may participate in joint implementation schemes, the clear implication is that a developed country may implement its commitments jointly with any other country. To safeguard against possible abuse, the Convention provides that "the Conference of the Parties shall, at its first session, . . . take decisions regarding criteria for joint implementation." These criteria could potentially include the German suggestion to discount the credits given for emissions reductions achieved through joint implementation.

Two complementary mechanisms to promote joint implementation were discussed in the INC but were not adopted. First, Norway proposed establishing a clearinghouse to match proposed projects in developing countries with sponsors among developed countries, and to monitor and verify emissions reductions. Although many delegations expressed support for this proposal, it was not incorporated into the Convention because of both a lack of adequate time for consideration and a feeling that a clearinghouse mechanism was overly ambitious so early in the development of the Convention. Second, several delegations discussed establishing a system of socalled "tradeable emissions rights." Under this scheme, states would initially be given an allocation of greenhouse gas emissions based on some agreed criteria. States would then have the right either to emit their allotment of greenhouse gases or to trade or lease their emissions rights to other states. Proponents argued that a tradeable emissions scheme could promote both efficiency (by inducing emissions reductions in those states where they can be made most cheaply) and equity (through the initial allocation of emissions rights). Even more ambitious and complex than a clearinghouse mechanism, a tradeable emissions scheme was not seriously considered for inclusion in the Convention. The quasi-target and quasitimetable actually contained in the Convention proved far too ambiguous to have been the basis for tradeable emissions rights. However, if protocols are eventually negotiated establishing firm targets and timetables, the tradeable emissions mechanism could well be revived.

4. SPECIFIC COMMITMENTS ON FINANCIAL RESOURCES AND TECHNOLOGY TRANSFER

Along with targets and timetables, financial resources and technology transfer were among the most controversial issues in the negotiations. These North-South issues have become prominent in international environmental negotiations only fairly recently. The Vienna Ozone Convention, adopted in 1985, did not provide for the transfer of financial resources. Even the 1987 Montreal Protocol, which established specific control measures for developing countries, contained only a very weak commitment by developed countries to "facilitate the provision of subsidies, aid, credits, guarantees or insurance programs." Following Montreal, however, developing countries began to assert that they would accept obligations to limit their use of ozone-depleting substances only if developed states agreed to provide them with additional financial resources and technology. The 1990 London Amendments responded by establishing a World Bank-administered fund to help developing countries implement the Montreal Protocol. For the most part, INC discussions on financial transfers picked up where the negotiations for the London Amendments left off, and, from the outset, Working Group

I's mandate included the development of a text on "appropriate commitments on adequate and additional financial resources" for developing countries.

a. Financial Resources

Transfers of financial resources to developing countries were proposed for two general purposes: (1) to offset the various costs of implementing the Convention's general commitments, and (2) to aid developing countries in adapting to the adverse effects of climate change if steps taken under the Convention fail to abate global warming adequately.

(1) Implementation Costs (Articles 4(3) and 12(3))

Although many observers believe that developing countries can reduce emissions and enhance sinks more cheaply than developed countries, developing countries' implementation costs are nevertheless likely to be high relative to their ability to pay. For this reason, developing countries argued that they would assume general commitments to combat climate change only if they received financial resources from developed countries to cover their increased (or "incremental") costs. Developed countries generally accepted this position, but insisted in return that the channeling of money occur through an appropriate financial mechanism; that developing countries accept at least some binding commitments, in particular, commitments to report on their greenhouse gas emissions and national programs; and that developing countries agree to establish institutions with adequate authority to implement the Convention effectively. Although this quid pro quo was rarely stated explicitly, it shaped the package that ultimately emerged from the negotiations.

A number of questions arose over the specific terms on which financial transfers would take place. The first related to whether economies in transition were to be donors or recipients of financial assistance. During the negotiations, the United States suggested that economies in transition be eligible to receive financial assistance, but this proposal received little support, even from the potential beneficiaries. Instead, the eastern European states were satisfied with an exemption from any obligation to provide financial resources.

The second question was whether the Convention should establish a fiscal instrument to generate resources. The Toronto Conference Statement had proposed raising money for climate change measures by imposing a levy on fossil fuel consumption. In the INC, however, there was little discussion of creating an automatic mechanism to generate financial resources, such as a carbon tax, emissions fees, or fines. Instead, developed countries are to provide periodic contributions "through bilateral, regional, or other multilateral channels," including the Convention's financial mechanism.

Related questions were whether developed nations would provide financial assistance on a mandatory basis, and if so, whether the Convention should set a minimum or assessed amount. Both the Noordwijk Declaration and the SWCC Ministerial Declaration stated that "additional resources" should be "mobilized" to help developing countries take action to deal with climate change. In the INC, developing countries sought a commitment requiring developed countries to provide financial assistance, while the United States sought to make the provision of financial resources strictly voluntary. Here the developing countries prevailed.

Nevertheless, the Convention does not mandate a specific level of funding. In the UNCED negotiations, developing countries had sought a commitment by developed countries to transfer a certain percentage of their gross national product. In the INC, however, specific figures for financial transfers were never proposed. As an alternative to minimum financial transfers, some developing countries suggested that developed countries be required to make "assessed" contributions – that is, to provide specified amounts, possibly determined by the COP. This proposal was also unsuccessful. Instead, Article 4(3) simply stresses the "need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties." While this provision lays down important guidelines, the Convention allows each developed country to determine for itself the size of its financial contribution. These sums will probably not be known for some time, until more country studies are completed and the costs of implementing the Convention are better known.

Instead of seeking specific minimum sums, some developing countries sought a more general commitment by developed countries to provide "adequate, new and additional" financial resources. Although the exact mean-

ing of this phrase was never fully explained, the general thrust of the developing countries' demands was clear: money to implement the Convention should not be diverted from existing development aid, but should consist of "new and additional" resources. In the INC, most Western countries were willing to accept language requiring the provision of "new and additional" financial resources, although the United States opposed this formulation until near the end of the negotiations.

Also problematic was the demand by developing countries that financial transfers should cover their "full incremental costs" in implementing the Convention. Although the general concept of "incremental costs" is clear, identifying these costs can be very difficult, if not impossible, since for many types of actions there is no baseline from which to measure a country's incremental costs. For this reason, states in general can more easily agree on specific categories of costs to be funded rather than on a general definition of "incremental costs." This was the approach taken under the London Amendments to the Montreal Protocol, where a list of categories of incremental costs was adopted by a decision of the parties.

Ultimately, the parties resolved the financial resources issue by distinguishing between two types of financial transfers: (1) transfers to help developing countries comply with their reporting obligations under Article 12(1); and (2) transfers to help developing countries implement other aspects of the Convention, such as mitigation measures, research, information exchange, education, training, and public awareness. Developing countries were most immediately concerned with the former category of costs, because those costs were their only definite costs of joining the Convention. Developed countries were amenable to underwriting these costs fully, both because they want developing countries to develop and publish inventories and reports and because the costs of doing so will be limited. In contrast, developed countries resisted underwriting the other costs that may be incurred by developing countries in addressing climate change, because such costs are open-ended and potentially great. They could include the costs of building hydroelectric or nuclear facilities to replace coal-fired power plants, or the opportunity costs of not clearing forests for timber sales. Developed countries, particularly the United States and the United Kingdom, wanted to ensure that in accepting the Convention they would not be writing a blank check.

The Convention attempts both to protect developed countries' treasuries and to satisfy developing countries' concerns about bearing the costs of implementing the Convention. Under Article 4(3), developed countries will provide "new and additional financial resources to meet the agreed full costs incurred by developing countries" in fulfilling their reporting requirements. For other implementation measures taken pursuant to Article 4(1), developing countries may propose projects to the Convention's financial mechanism. If the financial mechanism approves the project, developing countries will receive the "agreed full incremental costs" of the project. If the financial mechanism rejects it, developed countries need not provide any funding.

(2) Adaptation Costs (Articles 4(4) and 12(3))

The issue of implementation costs focuses on who should pay for measures to abate climate change; it does not address the question of who should bear the costs of climate change if it actually occurs. Many of the states that would be most affected by climate change do not contribute substantially to the problem, and hence do not need much money to implement abatement measures. If global warming does occur, however, they would incur substantial costs. These costs fall into two related categories: (1) the costs of adaptation measures (e.g., building sea walls to combat sea-level rise and developing heat- and drought-resistant crops); and (2) the costs of damages caused by global warming (e.g. decreased agricultural yield, increased disease, and coastal flooding).

Many scientists believe that past emissions of greenhouse gases make some global warming inevitable, and the Convention nominally addresses the special needs of developing countries that are particularly vulnerable to the adverse effects of climate change. In the discussions of financial commitments, however, the INC focused on funding abatement measures rather than adaptation. This emphasis is not surprising, since potential victim states had less to offer the developed world in exchange for financial transfers than did large developing countries like China, India, and Brazil. Because these latter countries have very high projected emissions and could therefore make a substantial contribution to the prevention of climate change by, for example, promot-

ing energy efficiency and using environmentally- sound technologies, their participation in the Convention was considered by developed countries to be crucial to its success. Moreover, financing measures to mitigate global warming serves the interests of developed countries, since such measures have global effects. In contrast, adaptation measures generate primarily local benefits, so that developed countries have little incentive to fund adaptation measures in other countries.

In an effort to focus attention on the potential adaptation costs of its members, AOSIS proposed that the Convention establish an insurance fund that would provide compensation for damages suffered as a result of sea-level rise. As discussed below, this proposal was successively whittled down. The only remaining trace is a reference in Article 4(8) to insurance as one of the possible measures to meet the specific needs and concerns of developing countries, particularly those that are specially vulnerable.

In the closing days of the negotiations, however, AOSIS did succeed in adding Article 4(4) to the Convention. This paragraph states that developed countries "shall also assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects." The significance of this provision is as yet unclear. Although AOSIS representatives viewed its inclusion as a major victory, parties seeking aid for adaptation costs may have difficulty proving causation. Especially if the amount of sea-level rise is relatively small, it will be difficult to establish that any particular harm is due to climate change rather than natural variability. Moreover, in contrast to Article 4(3), which calls for funding of the "agreed full incremental costs," Article 4(4) does not require any particular degree of funding.

(3) Other Costs

A final category of costs are the "direct and indirect social and economic costs . . . that may result from the implementation of the Convention." Such costs could include the economic losses to fossil-fuel producing states that would result from reductions in fossil fuel consumption by other states. A proposal to provide financial resources for these costs was rejected, and these costs are not encompassed in Article 4(3) or 4(4): Article 4(3) covers only the "costs of implementation measures," not the indirect costs resulting from those measures; Article 4(4) covers the costs of adaptation to the adverse effects only of climate change itself, not of climate change response measures.

b. Technology Transfer (Articles 4(5) and 12(3))

Technology cooperation and transfer is closely related to the issue of financial resources. Delegations generally agreed on the importance of technology transfer and on the need to view technology broadly (to include "know how" as well as hardware). INC discussions on this issue centered on the terms of technology transfer. Developing countries initially sought a commitment by developed countries to transfer technology on "concessional and preferential terms." They argued that, to implement the Convention, they needed access to environmentally sound technologies at an affordable cost. Some even suggested that the Convention provide for "assured access to technology" or "compulsory licensing." In contrast, developed countries emphasized technology "cooperation" rather than "transfer" and the need to protect intellectual property rights in order to preserve incentives for innovation. Most were willing to agree to the transfer of technology only on "fair and most favorable terms." Since the rights to most technologies are privately held, developed countries argued that governments could not commit to their transfer.

For reasons not fully apparent, developing countries decided to press the technology transfer issue at UNCED rather than in the INC, and accepted a quite moderate provision in the Convention which does not define the terms on which transfers will occur. Instead, Article 4(5) requires developed countries simply "to take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties," and to support the "development and enhancement of endogenous capacities and technologies of developing country Parties."

(1) Special Circumstances (Article 4(8)-(10))

The Convention gives special consideration to categories of countries that may be particularly affected either by climate change itself or by the response measures taken to mitigate climate change, or that require special

help in implementing the Convention. Article 4(8) requires the parties to give "full consideration" to the specific needs of developing countries that are particularly vulnerable to the adverse effects of climate change or the impact of implementing response measures. The legal effect of this provision is questionable, and it may well have been included for purely political purposes so that particular categories of countries could receive explicit recognition in the Convention. Although it does not limit the type of consideration that may be given to vulnerable states, it specifically mentions actions relating to funding, insurance, and the transfer of technology. The provision therefore appears to be related to Article 4(4)-(5), which requires developed countries to provide financial resources for adaptation costs and to facilitate the transfer of technology. However, Article 4(8) establishes no meaningful priorities for the provision of financial resources and technology, since most (if not all) developing countries would appear to fall into one or more of the specified categories. These categories include low-lying coastal, transit, and land-locked countries; small island countries; fossil-fuel dependent countries; and countries with semi-arid areas, areas liable to drought and desertification, forested areas, areas prone to natural disaster, areas of high urban atmospheric pollution, and areas with fragile ecosystems such as mountains.

The last two paragraphs of Article 4 address the special needs and concerns of two additional categories of states. Article 4(9) singles out least developed countries for financial and technology transfers. It does not differentiate between funding for implementation and adaptation costs, and therefore seems to apply to both. Article 4(10), included at the insistence of Australia, addresses the needs of countries that may be economically harmed by climate change response measures, particularly countries with economies that are highly dependent on the production, processing, export and/or consumption of fossil fuels. The parties are to "take into consideration [the situation of these states] in the implementation of the commitments of the Convention." Since developing countries that are highly dependent on fossil fuels are already entitled to special consideration under Article 4(8), the distinctive feature of Article 4(10) is its applicability to developed countries that produce fossil fuel (e.g., United States, Australia, and Russia). In this regard, it could potentially be cited by developed states to qualify their commitments under Article 4(2).

E. Institutions and Mechanisms for Implementation

At the third session in Nairobi, the co-chairs of Working Group II identified seven basic implementation functions: (1) scientific assessment, (2) national reporting on implementation, (3) implementation review, (4) secretariat support, (5) dispute settlement, (6) financial transfer, and (7) technology transfer. Notably missing from this list were liability and enforcement, a clear reflection of the prevalent view that the Convention should play a facilitative and consultative role, not a punitive one.

Initially, negotiators discussed ambitious implementation mechanisms, including establishment of a new green fund and/or a technology clearing-house, designation of national assessment bodies, monitoring and verification by an international body, non-compliance procedures, and compulsory dispute settlement. As the discussions in the INC wore on, however, it became increasingly clear that many countries remained deeply skeptical of strong international machinery. On the one hand, many developing countries feared that developed countries would dominate the Convention's machinery and use it to intrude on their sovereignty, much as the IMF [International Monetary Fund] and the World Bank have done in the past. For these countries, it was not enough that the Convention created differential obligations; they did not want it to establish institutions that could review their national policies and actions. On the other hand, many developed countries did not wish to entrust their money to a new and untested financial mechanism. Thus, innovative institutional and procedural mechanisms tended to come under criticism from one or both sides. As a result, the Convention breaks little new ground on implementation matters.

1. INSTITUTIONS

The Convention establishes or defines five institutions: (a) a conference of the parties, (b) a secretariat, (c) a subsidiary body for scientific and technological advice, (d) a subsidiary body for implementation, and (e) a financial mechanism. Delegations generally agreed on the need for both a conference of the parties to provide general policy review and guidance, and a secretariat to provide technical support. However, they differed about whether to create additional bodies and, if so, which ones. Developed states, which generally

supported detailed implementation mechanisms, sought to delegate technical functions relating to science and implementation to subsidiary bodies, so that the COP would not be overburdened. European states tended to prefer institutions composed of independent experts, while the United States argued that technical bodies would be more politically acceptable and effective if composed of government experts. In contrast, developing states, led by India and China, tended to support less extensive implementation mechanisms and questioned the need for additional bodies, although they did agree with the United States that, if additional bodies were established, such bodies should be composed of government representatives. The only new institution supported by the developing states was a climate fund to serve as the financial mechanism for the Convention. Ultimately, the INC created two bodies subsidiary to the COP: one to provide scientific and technological advice, the other to facilitate implementation. In addition, the Convention defines a financial mechanism, whose operation will initially be entrusted to the GEF [Global Environment Facility]. To preserve flexibility, the Convention gives the COP authority to create additional subsidiary bodies as needed.

a. Conference of the Parties (Article 7)

The COP is the "supreme" decision-making body of the Convention. The COP's primary functions are to make the decisions necessary to promote the implementation of the Convention, and to review its effectiveness regularly. In carrying out these functions, the COP is specifically authorized to examine the parties' obligations and the institutional arrangements under the Convention; review the adequacy of the commitments in Article 4(2) of the Convention; facilitate, upon request, the coordination of national measures; and make recommendations on any matters necessary to realize the goals of the Convention. Meetings of the COP are to take place annually and are likely to play a crucial role in determining the effectiveness and future evolution of the Convention. These meetings will provide a forum for discussions among states and between states and NGOs, focus public attention on the problem of climate change, and bring peer and public pressure on states to comply with and strengthen their commitments under the Convention.

In addition to these primary functions, the COP is responsible for a number of specific tasks and routine functions. For instance, the COP is to develop methodologies for calculating national inventories of greenhouse gases and the effectiveness of efforts to limit emissions and enhance sinks. It must also adopt criteria and guidelines for joint implementation and reporting, and designate a permanent secretariat. The COP is to manage the implementation of the Convention's financial provisions by negotiating with the entity entrusted with the operation of the financial mechanism, and by deciding whether to maintain the interim financial arrangements. The COP's more routine functions include establishing and reviewing reports by subsidiary bodies, and adopting rules of procedure and financial rules. A savings clause, allowing the COP to exercise such other functions as are required to achieve the Convention's objective, ensures that the COP will not be vulnerable to challenges to its legal authority. The Convention leaves open whether the COP will make decisions by consensus or use some type of majority rule. At its first session, the COP will adopt rules of procedure which "may include specified majorities for the adoption of particular decisions."

In a departure from the standard clause on observers found in other agreements, the Convention allows non-state observers to the United Nations or its specialized agencies to attend the COP as observers. The United States accepted this formulation to forestall questions that might otherwise arise about the Palestinian Liberation Organization's competence to attend the COP as a "state" member of U.N. specialized agencies. The Convention also permits qualified NGOs to attend meetings as observers unless at least one- third of the parties present object. Given the prominent role that NGOs played in the INC's deliberations, many participants regarded this as an important means of promoting transparency and focusing public attention on the COP's work.

b. Secretariat (Articles 8 and 21(1))

Two general issues arose with respect to the Secretariat: first, the scope of its authority; and second, whether to use an existing institution or to create a new one. Some commentators and delegations suggested a broad role for the Secretariat in monitoring compliance, modelled on the verification functions of the International Atomic Energy Agency (IAEA). However, most delegations preferred to establish a secretariat with strictly administrative functions. Some even raised questions about the scope of the Secretariat's power to prepare

reports, fearing that the Secretariat's reports might reflect adversely on particular parties. Thus, Article 8 authorizes the Secretariat to arrange for sessions of the COP, to facilitate assistance to parties in preparing their reports, to compile and transmit reports submitted to it by others, and to coordinate with secretariats established under other international agreements. However, Article 8 does not authorize the Secretariat to collect data or review or report on the implementation of the Convention by the parties.

Although many delegations expressed support for using the INC Secretariat as the permanent secretariat for the Convention, the Convention maximizes flexibility by leaving open which institution shall serve as the Secretariat. After the Convention enters into force, the INC Secretariat will continue to carry out secretariat functions on an interim basis and will prepare for the first COP. The COP shall then decide whether to continue this arrangement, designate another existing institution to serve as the secretariat, such as UNEP [United Nations Environment Programme] or WMO [World Meteorological Organization], or create a new institution.

c. Subsidiary Body for Scientific and Technological Advice (Article 9)

Although decisions under the Convention are to be based on the best available scientific information, not all states were convinced of the merits of establishing a new science committee. Some developing countries argued that the IPCC could adequately provide scientific assessments and advice to the COP. In response, other states argued that a new committee would help keep politics out of the IPCC, and would serve as a useful interface between outside scientific groups and the Convention's institutions. At times during the negotiations it appeared that, because of these differences, the Convention would not establish a science committee or would let the COP determine its composition, functions, and procedures. In the end, however, the Convention not only establishes a science committee, but also specifies its composition and functions. However, as a concession to developing countries, who were particularly concerned about technology development and transfer, the mandate of the body was expanded to include technological as well as scientific matters.

Under Article 9, the Scientific and Technological Committee will assess the state of scientific knowledge and the effects of measures taken to implement the Convention, and provide information on innovative, efficient, and state-of-the-art technologies. Given the Committee's multi-disciplinary character, its mandate could potentially include economic and social issues. The Committee is to provide information and advice only to the COP and its subsidiary bodies. This limitation reflects the concern of some states that providing advice directly to individual parties could be intrusive.

The Scientific and Technological Committee will be open to all parties and will be composed of government representatives "competent in the relevant field of expertise." AOSIS and some European states had preferred a more independent group of experts with limited membership. However, most developing countries insisted on having government representatives on the Committee, and the United States argued that an open-ended, governmental group would best be able to serve as a liaison between primarily scientific bodies (such as the IPCC) and the politically-oriented COP. Although Article 9 does not specifically address the relationship between the new committee and the IPCC, it does stipulate that the Committee is to draw upon "existing competent international bodies" in carrying out its functions. Presumably the IPCC will be among those consulted; however, the Convention's only specific reference to the IPCC appears in the provision for interim arrangements.

d. Subsidiary Body for Implementation (Article 10)

For a time during the negotiations, it appeared possible that an implementation committee with strong technical review powers would be established. Both the Consolidated Working Document and the Revised Text Under Negotiation contained bracketed provisions establishing an implementation committee with authority to receive information from international and nongovernmental organizations, and to review individual parties' reports. Developed countries initially proposed giving it two general functions: first, providing technical assistance to the parties in developing inventories, formulating national strategies, and meeting the Convention's reporting requirements; and, second, reviewing and reporting on the implementation of the Convention on a global and national basis. Austria suggested that this latter function might include quasi-adjudicative authority to resolve questions relating to a country's implementation of or compliance with the Convention.

However, a number of developing countries, in particular India and China, objected strongly to international review of their national energy, transportation, and industrial policies, and threatened to block the adoption of the Convention if it provided for an implementation committee. An eleventh-hour compromise to narrowly define the powers of the implementation body broke the impasse. The Implementation Committee's function was reduced to assessing "the overall aggregated effect of the steps taken by the Parties" and considering the reports of developed countries in order to assist the COP in reviewing whether to amend the Convention's specific commitments on sources and sinks. The Implementation Committee has no express authority to assess the steps taken by individual developing states to implement the Convention. Nevertheless, even these limited functions are more extensive than those of the Secretariat or the Scientific and Technological Committee, which do not have any monitoring or reviewing role under the Convention.

The Implementation Committee's functions include assisting the COP in preparing and implementing its decisions. For reasons not altogether clear, the Implementation Committee's technical assistance functions were dropped from Article 10. The Convention instead divides these functions between the COP, which is to arrange for the provision of technical and financial support, and the Secretariat, which is to facilitate assistance in the compilation and communication of reports.

Like the Science and Technological Committee, the Implementation Committee will be open-ended and will consist of government representatives who are expert on matters related to climate change. The Convention makes no special provision for participation by NGOs at the Implementation Committee's meetings as it does for meetings of the COP.

e. Financial Mechanism (Articles 11 and 21(3))

After the targets and timetables issue, perhaps the most controversial issue in the entire negotiation was whether the Convention should establish a new financial institution – a so-called "climate" or "green" fund – or channel financial assistance through the existing GEF, a joint project of the World Bank, UNEP, and UNDP [United Nations Development Programme]. Many developed countries did not wish to entrust their money to a new and untested financial mechanism, potentially under the sway of developing countries. Instead, they argued that the GEF should serve as the financial mechanism for the Convention.

In contrast, the South argued that since providing financial assistance to developing countries that participate in efforts to curb climate change is an obligation, not charity, donor countries do not have a right to control the financial mechanism. Consequently, channelling financial assistance through existing development institutions such as the World Bank would be inappropriate, because these institutions are dominated by the North. Developing countries opposed use of the GEF in particular, arguing that its decision-making is not transparent (since there is no right of access to documents and meetings) or democratic (since the World Bank, which chairs and administers the GEF, uses a system of weighted voting). They proposed establishing a completely new institution that would operate under the collective authority of the contracting parties.

In the end, the North and South agreed on a compromise solution that neither establishes a new institution nor conclusively designates the GEF as the financial mechanism for implementing the Convention. Article 11 simply "defines" a financial mechanism by setting forth the mechanism's general characteristics and governance. The GEF is entrusted with the operation of the financial mechanism only until the first meeting of the COP, when the COP will decide whether to make this arrangement permanent. Although it is likely the COP will continue the arrangement with the GEF, Article 11 permits the COP to authorize any other existing international entity or entities, such as the UNDP, to operate the financial mechanism.

Article 11 contains several clauses that seem to be constructively ambiguous or silent on certain issues. In designating the GEF as the interim financial mechanism, the Convention states that the GEF should be expanded so that it has "universal" membership (i.e., be open to all states) and be "appropriately restructured." Although these clauses appear to refer to the requirement that the financial mechanism have "an equitable and balanced representation of all parties," it is unclear what that requirement entails. For instance, the United States contends that the present weighted voting system of the World Bank is "equitable and balanced," while developing countries prefer a system in which each party would have an equal vote.

Another ambiguity involves the relationship between the COP and the financial mechanism. The nature of this relationship would be particularly problematic if the GEF continued to serve as the financial mechanism, since it has a governance structure independent of the Convention. Developed states wished to maintain the autonomy of the GEF, particularly in deciding which projects to fund. In contrast, developing countries wanted the financial mechanism to be under the "authority" or "supervision" of the COP. Article 11 resolves this difference by distinguishing between general policy guidance and specific funding decisions. It provides that the COP is to decide on policies, programme priorities, and eligibility criteria, but does not give the COP decision-making authority in project selection. Instead, Article 11 provides only that the COP and the financial mechanism agree on modalities "to ensure that the funded projects . . . are in conformity with the policies, programme priorities, and eligibility criteria established by the Conference of the Parties," as well as on modalities by which funding decisions may be "reconsidered." Article 11 does provide that the financial mechanism is to "function under the guidance of and be accountable to the COP." Accountability seems to suggest something between "authority" and "guidance," but the exact content of the financial mechanism's obligation under Article 11 remains unclear. Some developed countries asserted that the provision of reports would satisfy that obligation; however, nothing in the language of Article 11 states that reports are sufficient to meet, and are not merely consistent with, the requirements of accountability.

Although Article 11 states that the financial mechanism is to provide financial resources on a grant or concessional basis, it does not specify the purposes for which financial resources may be provided. In particular, it does not state whether the financial mechanism may be used to provide financial resources to particularly vulnerable states for adaptation costs pursuant to Article 4(4). Currently, the GEF is not authorized to make grants for projects that have local rather than global benefits, and hence could not provide funding for adaptation costs. The United States successfully opposed AOSIS proposals to insert a phrase in Article 11 which would have explicitly encompassed compensation for adaptation costs. This preserves the position of donor countries that the GEF be limited to projects that have global benefits, and that Article 4(4) transfers be made through bilateral, regional, or other multilateral channels.

Early in the negotiations, several delegations suggested establishing a separate mechanism to coordinate, promote, and facilitate the transfer of technology. Both Norway and Mexico informally proposed creating a technology clearinghouse. However, most delegations felt that it would be more efficient to have a single mechanism, and by the end of INC 4 they had tacitly decided not to establish a separate mechanism for technology transfer. Attention then turned to the role the financial mechanism would play in technology transfer. Some proposals set forth extensive functions, including the receipt of both technological and monetary contributions. As with many other aspects of the Convention, however, a more skeletal formulation was ultimately adopted in order to gain consensus in the limited time available. Article 11 authorizes the financial mechanism to provide grants for the transfer of technologies, but does not specify that the mechanism will actually receive technologies or play a direct role in transferring them.

The INC also declined to adopt a proposal by AOSIS to create an insurance fund (modelled on existing maritime insurance funds) for the potential damage caused by a rise in sea levels. AOSIS had proposed that the insurance fund would not be established immediately, but would come into existence only if the rate of sea level rise exceeded an agreed upon figure. Contributions to the proposed fund would be based primarily on a country's gross national product, with an adjustment for its total carbon dioxide emissions, and receipt of benefits from the fund would occur only if the absolute level (as opposed to the rate) of sea level rise had exceeded a specified figure. In light of the reluctance shown by states to establish liability regimes in other areas, such as ocean dumping, where both the scope of potential damages and the uncertainties are much lower, no one expected that the INC would actually establish an insurance fund. The insurance fund seems to have been proposed by AOSIS as a bargaining chip and as the opening round of a long-term campaign to begin to familiarize delegations with the concept of insurance. Initially, a compromise formulation was suggested, directing the parties to consider establishing an insurance scheme. Even this was not acceptable to many Western states. As a result, the Convention refers to insurance only as one of the actions to which parties should give "full consideration" in meeting the specific needs and concerns of developing countries arising from the adverse effects of climate change.

2. MECHANISMS

The Convention's implementation mechanisms establish a limited form of "pledge and review." First, countries will communicate information on their greenhouse gas emissions and implementation measures. While this reporting requirement falls well short of a binding "pledge," it nonetheless forces parties to state publicly what they are doing and may thereby serve as a prod to national action. These national reports will then be subject to international review at meetings of the COP.

In addition to the COP's periodic assessment of implementation issues, the INC discussed a number of mechanisms to review individual parties' compliance with the Convention. Bilateral dispute settlement has traditionally served as a principal compliance mechanism in international agreements; the Convention contains a boilerplate dispute settlement article, which provides for negotiation, conciliation, and non-compulsory arbitration or adjudication. In practice, however, states have rarely used bilateral dispute settlement to address global environmental problems, both because no one state is particularly affected by another state's lack of compliance and because states generally seek to avoid adversarial proceedings with one another. Therefore, the INC also considered establishing a multilateral mechanism, modelled on the non-compliance procedure of the Montreal Protocol. This supplementary mechanism, inelegantly styled a "multilateral consultative process to resolve questions regarding implementation," would allow states to raise questions about another state's implementation of the Convention in a non-adversarial setting. The Convention directs the COP to consider establishing such a mechanism at its first session.

a. Communication of Information (Article 12)

Reporting requirements promote transparency and thereby facilitate international review of a country's performance. Initially, some developed countries sought to include ambitious reporting requirements in the Convention, perhaps in a detailed annex setting forth the information that reports should contain or directing the COP to adopt agreed common formats for reports. Some suggested that the Convention require parties to nominate a "national assessment body" that would prepare reports through a public process, with review or comments by NGO's. All of these proposals were eventually abandoned as the difficulty of setting even a simple reporting requirement became apparent. Although many international agreements include reporting requirements, some developing countries were reluctant to accept such a requirement in this Convention, which, because of its potential breadth, could subject virtually all economic sectors to a reporting requirement. They argued that reports would be burdensome and intrusive and should be voluntary rather than mandatory. Some developing countries even objected to the term "reporting," contending that it suggested an intrusive, interventionist process. As a result, the Convention instead uses the more neutral phrase "communication of information." Against this backdrop, the reporting requirements finally negotiated, though modest, still represent a significant concession and open the way to the development of more substantial requirements in the future.

The Convention sharply differentiates between the required content of developing and developed states' reports. All parties must communicate information on their national inventory of greenhouse gas emissions and removals (to the extent their capabilities permit), as well as on the steps taken or planned to implement the Convention. Developed states and economies-in-transition must also submit a detailed description of their policies and measures to implement their specific commitments, and an estimate of the effect of these measures and policies on their sources and sinks. Finally, OECD countries and the European Community must report on their transfers of financial resources and technology. While these reporting requirements are extensive, they certainly are not exhaustive. For example, developed countries must identify and periodically review policies that encourage greenhouse gas emissions, such as tax subsidies or pricing policies, but they are not required to report on such policies or to identify potential abatement measures. Changes in the Convention's reporting requirements would require an amendment or the negotiation of a protocol, since the INC specifically declined to authorize the COP to elaborate additional reporting requirements, or to include the reporting requirements in an annex, which could be amended more easily.

The main issue regarding reports, apart from the question of whether they should be required, was confidentiality. Some developing states wanted each party to be able to determine what information it could withhold

on the basis of confidentiality; others felt that purportedly confidential information should be communicated to the Secretariat, even if not made public, and should be subject to a review process. The Convention reflects a compromise between these views. States must include confidential information in their reports, but if they designate information as confidential, the Secretariat is to protect that information by aggregating it with other information – for example, by combining information about emissions from several different sources. To promote transparency and facilitate NGO review, reports are to be made public when the Secretariat submits them to the COP.

The Convention provides some flexibility in reporting requirements. Developing countries are given considerably more time to submit their initial reports than developed countries: three years as opposed to six months. Least developed countries may submit their initial reports at their discretion; the COP will fix their schedule for subsequent reports. Groups of parties, including but not limited to regional economic integration organizations such as the European Community, may file a report jointly, provided that (1) the report includes information on each state's implementation of the Convention; (2) the group gives prior notice to the COP; and (3) the report conforms to the COP's guidelines for joint reports. Finally, developing countries are entitled to full financial support in preparing their reports, and can receive technical assistance on request.

b. International Review of Implementation (Article 7(2))

Because of the potentially high costs of climate change response measures, many observers have argued that states will undertake strong commitments only if adequate monitoring and verification procedures exist. Such procedures provide information to other parties about whether potential competitors are complying with their obligations and help deter free riders through public embarrassment. They can also facilitate international review of a country's performance and serve as a trigger for the application of sanctions.

Early in the negotiations, Working Group II considered a number of ambitious verification procedures, in some cases modelled on procedures used in other international agreements. The group considered placing responsibility for monitoring in the hands of one or more international organizations such as WMO or UNEP, establishing a permanent review committee composed of independent technical experts, or using international teams of experts. Only remnants of these proposals remain in the Convention, partly because the INC's failure to agree to any specific control measures made monitoring and verification procedures less urgent. In addition, most delegations worked from the assumption that parties would act in good faith, and that failure to comply with the Convention would result from circumstances beyond a party's control, such as lack of financial or technical resources. Thus, the INC's task was not so much to design verification procedures as to develop mechanisms to help countries fulfill their obligations. Finally, the entire question of monitoring and verification was extremely sensitive politically for many developing country delegations. Indeed, some developing countries objected to the use of such terms as "monitoring," "compliance," and "verification;" the first because it had too activist and intrusive a tone, the last two because they suggested that countries might act in bad faith and wilfully violate their obligations. As a result, the Convention uses more neutral, descriptive language: "monitor" was replaced by "assess," "compliance" by "implementation," and "verification" by "resolution of questions."

As it became increasingly clear that the Convention would not establish international monitoring or fact-finding mechanisms, attention focused on international review of national reports. Delegations identified several different types of potential review: (1) a procedural review to determine whether a report has been submitted and whether it conforms to any formal guidelines established for reports; (2) a technical review of, for example, the methodologies used and whether particular national measures are likely to reduce emissions by the stated amount; and (3) a more substantive review, evaluating a party's compliance with its obligations under the Convention.

The Convention assigns the primary review function to the COP, which has the mandate to "assess, on the basis of all information made available to it in accordance with the provisions of the Convention, the implementation of the Convention by the parties, the overall effects of the measures taken pursuant to the Convention, . . . and the extent to which progress towards the objective of the Convention is being achieved."

Although this provision does not unambiguously authorize review of individual countries' performance, the provision as a whole suggests that the parties intended to permit individual review. The use of the plural in the phrase, "implementation of the Convention by the Parties," can be read to suggest that the provision is aimed at review of implementation by the parties as a whole. However, such an interpretation would make the provision redundant, since the following clause ("the overall effects of the measures taken") addresses collective implementation. If each clause is to be understood as a distinct mandate to the COP, the former clause must be read to address individual review.

c. Multilateral Consultative Process to Resolve Questions Regarding Implementation (Article 13)

To resolve questions regarding a party's compliance with the Convention, many felt that a multilateral, non-adversarial procedure would be preferable to traditional dispute settlement. Adversarial procedures were felt to be particularly inappropriate because climate change is a global concern; non-compliance would therefore affect all the parties collectively, not simply the party challenging another for violating the Convention. Moreover, as one commentator noted, a non-adjudicative mechanism would promote cooperative relations by allowing questions to be resolved even before they have "ripened into a full-blown legal dispute."

Although reservations by some developing states ultimately prevented Working Group II from agreeing to establish a multilateral, non-compliance mechanism, a significant degree of consensus did emerge on this subject. For example, delegations generally agreed that the mechanism should be forward-rather than backward-looking: its main goal should be to help parties come into compliance with the Convention rather than to adjudicate blame or impose sanctions. In this respect, the mechanism would be similar to the non-compliance procedure established under the Montreal Protocol. Two primary alternatives were suggested regarding who should conduct the procedure: ad hoc panels established by the COP (modelled on GATT panels) or the Implementation Committee. Given the political nature of the non-compliance procedure, some delegations questioned whether the COP would agree to establish ad hoc panels; therefore, they preferred to entrust this function to a standing committee, such as the Implementation Committee. Others felt that if the Implementation Committee had a technical character, it should not perform a quasi-political function such as non-compliance review; alternatively, if it had an open-ended membership (as was ultimately decided), it would be too unwieldy (and possibly too political) to undertake this type of detailed review. Two other options – namely to establish a standing, semi-adjudicative body, or to make the establishment of panels automatic rather than dependent on a decision of the COP – were not extensively discussed in the INC.

Rather than establish a multilateral non-compliance procedure immediately, the Convention calls on the COP to consider the establishment of such a mechanism at its first session. If the COP does choose to implement a non-compliance procedure, it will need to decide whether individual parties, the COP, subsidiary bodies of the Convention, international organizations, and/or NGOs will be given standing to initiate the procedure. In addition, the COP must consider whether to establish a system of penalties for non-compliance.

d. Settlement of Disputes (Article 14)

Regardless of the outcome of the multilateral consultative mechanism issue, most delegations believed the Convention should also provide for traditional bilateral dispute settlement. In their view, the two mechanisms are complementary rather than competing. As is often the case with respect to dispute settlement provisions, the main questions were whether the procedure should be mandatory or voluntary, and binding or non-binding. At one extreme, some developing countries wanted purely voluntary, non-binding procedures, under which states with disputes would engage first in negotiations and then, if those failed, in non-binding conciliation. Alternatively, the Working Group II Co-Chairs suggested the possibility of compulsory arbitration if parties that have not accepted the jurisdiction of the International Court of Justice (ICJ) are unable to resolve a dispute through negotiation or conciliation.

Article 14 represents a compromise, modelled on the dispute settlement provisions of other international environmental agreements. If a dispute arises, the states concerned must first seek to settle it through negotiations or some other peaceful means. If that is unsuccessful, either state may request the creation of a conciliation commission, composed of an equal number of members appointed by each party and a chair

chosen by the other members of the commission. The conciliation commission has the authority only to make "recommendatory" awards, which the parties are to "consider in good faith." However, if both parties have accepted in advance the jurisdiction of the ICJ or compulsory arbitration under Article 14(2), then these compulsory procedures may be used. Annexes on both conciliation and arbitration were proposed, modelled on those found in other environmental conventions, but could not be adopted in the short time available. Article 14 thus calls on the COP to adopt annexes on these subjects "as soon as practicable."

F. Final Clauses

1. AMENDMENTS, ANNEXES, AND PROTOCOLS TO THE CONVENTION (ARTICLES 15, 16, AND 17)

Given the current uncertainties about climate change, it is important that the Convention be able to respond to new knowledge and new concerns. To permit this responsiveness, the Convention, like many other recent international environmental agreements, provides for a somewhat flexible law-making process by allowing amendments to be made by a qualified majority. An amendment may be adopted in this manner only if all efforts at consensus have been exhausted and if three-quarters of the parties vote for and ratify it. Even then, however, the amendment applies only to those parties that affirmatively accept it.

Annexes can be adopted or amended more easily: a new annex or an amendment to an annex does not require ratification or acceptance by states to enter into force; it binds parties automatically unless a party notifies the depositary in writing of its non-acceptance. Thus, although an annex or an amendment to an annex, like an amendment to the Convention, cannot bind a state against its will, the presumption is reversed in the two situations. An amendment binds only those parties that accept it, whereas a new annex or an amendment to an annex binds a party unless the party opts out. Because of the comparative ease with which annexes may be adopted and amended, some delegations sought to limit the permissible content of annexes, to ensure that new legal requirements, which should be the subject of a protocol or a Convention amendment, could not be placed in an annex. Consequently, annexes are to be "restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural, or administrative character."

States disagreed about the need for protocols setting forth specific control measures. The INC did not call for the negotiation of any protocols, let alone establish a timetable for doing so. Instead, this question is left to future discussions, either in the INC or, after the Convention enters into force, in the COP.

To maximize flexibility, the Convention does not specify the requirements for entry into force or amendment of protocols. While framework conventions rarely require particular procedures for protocols, they often provide default procedures that apply unless a protocol otherwise provides. Such default procedures save time by eliminating the need to renegotiate the same issues over and over for each individual protocol. The INC considered specifying default procedures, but ultimately decided not to do so. These matters will instead be dealt with in each individual protocol.

2. VOTING RIGHTS, SIGNATURE, AND RATIFICATION (ARTICLES 18, 20, AND 22)

Because of the global nature of the climate change problem, the Convention allows any state to sign and become a party. Members of the United Nations or of any of its specialized agencies may sign, as may parties to the Statute of the ICJ. Regional economic integration organizations (REIOs) such as the European Community are also eligible to become parties to the Convention. The Convention includes what is becoming the standard provision regarding ratification by REIOs, namely that REIOs, in their instruments of ratification, must declare the extent of their competence on matters governed by the Convention. REIO's will have the number of votes equal to the number of their member states that are party to the Convention, but may not vote on a matter if any member state exercises its right to vote.

3. ENTRY INTO FORCE (ARTICLE 23)

Because the COP is responsible for adopting rules of procedure and financial rules, establishing criteria for joint implementation, and approving comparable methodologies for inventories, the COP's first meeting will

be especially important. Consequently, many states took particular interest in the entry-into-force requirements of the Convention, seeking to ensure that they would be able to ratify the Convention in time to be charter members. If the requirements were too easy, then the Convention might enter into force very early and only a small number of parties would be entitled to participate in the first COP. On the other hand, if the requirements were too strict, then entry into force might be substantially delayed. In the end, the INC decided to require ratification by fifty states for entry into force, choosing the midpoint of the various numbers proposed.

Some states suggested also requiring ratification by states representing a minimum percentage of global greenhouse gas emissions, the approach used in the Montreal Protocol and a variety of International Maritime Organization marine pollution conventions. A minimum emissions approach has two related purposes. First, it gives a convention credibility by requiring ratification by the states that contribute most to the problem, i.e., the big greenhouse gas emitters. Second, it minimizes the risk of any one state being put at a competitive disadvantage by accepting a convention, since it ensures that the Convention will enter into force only if a critical mass of other states also join. Use of an emissions formula was deemed unnecessary, however, because the Convention establishes only general obligations which will not impose high costs on parties initially.

4. RESERVATIONS AND WITHDRAWAL (ARTICLES 24 AND 25)

Like the Montreal Protocol and the Basel Convention on the Transboundary Movement of Hazardous Wastes, the Climate Change Convention does not allow reservations. This "no reservations" rule, an increasingly common feature of international environmental treaties, is intended to ensure uniformity of obligations among the parties and to minimize free riders. However, if a party is sufficiently dissatisfied with the Convention after three years, it may withdraw from the Convention by giving written notice, effective one year from the date of receipt by the Depositary.

G. Interim Arrangements (Article 21 and Resolution INC/1992/1)

In early 1992, as it became clear that the INC would have difficulty finalizing any convention, let alone a convention with teeth, attention turned to the possibility of continuing work on convention-related issues in the time between the Convention's adoption and its entry into force. The delay between adoption of conventions and entry into force is often a problem in international environmental law, particularly when that delay is substantial. It is especially problematic when a convention establishes only a general framework for future work and leaves many of the controversial issues to a conference of the parties. In such a case, if the effect of adopting the convention is to put a temporary halt to discussions pending the convention's entry into force, it may be better to delay adoption of the convention and continue working towards a more substantive agreement.

The optimal solution, of course, is to accept the convention and to continue both substantive work to achieve the purposes of the agreement and legal and institutional work to further develop and implement the convention pending its entry into force. In the climate change context, this became known as the "prompt start." It was promoted by several academics who organized a conference in Bellagio in January 1992 attended by many of the key INC negotiators. During the prompt start, the signatories to the Convention would begin working on the tasks assigned to the COP, such as developing comparable methodologies for greenhouse gas inventories, and preparing guidelines for joint reporting and joint implementation. Because these interim activities would be undertaken prior to the Convention's entry into force, it was decided to elaborate them in a resolution rather than in the Convention itself. The resolution was initially drafted by the Canadian co-chair of Working Group II and was adopted at the final session.

Although many delegations had supported the prompt start idea at earlier sessions, in the end the resolution was a partial victim of the fall-out from the OECD compromise on specific commitments. Some developing countries, dissatisfied with the failure of the OECD to accept a firm target and timetable, objected to a strong prompt start resolution and progressively whittled away much of its substance. Even in its skeletal form, however, the resolution retains the key element of the prompt start – continued meetings during the interim period – although it does not elaborate in detail what those meetings will do. Early drafts of the resolution

characterized these sessions as meetings of the signatories to the Convention. The resolution eventually adopted calls for a continuation of the INC itself, thereby allowing states that have not signed the Convention to participate. The resolution requests an initial meeting "to prepare for the first session of the Conference of the Parties," and provides that the U.N. Secretary-General make recommendations to the General Assembly regarding arrangements for further sessions. The resolution also invites the Secretary-General to enable the INC Secretariat to continue its activities until the COP designates a permanent secretariat. Finally, the resolution invites states to share information about measures they have taken which conform to the Convention prior to its entry into force.

Pursuant to this resolution, in December 1992 the INC held a meeting to organize its work during the period pending the Convention's entry into force. It decided to organize itself into two working groups: one to consider issues related to commitments (for example, methodologies for greenhouse gas inventories, criteria for joint implementation, and review of adequacy of commitments); and the other to consider issues related to the financial mechanism, technical and financial support for developing countries, and procedural, institutional and legal matters (for example, rules of procedure, financial rules, designation of the permanent secretariat, and establishment of the non-compliance procedure). The INC also requested its secretariat to explore organizing a clearinghouse for the exchange of information and experience on relevant technical and financial cooperation activities, including greenhouse gas inventories and country studies. Additional meetings of the INC are scheduled for August 1993 and February and August 1994. With ratifications proceeding at a relatively brisk pace, many observers expect the Convention to enter into force by the end of 1993, and states have already begun planning for the first meeting of the COP in Germany in early to mid-1995.

In addition to these arrangements for the period pending the Convention's entry into force, the Convention contains an article dealing with the period between entry into force and the first meeting of the COP. Article 21 provides that the INC Secretariat will continue to carry out secretariat functions during this period, and that the GEF is to be entrusted with the operation of the financial mechanism.

Evaluation of the Convention

At the outset of the INC, many governments and commentators had very high, perhaps unrealistic, expectations for the Climate Change Convention. They assumed that it would be able to build on the progress achieved in international environmental agreements such as the Montreal Protocol. Indeed, given the gravity of the global warming problem, many believed the negotiations could go beyond existing environmental agreements – for example, by providing for semi-continuous negotiation rounds; establishing a system of tradeable emissions permits; or providing for monitoring, investigation, and reporting by independent experts. A more limited but novel suggestion was that even if the Convention did not contain targets and timetables initially, at a minimum it should set a baseline for future emissions control requirements.

Compared to these ambitious proposals, the Convention is a modest achievement. Indeed, it falls short of existing agreements such as the Montreal Protocol and London Amendments. For example, the amended Montreal Protocol establishes stringent control measures, requiring a phaseout of most ozone depleting substances within a decade, while the Climate Change Convention does not even include a clearly binding stabilization commitment. While the Montreal Protocol contains innovative implementation mechanisms, including trade sanctions against non-parties and a multilateral non-compliance mechanism, the Climate Change Convention imposes no sanctions for non-compliance and calls on the parties merely to consider establishing an alternative dispute resolution mechanism. The Montreal Protocol permits its control measures to be adjusted by a two-thirds majority, binding even on dissenting parties; the Climate Change Convention, on the other hand, requires a three-quarters majority vote and allows parties to opt out of amendments to which they object. Finally, the Montreal Protocol amendments established a new financial mechanism in which developed and developing countries have an equal say, whereas the Climate Change Convention relies, at least initially, on an existing financial institution and contains only vague language about the need for "equitable and balanced" governance.

However, while the Climate Change Convention contains little that is new from a legal standpoint, it is inappropriate to hold it to the achievements of the Montreal Protocol. The Montreal Protocol was accepted only following the adoption of the Vienna Ozone Convention and was the culmination of a decade of international work. The international community is at a much earlier stage in addressing the climate change problem. Moreover, the climate change problem is considerably more complex and politically sensitive than the ozone issue, making international agreement especially difficult to reach.

In the voluminous literature appearing prior to the climate change negotiations, commentators identified several criteria for a successful convention. First, it should be politically acceptable to a wide variety of states, given the global nature of the climate change problem. Second, it should be equitable, that is, it should encourage burden-sharing and treat developing countries fairly. Third, it should promote economic efficiency, by encouraging states to consider the cost-effectiveness of measures to address climate change. Fourth, and perhaps most critical, the convention should be flexible. Flexibility is essential, given the long-term nature of the climate change problem and current uncertainties about both scientific predictions of global warming, and the costs and benefits of response measures. Fifth, it should lay a foundation for future work by reducing uncertainties, promoting consensus, and building a base of information. Finally, it should establish targets and timetables for greenhouse gas limitations.

The INC succeeded in negotiating a convention that was politically acceptable to a wide array of states by avoiding firm targets and timetables, which were opposed by the United States; limiting the obligations of developing countries and requiring that they be provided financial and technical assistance; and focusing attention on the climate change problem, which the European states and AOSIS certainly preferred to no convention at all. Ultimately, the proof was in the pudding: at UNCED, the Convention was signed by 154 states. Of course, political acceptability came at a price; in order to make the Convention acceptable, it was progressively diluted by the INC. If other countries had been willing to proceed without the support of the United States, the Convention would likely contain firm targets and timetables – in all probability, a commitment to stabilize emissions of greenhouse gases not controlled by the Montreal Protocol at 1990 levels by the year 2000. The question is, how meaningful would a climate change convention have been without the United States, the single largest emitter of greenhouse gases? Are we better off with a Convention that includes the United States but not firm targets and timetables, or one that contains targets and timetables but not the United States?

The Convention scores relatively high in terms of equity, as defined by the needs of developing countries. Although developing countries did not achieve all that they wanted with respect to financial transfers, the Convention repeatedly recognizes the developmental priorities of the South and the need for economic growth. It exempts developing countries from any quantitative emissions limitations, and provides them with relaxed reporting requirements, which will be paid for by developed countries. The Convention does less well in dealing with OECD countries, since it treats them all more or less alike, despite their very different circumstances. Turkey, for example, is subject to the same commitments as other OECD countries, including the provision of financial assistance to developing countries, some of which may be considerably richer than Turkey. Understandably, Turkey is one of the few countries that has not signed the Convention.

Because the Convention does not call for specific control measures, its exact regulatory approach has not yet been defined and cannot be evaluated in terms of the third criterion, efficiency. However, by endorsing the comprehensive approach and joint implementation, the Convention lays the groundwork for cost-effective response measures, allowing parties to focus on those greenhouse gases and locations where limitations can be achieved most economically.

The Convention does preserve a certain degree of flexibility for the new climate change regime. On the positive side, the COP may establish new institutions or change the mandate of existing ones. Amendments, annexes, and amendments to annexes may be adopted by a three-quarters majority vote. In addition, the specific commitments on sources and sinks will be reviewed regularly for adequacy, with a view to their possible amendment. On the other hand, the Convention does not specify decision-making rules for the COP, where most important decisions will be made. If the rules of procedure adopted by the COP require consensus decision-making, this could lead to policy gridlock. More important, the Convention does not

define a regulatory process for the adoption and amendment of emissions control measures that the parties may eventually decide are warranted. Because annexes are limited to descriptive material, the adoption of control measures would require an amendment to the Convention or the negotiation of a separate protocol, either of which would be cumbersome. Even with respect to annexes, the Convention does not establish any amendment or adjustment procedure like that of the Montreal Protocol, under which changes may be imposed by a qualified majority. Nor does it provide for periodic rounds of renegotiation similar to those that take place under the GATT.

The Convention does somewhat better in meeting the fifth criterion, laying a basis for future work. By requiring parties to develop greenhouse gas inventories, formulate national strategies and measures, and cooperate in scientific research, the Convention promotes national planning and will generate a better information base for future negotiations and decisions. Moreover, the newly-created scientific and implementation bodies will help the parties decide how to proceed. Nevertheless, the Convention falls short in several respects, all of which may impede timely responses to global climate change. For instance, the Convention does not establish in advance a baseline for possible future targets and timetables. This may make countries reluctant to take immediate actions to reduce their emissions or enhance their sinks for fear that they will not receive credit for these actions and will instead simply face a tougher starting point should the Convention later establish targets and timetables. Moreover, the Convention does not establish any timetable for the negotiation of protocols containing specific control measures. Nor was agreement reached, even informally, about the amount of money that will be made available to developing countries for national planning and mitigation purposes.

Finally, the Convention's failure to include strict targets and timetables was, for many, the greatest disappointment. Clearly, the inclusion of targets and timetables would have been a moral and political victory for supporters of stronger global warming policies and, as such, would have encouraged stronger national measures. It is unclear, however, how serious the omission of targets and timetables is as a practical matter. The most commonly proposed target and timetable, to stabilize carbon dioxide emissions at 1990 levels by the year 2000, would have been largely symbolic. To illustrate, environmental groups estimate that the United States will meet this target anyway, as a result of measures already planned. Indeed, that was a principal argument why the United States should have been able to accept such a target. By the same token, however, if the United States will achieve stabilization even without any international commitment, then the practical significance of the target and timetable is reduced. Instead, it is important primarily because it signals that more stringent measures may be on the way and that business will not continue as usual. That message is implicit in the Convention even without a firm target and timetable, and a cautious government or business should already be thinking about how to limit or switch away from its use of fossil fuels.

If scientists are right, the climate change problem will be with us for a long time. As first steps in addressing the problem, we need to reduce uncertainties about the basic science, develop an information base about national conditions and options, and establish a strong institutional structure. While immediate emissions stabilization would be desirable, establishing a dynamic international process is more important for the long-term. The U.N. Framework Convention on Climate Change makes a definite, albeit tentative, start along that road.

RECENT DEVELOPMENTS[2]

ADOPTION AND ENTRY INTO FORCE

As stated above, the United Nations Framework Convention on Climate Change was adopted on 9 May 1992, in New York, and opened for signature at the UN Conference on Environment and Development in June 1992 at Rio, where it received 155 signatures. The Convention entered into force on 21 March 1994 (90 days after the 50th ratification). Following the adoption of the Convention, the INC held six sessions. The sixth session of the Intergovernmental Negotiating Committee (INC-6) identified tasks to be carried out by the

2 Update provided by Seth Osafo, Senior Legal Officer, UNFCCC Secretariat.

first session of the COP and decided a prompt start would be necessary if the Convention were to be effectively implemented. During the five sessions held after the adoption of the Convention, the INC spent a lot of its time on scientific work needed to improve the methodologies for measuring emissions from various sources. The definition of the relationship between the financial mechanism and its interim operating entity as well as the provision of financial support for implementation, particularly to developing country Parties, was also high on the agenda of the INC. The INC also considered procedural, legal and institutional issues.

At INC 11 held at UN Headquarters in New York from 6-17 February 1995 the delegates addressed several issues including arrangements for the first session of the COP, rules of procedure for the COP, location of the Permanent Secretariat and matters relating to commitments, arrangements for the financial mechanism, and provision of technical and financial support to developing country Parties. The delegates did agree to maintain the Global Environment Facility (GEF) as the interim financial mechanism and to finance mitigation activities, but made little progress on the question of adequacy of commitments or the beginning of negotiations on the AOSIS proposal for a protocol or the proposals for further elements of a protocol submitted by Germany. Discussion on joint implementation was tortuous and the progress on financial support to developing countries was slow. The negotiators could not agree on which of the four countries would host the Secretariat (Canada, Germany, Switzerland and Uruguay). It was therefore decided that a final decision would be taken at COP1 in Berlin. The rules of procedure could also not be recommended for adoption due to a lack of agreement on voting procedures and the allocation of seats on the COP Bureau.

First Session of the Conference of the Parties

The Conference of the Parties held its first session (known as COP 1) in Berlin . From 28 March - 7 April 1995, the historic city of Berlin was the site of the first global climate change meeting attended by ministers since the 1992 Rio "Earth Summit". Delegates from 118 Parties, 53 observer States, and hundreds of intergovernmental organizations (IGOs), non-governmental organizations (NGOs), and the press were present.

COP 1 adopted the "Berlin Mandate", thereby launching talks on new commitments. The Convention required COP 1 to review whether the commitments of developed countries to take measures aimed at returning their emissions to 1990 levels by the year 2000 were adequate for meeting the Convention's objective. The Parties agreed that new commitments were indeed needed for the post-2000 period. A new subsidiary body, the Ad hoc Group on the Berlin Mandate (AGBMN), was established to draft "a protocol or another legal instrument" for adoption at COP 3 in 1997. The Berlin Mandate process is to consider all greenhouse gases. It is also to consider setting quantified objectives for limiting and reducing emissions within specified time-frames such as 2005, 2010 and 2020. It is not to introduce any new commitments for developing countries.

Other decisions completed the main elements of this process-oriented Convention. The review process started with a compilation and synthesis of the 15 first national communications submitted by developed countries; the Parties decided that their second submissions should be due by 15 April 1997 and that there should also be a series of in-depth reviews. They also decided that the interim secretariat would become the "permanent secretariat" on 1 January 1996 and would be located in Bonn, Germany (the actual move occurred in August 1996). It was agreed that the secretariat would be operationally independent but that it would be linked to the UN and its head would be appointed by the UN Secretary-General in consultation with the Parties. Finally, a fourth subsidiary body, the Ad hoc Group on Article 13 (AG13), was established to explore various options for conflict resolution.

The interim financial arrangements were extended for up to four years. The Global Environment Facility (GEF) will therefore continue to operate as the Convention's "financial mechanism". As required by the Convention, COP 1 also gave guidance to the GEF on policies, programme priorities, and eligibility criteria. It stated that projects funded by the GEF should be cost-effective, supportive of national development priorities, and focused on "enabling activities" that would assist developing countries to implement the Convention.

A pilot phase was launched for "activities implemented jointly" (AIJ). During the treaty negotiations, the term "joint implementation" had generated considerable controversy. Based on the new concept of AIJ, COP 1 agreed that any country can participate in the pilot phase if it so chooses; during this phase the investing country could not claim credit for reduced emissions in the recipient country; a system of regular reporting will monitor the activities; and the pilot phase will be reviewed no later than the end of 1999.

Ad Hoc Group on the Berlin Mandate

The Conference of Parties (COP) to the UN Framework Convention on Climate Change, at its first session held in Berlin in March 1995, decided that the commitments for developed countries (Annex I Parties), set out in Article 4.2(a) and (b) of the Convention, were "inadequate". The COP took a decision, dubbed the "Berlin Mandate", to "begin a process to enable it to take appropriate action for the period beyond 2000", including the strengthening of the commitments of Annex I Parties through the adoption of a protocol or another legal instrument. It was further decided that the process would:

- Elaborate policies and measures;
- Set quantified emission limitation and reduction objectives (QELROs);
- Not introduce any new commitments for developing countries (non-Annex I Parties) but continue to advance the implementation of their existing commitments in Article 4.1 of the Convention.

The process was entrusted to an "open-ended ad hoc group of Parties" which became known as the "Ad Hoc Group on the Berlin Mandate" (AGBM). The Group was charged with completing its work as soon as possible, with a view to adopting the results at the third session of the Conference of the Parties (COP 3) due to take place from 1 to 10 December 1997 in Kyoto, Japan.

The AGBM is expected to meet for its eighth and final session from 22 to 31 October 1997 before handing over the results of its work to COP 3 for finalization and adoption.

In line with its mandate, the programme of work of the AGBM has focused on four broad areas:

- Policies and measures;
- QELROs;
- Continuing to advance the implementation of existing commitments in Article 4.1; and
- Possible features of a protocol or another legal instrument (institutions and mechanisms for the new instrument).

The main inputs into the work of the AGBM have been comments and proposals from Parties. In addition, the AGBM has benefited from contributions from the SBSTA and the SBI, documentation prepared by the secretariat in response to requests from parties, the work of the Intergovernmental Panel on climate Change (IPCC), in particular the Second Assessment Report, and an analysis of policies and measures from the so-called Annex I Experts Group (a joint project of the Organisation for Economic Co-operation and Development (OECD) and the International Energy Agency (IEA)).

In its initial stages, the AGBM directed its efforts towards analysis and assessment of the issues before it. The convening of informal workshops, particularly on matters relating to QELROs, policies and measures and the possible impacts on developing countries of new commitments for Annex I Parties, helped to advance this process.

Following the fourth session of the AGBM, the emphasis of the work of the Group shifted progressively towards negotiation. At AGBM 4, the Chairman undertook to produce a synthesis of proposals from Parties on elements for a protocol or another legal instrument and, at AGBM 5, the Group moved one step further to request the Chairman to prepare a "Framework Compilation" of all proposals submitted by Parties.

AGBM 6 marked an important milestone in the AGBM process for two reasons: firstly, the AGBM was meeting for the first time in Bonn, the new home of the secretariat, and secondly, the Chairman received a mandate to prepare a negotiating text for the protocol or other legal instrument. This was a particularly

important decision as, according to Articles 15 or 17 of the Convention, the text of a protocol or amendment needed to be circulated to all Parties at least six months before the date of its adoption. The timing of COP 3 meant a deadline of 1 June 1997.

The negotiating text was issued as document FCCC/AGBM/1997/3/Add.1 and was circulated to all Parties in time to meet the 1 June deadline. The document incorporated around 60 proposals from more than 30 Parties and its size – covering 128 pages and over 250 paragraphs – demonstrated well the wide range of options before the Group.

With a negotiating text before it for the first time, negotiations are expected to be made in earnest at AGBM 7 where most of the work should take place in informal consultations, or so-called "non-groups". The non-groups should produce revised texts, which would be indicative of the status of negotiations at the end of AGBM 7.

At the end of AGBM 7, Parties may request the Chairman to prepare a consolidated negotiating text, based on the outcome of the session, to be the focus of work at AGBM 8. It is hoped that the consolidated negotiating text, which should be prepared on the Chairman's own authority, would enable the AGBM to make significant progress at its final session.

Although the AGBM will cease to exist after October 1997, the wide gulf between the positions of Parties on a number of issues means that its work on a protocol or another legal instrument is unlikely to be complete by that time. Negotiations will therefore continue during COP 3 where ways of bridging the many remaining differences between Parties must be found if the Berlin Mandate is to be fulfilled.

Subsidiary Body for Scientific and Technological Advice (SBSTA)

The Subsidiary Body for Scientific and Technological Advice (SBSTA) was established by the Conference of the Parties (COP) at its first session in accordance with Article 9 of the Convention to provide the COP and as appropriate its subsidiary bodies with timely information and advice on scientific and technological matters relating to the Convention.

The first session of the Subsidiary Body for Scientific and Technological Advice was held in Geneva from 28-30 August 1995. The delegates were faced with complex issues including: scientific assessments, national communications from Annex I Parties, methodologies, first communications from non - Annex I Parties, and Activities Implemented Jointly during the pilot phase. The SBSTA was expected to establish intergovernmental technical advisory panels on technologies (TAP-T) and methodologies (TAP-M), however, it failed to do so at the session. Among the more contentious issues were the definition of the SBSTA's relationship with the Intergovernmental Panel on Climate Change (IPCC), the terms of reference and composition of the technical advisory Panels and the elaboration of guidelines for national communications from non-Annex I Parties. Delegates successfully identified areas for cooperation with the IPCC, agreed on a division of labour with the Subsidiary Body for Implementation on technology transfer issues, and requested the Secretariat to organize a workshop on non-governmental inputs. No progress was made on the formation of the TAPs and delegates had to postpone discussion to the second session.

At the second session of the SBSTA, held in Geneva from 27 February-4 March 1996, the delegates considered scientific assessment and cooperation, including the Intergovernmental Panel on Climate Changes's Second Assessment Report (SAR), reporting by Annex I and non-Annex I Parties, Activities Implemented Jointly and the Technical Advisory Panels (TAPs). The main result was that Parties documented that they could not yet agree on how to absorb or respond to scientific predictions of climate change. Although initial discussions gave the impression that the second session would welcome the IPCC's predictions with less resistance than in previous sessions of the Convention, oil producers and other developing countries ultimately blocked consensus on specific conclusions about the Second Assessment Report.

At the third session of the SBSTA held from 9-16 July 1996, the delegates again discussed the second assessment report and decided to send the issue to the COP for resolution. The SBSTA also adopted, in conjunction

with the SBI decisions on Communications from Annex I Parties, decisions on Communications from non-Annex I Parties. The SBI and the SBSTA also agreed on a decision on activities implemented jointly. Progress was made on a roster of experts and technical panels and the SBSTA also agreed to reconsider non governmental organizations consultation mechanisms and cooperation with the IPCC.

The fourth session of the SBSTA held in Geneva from 9-18 December 1996 agreed to apply the 1996 IPCC guidelines for national greenhouse gas inventories. It agreed on future cooperation with the IPCC and decided to continue further work on the revisions to the Uniform Reporting Format and methodological issues pertaining to the implementation of activities implemented jointly.

The fifth session of the SBSTA considered a number of issues and reached agreement on the Uniform Reporting Format. It also requested a work plan for an in-depth review of second national communications and requested a number of reports on technology transfer.

The sixth session of the SBSTA will be held in Bonn, Germany from 28 July to 5 August 1997 to discuss cooperation with international organisations, transfer of technology and activities implemented jointly. Methodological issues and a division of labour between the SBSTA and the SBI also should be discussed.

Subsidiary Body for Implementation

The Subsidiary Body for Implementation (SBI) was established by the Conference of the Parties at its first session, n accordance with Article 10 of the Convention, to assist the Parties in the review and assessment of the implementation of the Convention and in the preparation and implementation of the COP's decisions.

The first session of the SBI was held from 31 August - 1 September 1995 in Geneva. At that session the SBI considered: communications from Annex I Parties; a progress report on in-depth review; institutional and budgetary matters; matters relating to the financial mechanism; and the elaboration and scheduling of the programme of work for 1996-1997. The SBI also decided to recommend to COP2 to adopt the draft Memorandum of Understanding which would establish the Global Environment Facility as the interim operating entity of the financial mechanism.

The second session of the SBI was held in Geneva from 27 February - 4 March 1996. Among the issues considered by the delegates were the in-depth reviews of national communications, matters related to the financial mechanism, financial and technical cooperation, transfer of technology, arrangements for the relocation of the Secretariat to Bonn, and arrangements for the second Conference of the Parties (COP-2). Many delegates welcomed the GEF Council's adoption of its operational strategy, and expressed the need for the GEF to expedite the process of providing "full agreed costs" for non-Annex I communications or risk serious delays. The developing countries wanted the GEF to simplify the procedure for obtaining funds to prepare national communications.

At the third session of the SBI, held from 9-16 July 1996 in Geneva, the Parties agreed to recommend draft decisions on technology transfer, the operating budget of the Secretariat, legal issues concerning relocation of the Secretariat to Bonn and the possibility of setting up a liaison office at UN Headquarters in New York; guidance to the GEF Council and national communications from non annex I Parties. They could not reach agreement on the Annex to the Memorandum of Understanding (MOU) between the GEF Council and the COP and decided to refer the issue to the GEF for resolution.

The fourth session of the SBI was a brief one devoted to finalizing the agreement on the Annex to the Memorandum of Understanding (MOU) between the Conference of the Parties (COP) and the Council of the Global Environmental Facility (GEF). After a long and protracted debate, the Parties were able to agree on the Annex and decided to recommend it to the COP at its third session for adoption.

The fifth session of the SBI was held in Bonn from 25-28 February 1997. The Parties were able to reach agreement on the timetable and process for review of the programme budget and the input of the Climate Convention to the UN General Assembly Special Session (UNGASS). The SBI began discussions on the

review of the activities of the GEF as the interim operating entity of the financial mechanism of the Convention but could not complete its deliberations. It therefore decided to continue at its sixth session.

The sixth session of the SBI will meet from 28 July - 5 August 1997 in Bonn. Among the issues to be considered at that session are matters related to the financial mechanism; national communications; arrangements for intergovernmental meetings including arrangements for the third session of the Conference of the Parties in Kyoto, Japan in December 1997; the programme budget for the biennium 1998/99 and arrangements for a non-governmental organisations consultation rnechanism.

AD HOC GROUP ON ARTICLE 13

The ad hoc group on Article (AG13) was set up in accordance with Article 13 of the Convention to consider the establishment of a multilateral consultative process available to Parties to resolve questions on implementation. The first session of the AG13 was held in Geneva from 30-31 October 1995 in Geneva. At that session, the Parties decided to request Parties, non-Parties, and intergovernmental and non-governmental organizations to make written submissions in response to a questionnaire on a multilateral consultative process. At the second session held on 10 July 1996 in Geneva, participants received a synthesis of responses to a questionnaire on establishing a Multilateral Consultative Process under Article 13. At that session the delegates adopted a decision recommending to the COP to extend the mandate of AG13 to establish a role in examining ways to apply a multilateral consultative process to a protocol, in cooperation with the Ad Hoc Group on the Berlin Mandate. At its third, fourth and fifth sessions the AG13 continued its review of proposals for a multilateral consultative process (MCP).

THE SECOND CONFERENCE OF THE PARTIES

The second session of the COP was held from 8-19 July 1996. COP 2 took stock of progress on the Berlin Mandate, the review process for National Communications, and other issues. Over 900 Government delegates – including some 80 ministers and 600 observers – participated in the two-week meeting.

Ministers stressed the need to accelerate talks on how to strengthen the Climate Change Convention. In their Geneva Declaration the ministers also endorsed the 1995 Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) "as currently the most comprehensive and authoritative assessment of the science of climate change, its impacts and response options now available". They further stated that the Report "should provide a scientific basis for urgently strengthening action at the global, regional and national levels, particularly action by annex I (industrialized) countries to limit and reduce emissions of greenhouse gases".

COP 2 also adopted a number of formal decisions and conclusions. One of the most important was an agreement on the contents of the first national communications that developing countries would start submitting in April 1997. Other decisions concerned technology transfer, financial support for Convention-related activities in developing countries, and the pilot programme for AIJ.

The third session of the Conference of the Parties will be held from 1 to 10 December 1997 in Kyoto, Japan. In addition to adopting the results of the Berlin Mandate process, this meeting will consider funding, technology transfer, the review of information, and the many other issues that together constitute the international response to the threat of climate change.

EXERCISES ON CLIMATE CHANGE

1. What are "greenhouse gases", and what are their sources?
2. Why are greenhouse gases increasing in the earth's atmosphere?
3. What are the consequences of uncontrolled greenhouse gas emissions?

4. Restate in your own words the objective of the Climate Change Convention.
5. What specific problems does the Climate Change Convention address?
6. Why is the Climate Change Convention called a "framework" convention?
7. What were some of the specific problems that arose during the negotiation of the Climate Change Convention in relation to the obligations upon developed and developing states?
8. What is the meaning of the term "common concern of humankind" in the context of the Climate Change Convention? (See Preamble)
9. Is the strategy of allowing developing countries a greater share of greenhouse gas emissions a good one? (See Preamble)
10. How does the Climate Change Convention define "adverse effects of climate change"? (Art 1)
11. What is the meaning of "sinks" and reservoirs" of greenhouse gases under the Climate Change Convention ? Give two examples of each. (Art 1)
12. How is the precautionary principle applied in the Climate Change Convention? Does it differ from approaches taken in other Conventions (Art 3)
13. What is the meaning of "common but differentiated responsibilities" in Article 3(1) of the Climate Change Convention?
14. How is the ability of developing countries to meet their commitments under the Climate Change Convention linked to the commitments of developed country parties? ((Arts 3 and 4)
15. Which countries are recognised by the Climate Change Convention as being the most vulnerable in terms of economic impacts? List the impacts. (Art 3(5)
16. What measures has your country taken to meet its obligations under the Climate Change Convention? List them briefly. (Arts 4, 5, 6 and 12)
17. Under the terms of the Climate Change Convention, is it necessary for all state parties to enact legislation to combat climate change? Give reasons for your answer. (Art 4)
18. What general commitments and obligations are imposed upon parties to the Climate Change Convention? Briefly summarise those commitments in point form. (Art 4)
19. Under what criteria can it be determined that the objectives of the Climate Change Convention have been met ? (Art 4(2)(d))
20. What consequences are there, if any, of the failure of a developed country Party to meet the commitments set out in the Climate Change Convention? (Art 4(2)).
21. What is the meaning of sustainable development in the particular context of the Climate Change Convention? (Arts 4 and 5)
22. What particular commitments and obligations does the Climate Change Convention impose upon developed states ? Briefly summarise those commitments in point form.(Arts 4 and 12)
23. What distinction does the Climate Change Convention make between those state parties which have economies of transition towards a market economy and other state parties ? (Arts 4 and 12)
24. What countries are able to take advantage of the financial mechanism under the Climate Change Convention? (Arts 4(3) and 11)
25. What specific measures does the Climate Change Convention recognise that small island states will require to protect them from the effects of climate change? (Art 4(8))
26. What provisions exist in the Climate Change Convention for joint implementation. Summarise them in your own words. (Art 4(2), 12)

27. What are the advantages of joint implementation of the Climate Change Convention? (Art 4(2))

28. Summarise in your own words the obligations of Parties in relation to the communication of information related to implementation of the Climate Change Convention. (Arts 7 (2)(b) and 12)

29. What are the main functions of the Conference of the Parties under the Climate Change Convention? (Art 7)

30. What are developing states encouraged to do under the Climate Change Convention? (Art 12)

31. Why is it necessary, and what are the benefits of aggregated information under the Climate Change Convention? (Art 12(9))

Discussion Points for Small Groups

32. "The targets so far set by the Convention for the stabilisation of greenhouse gas emissions are inadequate to meet the actual needs in relation to global warming and its effects". Discuss.

33. Consumers of energy in Western countries are never going to give up their luxuries unless they are forced to. Discuss.

34. "Developing countries must go through a 'dirty' industrial period before they can become clean." Discuss.

35. "The Climate Change Convention can be regarded as rather weak". Discuss the reasons for this perception.

36. The Climate Change Convention needs a strong global enforcement agency to ensure greenhouse gas emission reductions. Discuss.

37. Those countries most affected by climate change are those least able to do anything about it. Discuss, giving specific examples.

38. The Climate Change Convention will require strong legislation at national level to implement greenhouse gas emission reduction targets". Discuss.

CHAPTER 6

WATER PROTECTION

A. MARINE ENVIRONMENT

RATIONALE FOR THE DEVELOPMENT OF AGREEMENTS ON THE MARINE ENVIRONMENT

Pollution of the marine environment threatens public health, food security, economic prosperity, social patterns and ways of life. Public health can be threatened directly through, for example, contamination of the marine environment from sewage spreading disease, and indirectly through the dumping of heavy metals or persistent organic pollutants which can contaminate seafood. Contamination of seafood threatens food security as does the loss of habitat, for example through destruction of coral reefs by blasting or sedimentation. Lose of fishing income threatens economic prosperity and self sufficiency and can destroy traditional lifestyles. With human dependence on the oceans and seas, protection of their environments is a most essential element of global environmental protection.

The many facets and elements of the marine environment must be considered in developing a complete regime for its protection. Components of this regime range from the protection and conservation of fish stocks to controlling pollution from vessels to addressing land-based activities which impact on the marine environment. Over the last forty years, international, regional and national regimes have been developed or are in the process of development to provide a legal framework to address these many issues.

One the earliest issues arose from the growth in oil tanker traffic as the world become more dependent on oil. The increased usage of the high seas by tankers also brought with it the increased potential for pollution of the marine environment, particularly from oil spills. It was this factor which prompted states to develop international law to respond to concerns for the need to protect the marine environment. Initially, international instruments sought to control operation and other intentional discharges of oil at sea. The first global initiative was the 1954 International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL)[1]. While OILPOL was considered a partial success, it had limited coverage and was replaced in the 1970's by the 1973/78 International Convention for the Prevention of Pollution by Ships (MARPOL)[2]. MARPOL deals not only with oil pollution from ships, but also control of noxious liquid substances in bulk, pollution from harmful substances carried in packaged forms and pollution from sewage and garbage. The Regional Seas Agreements were also prompted in many cases by the need for international cooperation in case of environmental emergencies, again notably oil spills.

The 1967 *Torrey Canyon* incident further galvanized development of international law to protect the marine environment. The *Torrey Canyon* was an American owned, Liberian registered oil tanker which ran aground in international waters in the English Channel. Nearly 120,000t of crude oil spilled into the sea and polluted the nearby French and English coastlines. As a measure to halt the pollution, the wreck was bombed and the oil set alight, but only after considerable damage to the affected coastlines and the marine environment in general. Following this incident, a number of international legal instruments were negotiated including dealing with liability and compensation. These instruments include the 1969 Convention Relating to Intervention on the

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1 327 UNTS 3

2 (1973) 12 ILM 1319, 17 ILM 546

High Seas in Cases of Oil Pollution Damage[3], the 1969 International Convention on Civil Liability for Oil Pollution Damage[4] and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.[5]

One of the most significant developments in the general area of international law, was the adoption of the United Nations Convention on the Law of the Sea (UNCLOS). Negotiated over ten years between 1973 and 1982 and entering into force only on 16 November 1994, UNCLOS serves as a general framework instrument addressing issues such as rights of navigation, limits of national jurisdiction, exploitation of the high seas and its subsoil, and of course, protection of the marine environment. One of the most significant elements of UNCLOS was the adoption of an Exclusive Economic Zone, which extends national sovereignty over some issues, including protection and preservation of the marine environment[6], to a distance of 200 nautical miles from the baselines from which the territorial sea is measured.[7]

UNCLOS envisaged the further development of international law to address specific issues and concerns, including in the area of marine environment protection. Two recent developments have been the conclusion of the 1995 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[8] and the 1995 Global Programme of Action for Protection of the Marine Environment from Land-based Activities.[9]

While global instruments are useful in establishing measures to address issues of worldwide concern, more localized and specific issues cannot be adequately met. This has promoted the development of over 30 regional conventions and protocols between countries sharing common coastlines. The UNEP Regional Seas Programme has assisted in the development of 13 Regional Action Plans with the adoption of regional Conventions and Protocols in nine regions worldwide to address such issues as identification of protected areas, cooperation in cases of environmental emergencies, and combating pollution of the marine environment from dumping or land-based activities.

The principle conventions dealing with the protection of the marine environment which will be studied in this chapter are:

- 1969 Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Damage;
- 1969 International Convention on Civil Liability for Oil Pollution Damage, and the Protocols of 1976 and 1992 relating thereto;
- 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage;
- 1973/78 International Convention for the Prevention of Pollution by Ships;
- 1972 International Convention on the Prevention of Marine Pollution from Dumping of Wastes and Other Matter;
- 1982 United Nations Convention on the Law of the Sea;
- 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation;
- 1995 Global Programme of Action for Protection of the Marine Environment from Land-based Activities;

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3 (1970) ILM 25

4 973 UNTS 3

5 923 UNTS 3

6 Article 56.

7 Article 57.

8 Articles 61, 63 and 64.

9 Article 207 of UNCLOS.

- The International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 (HNS Convention); and
- the various Regional Seas Conventions and Protocols.[10]

It should be noted that these instruments operate alongside other international laws which also generally assist with the protection of the marine environment. For example, these other instruments include specialized instruments on safety at sea such as the 1972 Convention on the International Regulations for Preventing Collisions at Sea[11] or safe carriage of hazardous materials such as the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on Board Ships. It is not possible to address all of these instruments here.

The role of the United Nations and its specialized agencies in promoting and assisting with the development of international agreements for protection of the marine environment should also be noted. The United Nations was directly responsible for the negotiations leading to the conclusion of UNCLOS; UNEP has assisted with the development of numerous Regional Seas Agreements; the International Maritime Organization (IMO) has developed several instruments addressing such issues as oil pollution, dumping from ships, and carriage of hazardous materials; and the FAO, with its concern for food security, has developed a Code of Conduct for Responsible Fisheries. These agencies continue to provide a mechanism for regular review and amendment, as necessary, of these instruments and to assist with their implementation.

Global Instruments for Protection of the Marine Environment

United Nations Convention on the Law of the Sea

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) is the most comprehensive international instrument dealing with the law of the sea. It was negotiated over a 10 year period between 1973 and 1982. It eventually entered into force in 1994. Part XII of UNCLOS deals specifically with the protection and preservation of the marine environment.

The principal provision of UNCLOS dealing with state responsibility for the protection of the marine environment is found in Article 192. This provision provides:

> *States have the obligation to protect and preserve the marine environment.*

This obligation allows states to either jointly or individually take measures to prevent, reduce and control pollution of the marine environment from any source (Art 194). Many of the global marine environmental conventions adopted prior to and since UNCLOS represent the fulfillment of this goal.

SPECIFIC POLLUTION PROVISIONS

UNCLOS establishes certain fundamental principles for states in dealing with pollution. These principles cover a wide range of polluting activities, including pollution from:

- land-based sources (Art 207);
- sea-bed activities subject to national jurisdiction (Art 208);
- activities being conducted in the deep sea-bed, which in the Convention is known as the 'Area' (Art 209);
- dumping (Art 210);
- vessels (Art 211); and
- the atmosphere (Art 212).

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10 A list of selected references is provided at the end of this chapter.

11 (1977) UKTS 77

ENFORCEMENT PROVISIONS

The Convention also codifies an important list of principles dealing with enforcement of international laws concerning protection of the marine environment following a marine pollution incident such as an oil spill. These principles all deal separately with the rights, duties and obligations of:

- flag states (Art 217);
- port states (Art 218); and
- coastal states (Art 210).

However, these provisions are counterbalanced by safeguards so as to ensure that enforcement powers are not abused (Arts 223-233).

BASIC PRINCIPLES IN DEALING WITH MARINE POLLUTION

UNCLOS also reflects many basic principles of international environmental law such as:

- the need for cooperation on a global or regional basis (Art 197);
- notification in cases of imminent or actual damage (Art 198); and
- reliance upon scientific research for a greater understanding of the impact of pollution upon the marine environment (Art 201).

ADDITIONAL UNCLOS PROVISIONS

Part XII of UNCLOS also has provisions dealing with technical assistance for the protection and preservation of the marine environment (Arts 202-203), monitoring and environmental assessment of marine pollution (Arts 204-206), special provisions for ice-covered areas (Art 234), responsibility and liability (Art 235) and sovereign immunity (Art 236).

Other provisions of UNCLOS are also significant for the protection and preservation of the marine environment. In recognizing the ability of coastal states to claim a 12 nautical mile territorial sea, coastal states' rights to control offshore polluting activities have been extended (Arts 2, 3). In addition, the recognition of the right of a coastal state to claim a 200 nautical mile exclusive economic zone (EEZ) is also important for the protection of the marine environment (Art 55).

Within the EEZ, coastal states not only have certain sovereign rights over resources but also jurisdiction with respect to the protection and preservation of the marine environment (Art 56). These provisions recognize the relationship between a healthy marine environment and the state of marine living resources within the EEZ.

Other incidental provisions of UNCLOS which place significance on the protection of the marine environment include provisions requiring ships in passage through international straits to comply with international regulations preventing pollution from ships (Art 39). Flag states are also to ensure that crews are aware of relevant international regulations dealing with marine pollution (Art 94).

UNCLOS also makes special provision for cooperation between states bordering enclosed or semi-enclosed seas with respect to the protection and preservation of the marine environment (Art 123). Within these areas states are encouraged to engage in greater cooperation to deal with regional environmental issues. As noted earlier, UNCLOS also envisages the development of more specific instruments to address particular issues, including the development of the Global Programme of Action for Protection of the Marine Environment from Land-based Activities.

1973 International Convention for the Prevention of Pollution from Ships

The 1973 International Convention for the Prevention of Pollution from Ships (MARPOL) was adopted as a replacement for the 1954 International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL). However, the Convention never entered into force in its original form and it was necessary for the 1973 Convention to be amended by a 1978 Protocol[12] in order to solve a number of implementation difficulties.

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12 **Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships (1978) 17 ILM 546**

The 1973 Convention, as modified by the 1978 Protocol, is known as MARPOL 73/78. This paved the way for greater acceptance of the Convention and together the Convention and Protocol eventually entered into force in 1983.

GENERAL OBLIGATIONS AND ANNEXES

The general obligations of the Convention are to prevent pollution of the marine environment by the discharge of harmful substances or effluents containing such substances (Art 1). MARPOL adopts a wide definition of 'discharge', however, discharges which fall within the definition of dumping under the 1972 International Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter are excluded (Art 2).

The Convention established framework provisions supported by five additional Annexes which have regulations dealing with:

- the prevention of pollution by oil (Annex I);
- the control of pollution by noxious liquid substances in bulk (Annex II);
- the prevention of pollution by harmful substances carried by sea in packaged forms (Annex III);
- the prevention of pollution by sewage from ships (Annex IV); and
- the prevention of pollution by garbage from ships (Annex V).

APPLICATION AND ENFORCEMENT

The Convention applies to all ships which are entitled to fly the flag of contracting parties, and ships which are not entitled to fly the flag but which operate under the authority of a contracting party (Art 3). MARPOL operates through a combination of flag state enforcement and port state control. Emphasis is placed upon the contracting parties implementing appropriate laws dealing with sanctions for violation of the Convention (Art 4). Contracting parties are also encouraged to cooperate together in the detection of violations and enforcement (Art 6). This extends to inspection in port or at an off-shore terminal by a contracting party of any ship, to which the Convention applies, which is suspected of a violation (Art 6). Provisions are detailed for procedures to be followed in cases where a violation is detected and reports are to be made to appropriate authorities (Art 8).

PREVENTION OF OIL POLLUTION: ANNEX I

The most detailed operational provisions of the Convention are found in the Annex I regulations for the prevention of pollution by oil. These provisions seek to prohibit the discharge into the sea of oil unless certain conditions are met (Annex I, Reg 9). Within designated 'special areas' discharges are absolutely prohibited with the exception of ships of less then 400 gt (other than oil tankers) who can discharge under strict conditions (Annex I, Reg 10).

Exceptions exist to these general provisions prohibiting discharge in cases where it is necessary to discharge so as secure the safety of the ship and save life at sea, or where the discharge has resulted from damage to the ship (Annex I, Reg 11). In an effort to ensure ships have access to adequate oil reception facilities, Annex I details requirements for the provision of such facilities at various ports and for a variety of vessel types (Annex I, Reg 12).

Provisions also exist in Annex I dealing with survey and certification, construction and equipment, the use, cleaning and maintenance of ballast tanks, and the use of certain oil discharge monitoring equipment in addition to the need to complete an oil record book (Annex I, Regs 4-10).

1969 Intervention Convention

The 1969 Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Damage[13] (Intervention Convention) was adopted soon after the 1967 *Torrey Canyon* incident. It specifically deals with one of

13 (1970) ILM 25

the legal questions which arose from that incident: the ability of a coastal state to take action on the high seas in order to protect the marine environment within its national jurisdiction.

Under the Convention, contracting parties may take such measures on the high seas as are necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or the threat of pollution of the sea following a maritime casualty (Art I). An exception only exists in cases of warships and other non-commercial government vessels.

REQUIREMENTS FOR INTERVENTION

Intervention can occur where there has been a collision of ships, a stranding, or any other incident of navigation or occurrence which results in material damage or imminent threat of material damage to a ship or its cargo (Art II).

The ability to intervene, however, is not unlimited. The intervening state is required to:

- consult with other states affected, particularly the flag state of the vessel;
- notify any persons or company which has an interest of the proposed measures they intend to take, such as the shipowners;
- consult with an independent expert before any action is taken;
- ensure that any risk to human life is avoided; and
- provide assistance to persons in distress (Art III).

The IMO is required to maintain a list of international experts who may be consulted prior to a state intervening (Art IV). In cases of extreme urgency, however, it is possible to take action without the need for consultation (Art III).

Any action which is taken must be proportionate to the actual or threatened damage and shall cease as soon as the objective has been achieved (Art V). In instances where action is taken beyond that necessary, the state responsible is required to pay compensation (Art VI). The Intervention Convention was adjusted in 1973 by a Protocol allowing for intervention on the high seas in cases of pollution by substances other than oil.

1969 Civil Liability Convention and the Protocols of 1976 and 1992 relating thereto

The 1969 International Convention on Civil Liability for Oil Pollution Damage[14] (CLC 1969) is another convention developed as a response to the *Torrey Canyon* incident. While the Intervention Convention sought to deal with action which could be taken so as to minimize oil pollution damage to the marine environment, the Civil Liability Convention deals with the legal responsibility to pay compensation as a result of the damage caused by an oil pollution incident at sea.

EXTENT OF APPLICATION

The Convention, which has been amended by Protocols in 1976 and 1992, applies to pollution damage caused:

- in the territory of a state, including the territorial sea; and
- in the exclusive economic zone or equivalent maritime zone out to a distance of 200 nautical miles from the coast (Art II).

Compensation is also payable for the costs of reasonable measures taken to prevent or minimize pollution damage after an incident has occurred (Art.II).

LEGAL LIABILITY

The Convention creates a strict liability regime for pollution damage caused by the escape or discharge of persistent oil (for example crude oil, fuel oil, heavy diesel and lubricating oil). The owner of a ship is liable for

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pollution damage caused by that ship (Art III). Certain exceptions to liability do exist, such as when the damage resulted from acts of war and natural phenomenon. Another exception exists with respect to warships and vessels owned or operated by a State and used on Government non-commercial service (Art XI).

Ship owners are permitted to limit their liability under the Convention provided they establish a fund from which damages claimed can be paid (Art V). If an owner establishes a fund in this manner they are also entitled to certain immunities (Art VI).

The owners of ships carrying more than 2000 tonnes of persistent oil as cargo are also required to maintain insurance or another form of financial security so as to cover any liability arising from pollution damage (Art VII).

The shipowner is normally entitled to limit his liability to an amount determined by the size of the ship. Under the 1969 Civil Liability Convention the limit is 133 Special Drawing Rights (SDRs) per ton of the ship's tonnage, or 14 million SDRs, whichever is the less. These amounts were originally expressed in gold francs. The 1976 Protocol amended the Convention replacing the gold franc by the SDR of the International Monetary Fund (IMF).

Under the 1992 Protocol the limits of compensation payable by the 1992 CLC are as follows:

- for a ship not exceeding 5000 units of gross tonnage, 3 million SDRs;
- for a ship with a tonnage between 5000 and 140,000 units of tonnage, 3 million SDRs plus 420 SDRs for each additional unit of tonnage; and
- for a ship of 140,000 units of gross tonnage and over, 59.7 million SDRs.

1971 Fund Convention and the Protocols of 1976 and 1992 relating thereto

The 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage[15] (1971 Fund Convention) is the third convention which was agreed upon as a consequence of the *Torrey Canyon* incident. The Fund Convention complements the provisions of the Civil Liability Convention. It has been amended by Protocols in 1976 and 1992.

INTERNATIONAL FUND

The principal purpose of the Fund Convention is to establish an international fund to provide compensation for oil pollution damage to the extent that protection afforded by the Liability Convention is inadequate (Art 2). The Convention applies to the same types of pollution damage to which the Liability Convention applies (Art 3).

The fund pays compensation to persons suffering pollution damage if such persons are unable to obtain "full and adequate" compensation under the terms of the Liability Convention (Art 4). This will arise, for example, because there is no liability under that Convention, or where a shipowner who is liable under the Liability Convention is financially incapable of meeting its obligations in full (Art 4).

The compensation payable by the 1971 Fund for any one incident is limited to 60 million SDRs, including the sum actually paid by the shipowner or his insurer under the 1969 Civil Liability Convention. As in the case of the 1969 Civil Liability Convention, this amount was originally expressed in gold francs and a Protocol of 1976 replaced this unit of account by the SDR of the IMF.

Under the 1992 Protocol the compensation payable by the 1992 Fund for any one incident is 135 million SDRs, including the sum paid by the shipowner or his insurer under the 1992 CLC.

ADMINISTRATION OF THE 1971 AND 1992 FUNDS (IOPC FUNDS)

The 1971 and 1992 Funds are governed by separate Assemblies consisting of the State Parties to the 1971 Fund Convention and the 1992 Protocol relating thereto. They are administered by a joint Secretariat. The Secretariat, through its Director, is responsible for the administration of the Funds. Annual contributions are to

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be made to the Funds by persons in each contracting state who receive oil carried by sea in total quantities exceeding 150,000 tons per calendar year.

1972 London Convention

The 1972 International Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention)[16] is another international instrument directly designed to prohibit and limit marine pollution through activities in relation to the disposal of waste and other matter at sea. To that end, the Dumping Convention supports the terms of UNCLOS and is similar in its goals to MARPOL.

LIMITATIONS ON DUMPING OF WASTE

The main purpose of the London Convention is to ensure that all practicable steps are taken to prevent pollution of the sea by:

- the dumping of waste; or
- the dumping of other matter

that is liable to create hazards to human health, or to harm living resources and marine life (Art I). Contracting Parties are also to take measures individually, according to their capabilities, to prevent marine pollution caused by dumping (Art II).

'Dumping' includes any deliberate disposal at sea of wastes or other matter from:

- vessels;
- aircraft;
- platforms; or
- other man-made structures at sea (Art III).

It also extends to any deliberate disposal at sea of vessels, aircraft, platforms, or other man-made structures (Art III). However, dumping does not extend to the disposal at sea of wastes which are incidental to the normal operations of vessels, aircraft, platforms and other man-made structures (Art III).

APPLICATION OF THE CONVENTION

The jurisdictional reach of the Dumping Convention extends to:

- all vessels and aircraft flying the flag of a contracting party;
- all vessels and aircraft which are loading in the territory of a contracting party;
- all vessels or aircraft which intend to dump in the territorial sea of a contracting party; and
- to other vessels, aircraft and floating platforms under the jurisdiction of a Contracting Party (Art VII).

Provisions also exist recognizing sovereign immunity for certain vessels and aircraft, however, Contracting Parties are urged to ensure that vessels or aircraft which they own and operate act consistently with the terms of the Convention (Art VII).

TYPES OF WASTES

The principal operative provision of the Dumping Convention distinguishes between three types of wastes:

- wastes which are prohibited from being dumped;
- wastes which require a special prior permit in order to be dumped; and
- wastes which require a prior general permit in order to be dumped (Art IV).

Annex I to the Convention lists those substances which can not be dumped. Annex II lists those substances which cannot be dumped without a prior special permit. In cases where a permit is required for dumping,

16 (1972) 11 ILM 1294

criteria are established for the making of an assessment (Art IV in connection with Annex III). An exception to the above provisions exist in instances where dumping is necessary to secure the safety of human life or of vessels and aircraft (Art V).

ROLE OF RESPONSIBLE AUTHORITIES

Under the Dumping Convention each Contracting Party is required to establish and nominate an appropriate authority. This authority is responsible for:

- the issuing of permits;
- the keeping of records of dumping activities;
- monitoring the condition of the sea; and
- reporting to the International Maritime Organization (Art VI).

Contracting Parties are required to take appropriate measures within their territory to prevent and punish conduct which contravenes the Convention (Art VII).

In February 1994, amendments to the Annexes to the Convention entered into force prohibiting the dumping and incineration of industrial waste at sea, i.e., waste materials generated by manufacturing or processing operations. This does not include dredged material, sewage sludge, fish waste or organic materials resulting from industrial fish-processing operations, vessels and platforms or other man-made structures at sea, inert geological materials and uncontaminated organic materials.

In October 1996 a Special Meeting of Contracting Parties adopted the 1996 Protocol to the London Convention 1972, incorporating the application of the "precautionary approach" as well as the "polluter-pays principle".

The Protocol will enter into force after ratification by 26 States among which at least 15 should be Contracting Parties to the London Convention 1972.

Besides the incorporation of modern approaches to waste management and the strengthening of technical co-operation provisions and reporting enforcement and compliance procedures, the main aim was to include priorities set out in chapter 17 of UNCED Agenda 21 in the global regime governing dumping and incineration wastes at sea.

THE INTERNATIONAL CONVENTION ON LIABILITY AND COMPENSATION FOR DAMAGE IN CONNECTION WITH THE CARRIAGE OF HAZARDOUS AND NOXIOUS SUBSTANCES BY SEA, 1996

Through the adoption in May 1996 of the so called HNS Convention, the work which was initiated already in the wake of the *Torrey Canyon* disaster in 1967 was brought to a successful conclusion. Perhaps the fortunate absence of any disaster involving carriage of hazardous and noxious substances (HNS) could explain why it has taken Governments more than twenty-five years to reach agreement on a new convention on liability and compensation for damage caused in connection with the carriage of such goods.

Once the regime for compensation for damage caused by oil was in place attention was turned to other types of dangerous cargoes or, as it collectively has become known, hazardous and noxious substances, HNS. The starting points for these considerations were very much the same as for the oil pollution liability regime: a common basis of liability had to be introduced; the shipowner's liability had to be substantially increased and, possibly, supplemented and/or shared by cargo interests. However, even if the parallel with the 1969/1971 regime was obvious in many respects, there were also many different aspects to take into account.

SCOPE OF APPLICATION

As the title already reveals, the Convention establishes a system for compensation and liability. It covers in principle all kinds of hazardous and noxious substances and defines its scope of application by reference to existing lists of substances. HNS are defined as:

- oils carried in bulk listed in appendix I of Annex I to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended (MARPOL 73/78);
- noxious liquid substances carried in bulk referred to in Annex II of MARPOL 73/78;
- dangerous liquid substances carried in bulk listed in chapter 17 of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, 1983, as amended;
- dangerous, hazardous and harmful substances, materials and articles in packaged form covered by the International Maritime Dangerous Goods (IMDG) Code;
- liquefied gases as listed in chapter 19 of the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, 1983;
- liquid substances carried in bulk with a flashpoint not exceeding 60_C (measured by a closed cup text);
- solid bulk materials possessing chemical hazards covered by appendix B of the Code of Safe Practice for Solid Bulk Cargoes, as amended, to the extent that these substances are also subject to the provisions of the International Maritime Dangerous Goods Code when carried in packaged form; and
- residues from the previous carriage in bulk of substances referred to above.

HNS are defined by reference to lists in the above-mentioned instruments.

DEFINITION OF DAMAGE

The Convention defines damage as including loss of life or personal injury; loss of or damage to property outside the ship; loss or damage by contamination of the environment, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to the costs of reasonable measures of reinstatement actually undertaken or to be undertaken; and the costs of preventive measures and further loss or damage caused by them.

SHIPOWNER LIABILITY

The Convention introduces strict liability for the shipowner, higher limits of liability than the present general limitation regimes and a system of compulsory insurance and insurance certificates. The limits of liability are related to the gross tonnage of the ship concerned. For ships with a gross tonnage not exceeding 2,000 the liability is 10 million SDRs. The limit then increases with the size of the vessel and reaches its maximum of 100 million SDRs for ships with a gross tonnage of 100,000 or more.

THE SECOND TIER

In spite of the increased limits it was obvious that the shipowner's liability would not provide sufficient cover for the damage that could be caused in connection with carriage of HNS cargo. This liability, which creates a first tier of the Convention, is therefore supplemented by a second tier, the HNS Fund, financed by cargo interests. In principle, compensation will be paid from the HNS Fund when the shipowner's liability is insufficient to provide full compensation, or when no liability arises under the first tier, or when the shipowner is incapable of meeting the obligations under this Convention in full. Normally, therefore, and in view of the limits for the shipowner's liability, the HNS Fund will only become involved in major incidents or in exceptional circumstances.

Contributions to the second tier will be levied on persons in the State Parties who receive a certain minimum quantity of HNS cargo during a calendar year. The tier will consist of one general account for chemicals and three separate accounts for oil, liquefied natural gas (LNG) and liquefied petroleum gas (LPG). The system with separate accounts covering only damage caused by the substances contributing to the respective account has been seen as a way to avoid cross-subsidization between different HNS substances. Compensation will be payable by the HNS Fund up to a maximum of 250 million SDRs (including compensation paid under the first tier).

ENTRY INTO FORCE

The Convention will enter into force eighteen months after the date on which the following conditions are fulfilled:

- at least 12 States, including 4 States each with not less than 2 million units of gross tonnage, have expressed their consent to be bound by it; and
- the Secretary-General of IMO has been informed that a total quantity of at least 40 million tonnes of cargo contributing to the general account of the International Hazardous and Noxious Substances Fund established by the Convention has been received in these States during the preceding calendar year.

1990 Oil Pollution Preparedness Convention

Another recent international convention dealing with protection of the marine environment is the 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation.[17] This convention seeks to complement the legal regimes created by the Intervention, Civil Liability and Fund Conventions and is yet another which utilizes the International Maritime Organization as the coordinating international organization.

The Convention seeks to adopt both the precautionary principle and the need for cooperation to prevent pollution. To that end, parties are to individually or jointly take all appropriate measures in accordance with the Convention's terms to prepare for and respond to an oil pollution incident (Art. 1).

OIL POLLUTION EMERGENCY PLAN AND REPORTING

Ships which fly the flags of state parties are required to have on board a shipboard oil pollution emergency plan as adopted by the IMO (Art 3). Procedures are also established to deal with oil pollution reporting in the event of a discharge or probable discharge of oil.

In the case of a ship such a report is to be made to the nearest coastal state. In the case of a floating offshore installation or similar type of structure the report is to be made to the coastal state to whose jurisdiction it is subject (Art 4).

This requirement extends to:

- the masters of ships or other persons in charge of ships;
- persons in charge of sea ports and oil handling facilities;
- persons in charge of maritime inspection vessels or aircraft; and
- the pilots of civil aircraft.

Once a report of a discharge of oil is received then the relevant party in receipt of the information is to assess the nature of the incident, and to then without delay inform other states whose interests are affected or likely to be affected (Art 5).

NATIONAL COORDINATION

Contracting state parties are required to establish a national system for responding promptly and effectively to oil pollution incidents. Under this system a relevant national authority is to be designated as being responsible for oil pollution preparedness and response and the receipt of oil pollution reports.

This system is also to include a national contingency plan for preparedness and response. In addition, contracting parties are to establish oil spill combating equipment and other relevant programs for organization and training of relevant personnel, providing that such measures are within their capabilities (Art 6).

ENHANCED INTERNATIONAL COOPERATION

The Convention provides for enhanced international cooperation in pollution response. Contracting parties agree, subject to their own capabilities, to cooperate by way of the provision of services and support in

17 (1991) 30 ILM 735

responding to an oil pollution incident when the severity of the incident so justifies (Art 7). An Annex to the Convention deals with the reimbursement of the costs of assistance.

To support the programs implemented by the Convention, other provisions deal with increased international cooperation in research and development in dealing with oil pollution preparedness and response, and technical cooperation (Arts 8, 9). There is also a general undertaking that parties will endeavour to conclude bilateral or multilateral agreements for oil pollution preparedness and response (Art 10).

Global Programme of Action for Protection of the Marine Environment from Land-based Activities

The Global Programme of Action for Protection of the Marine Environment from Land-based Activities (GPA) was developed as a response to the growing recognition that land-based activities impose a tremendous negative impact on the marine environment. Sewage, contaminates, atmospheric pollution, industrial and agricultural runoff, and alteration of the coast line including destruction of habitat affects the most productive areas of the marine environment, such as estuaries and near-shore coastal waters. The GPA is a soft law instrument aimed at preventing the degradation of the marine environment from land-based activities by assisting states, individually or jointly, to prevent, reduce, control or eliminate degradation of the marine environment and assist with its recovery from impacts from land-based activities. As it states in the GPA:

> ***The Programme of Action [...] is designed to be a source of conceptual and practical guidance to be drawn upon by national and/or regional authorities in devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities. Effective implementation of this Programme of Action is a crucial and essential step forward in the protection of the marine environment and will promote the objectives and goals of sustainable development.***

The development of the GPA was envisaged under UNCLOS and chapter 17 of Agenda 21. In 1985, UNEP assisted in the development of the Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-based Sources. These guidelines served as the basis for the development of the GPA. Commencing in 1994, UNEP organized two government-designated expert meetings to draft the GPA. These meetings culminated in an intergovernmental conference to adopt the GPA from 23 October to 3 November 1995 in Washington D.C. UNEP was chosen to provide the secretariat.

It is worth noting the chose of the phrase "land-based activities". Many other instruments, including Regional Seas Conventions and Protocols use the word "sources". As understanding of the problem has grown overtime, experts came to realize that it was not always possible to point to a specific source of pollution. For example, whereas an outfall pipe from an industrial site or a municipal sewage treatment plant can be easily identified, runoff of pesticides or fertilizer from farms or leaching from polluted ground water sites are more difficult to trace. Further, harbour dredging or destruction of coral reefs are not, strictly speaking, sources of pollution, but rather polluting activities. Thus, the drafters decided to refer land-based activities to ensure the instrument addressed all types of land-based pollution which impact on marine resources.

PROBLEMS

The GPA lists some of the problems land-based activities impose on the marine environment including:

- contaminants including:
  - i) sewage;
  - ii) persistent organic pollutants;
  - iii) radioactive substances;
  - iv) heavy metals;
  - v) oils (hydrocarbons);
  - vi) nutrients;
  - vii) sediment mobilization;
  - viii) litter;

- physical alteration, including habitat modification and destruction in areas of concern;
- sources of degradation including:

  i) point sources (coastal and upstream) including:

     a. waste-water treatment, industrial, and recreation and tourism facilities;
     b. power plants;
     c. military installations;
     d. construction works (dams, coastal structures, harbour works and urban expansion);
     e. coastal mining;
     f. research centres;
     g. aquaculture;
     h. habitat modification (dredging, filling in of wetlands, clearing of mangrove forest); and
     i. introduction of invasive species;

  ii) non-point (diffuse) sources such as:

     a. urban, agricultural, horticultural, forestry, construction and mining waste runoff;
     b landfills and hazardous waste sites;
     c. erosion as a result of physical modification of coastal features;

  iii)atmospheric deposition caused by:

     a. transportation (vehicle exhaust);
     b. power plants and industrial facilities;
     c. incinerators;
     d. agricultural operations; and

- areas of concern including:

  i) critical habitats, including coral reefs, wetlands, seagrass beds, coastal lagoons and mangrove forests;
  ii) habitats of endangered species;
  iii) ecosystem components including spawning areas, nursery areas, feeding grounds and adult areas;
  iv) shorelines;
  v) coastal watersheds;
  vi) estuaries and their drainage basins;
  vii) specially protected marine and coastal areas; and
  viii) small islands.

The GPA provides detailed information on actions to be taken at the national, regional and international levels to address marine pollution from land-based activities.

ACTIVITIES AT THE NATIONAL LEVEL

At the national level, countries are encouraged to develop comprehensive programmes of action for integrated coastal area management which should include:

- identification and assessment of the problems;
- establishment of priorities;
- setting management objectives for priority problems;
- identification, evaluation and selection of strategies and measures;
- criteria for evaluating the effectiveness of strategies and measures; and
- programme support elements.

The GPA recommends strategies and programmes for management including:

- measures to promote sustainable use of coastal and marine resources and for preventing or reducing degradation of the marine environment such as best available techniques and best environmental practices, introduction of clean production practices, application of best management practices, use of appropriate, environmentally sound and efficient technologies and product substitution;
- measures to modify contaminants or other forms of degradation after generation such as waste recovery, recycling, and waste treatment;
- measures to prevent, reduce or ameliorate degradation of affected areas such as environmental quality criteria, land-use planning requirements, and rehabilitation of degraded habitats; and
- requirements and incentives to induce action to comply with measures such as economic instruments and incentives including polluter pays and internalization of environmental costs, technical assistance and training, and education and public awareness.

REGIONAL ACTIVITIES

As has been recognized through the Regional Seas Programme, cooperation at the regional level can be crucial for success in arresting marine degradation. This is particularly so where a number of countries share the same marine and coastal area, such as in enclosed or semi-enclosed seas. Regional cooperation can strengthen regional and national capacity, provide an avenue for harmonizing and adjusting measures to fit particular environmental and socio-economic circumstances and support more efficient and cost-effective implementation of the programmes of action. States are encourages to participate in regional and subregional arrangements. Effective functioning of such arrangements might include: strengthening regional information networks; inviting multilateral financing agencies, particularly regional development banks, to cooperate in and support action plans; and encouraging collaboration between national and regional focal points and economic groupings, other relevant and international organizations, development banks and regional rivers authorities in the development and implementation of action plans.

INTERNATIONAL COOPERATION

International cooperation serves a central role in capacity building, mobilizing financial resources, developing an international institutional arrangement for assisting with the implementation of the GPA and furthering work in specific areas at the international level. Regular review of the implementation of the GPA and the state of the world marine environment is also important at the global level to encourage exchange of experiences, flow of financial resources, scientific and technological cooperation, and transfer of cleaner technology.

Support for capacity building includes the mobilization of experience in support of national and regional activities and the development of a clearing house mechanism. With regard to mobilization of experience, states should cooperate to ensure the establishment of linkages with international and regional organizations, including specialized agencies such as UNEP and with ongoing international programmes monitoring and assessing the state of the marine environment and relevant river systems, including for example the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), the Global Ocean Observing System (GOOS) and the Global Investigation of Pollution in the Marine Environment (GIPME). States should also promote cooperative interaction with private-sector groups and non-governmental organizations to introduce cost-effective and environmentally sound practices, facilitate access to new and innovative technology and sources of technical advice and assistance, and promote cleaner production methods, particularly through the training of industry personnel. The clearing house is to be established by UNEP as the secretariat for the GPA. It is intended to be a means for facilitating exchange of experience and expertise, including facilitating effective scientific, technical and financial cooperation.

Mobilizing financial resources is another indispensable element of a successful programme of action. While states recognize that, in general, funding for national and regional programmes will come from national private

and public sector resources, financial support will be required by countries in need of assistance to follow through on implementation of the GPA. An illustrative list of funding sources and mechanisms at the national level and from external sources is provided in the Annex to the GPA. It should also be noted that the Global Environment Fund is authorized to mobilize funds, including grants and concessionary loans to eligible countries, to achieve agreed global incremental benefits in the area of international waters.

Finally, two areas of additional international action are identified: 1) waste water treatment and management and 2) persistent organic pollutants.

States recognize the serious public health problems and degradation of the marine environment caused by the disposal of inadequately treated waste water in coastal areas. The Executive Director of UNEP, in close cooperation with WHO, UNDP, UNCHS (Habitat) and other relevant organizations, is called upon to prepare a proposal setting forth a specific plan for addressing the global nature of the problem to allow the issue to be addressed in follow-up to the GPA.

The GPA also promotes the development of a global legally binding instrument on persistent organic pollutants (POPs). POPs are a set of organic compounds which are particularly dangerous in that they are toxic, persistent (do not break down), liable to bioaccumulate, prone to long-range transport and deposition, and can result in adverse environmental and human health effects at locations both near to and far from their source. Due to their composition and transport patterns, they tend to accumulate in the cooler latitudes. Twelve specific compounds have been identified including PCBs, dioxins and furans, and DDT. Work is currently under way in a number of international fora to assist in the development of such a multilateral environmental agreement.

RECOMMENDED APPROACHES BY SOURCE CATEGORY

While the GPA offers guidance on national, regional and international activities to address marine pollution from land-based sources, it also provides more detailed advice on actions that states can take to address specific source categories of environmental degradation. For each source category (sewage; persistent organic pollutants; radioactive substances; heavy metals; oils (hydrocarbons); nutrients; sediment mobilization; litter; and physical alterations and destruction of habitat) the basis for action, objective/proposed target and activities, at the national, regional and international level, are outlined. States are expected to set specific targets and deadlines for action.

Regional Marine Conventions

One of the difficulties which exist with conventions dealing with international environmental law is that many are unable to deal with very specific regional problems. This is primarily a consequence of the fact that the conventions are negotiated to specifically deal with global problems and in order to gain international support they must seek to deal with universal problems which all states face rather than specific problems only of concern to a few states.

This does not stop some global conventions from attempting to deal with some very specific regional issues. For example, the 1982 United Nations Convention on the Law of the Sea deals with the unique problem of protecting the marine environment of ice covered waters (Art 234) despite this being an issue for only a very small number of states. Likewise, the 1989 Basel Convention on the Transboundary Movements of Hazardous Waste and their Disposal provides that states are not to allow the export of hazardous wastes to the area south of 60oS (Art 2). However, while it is sometimes possible for global conventions to deal with some very specific regional issues, they do not adopt a comprehensive approach.

Regional environmental conventions share many of the characteristics of globally applicable conventions. However, as pointed out by Kiss and Shelton[18], principles and norms for the whole community of nations often can be more effective when enforced at regional levels. In recognition of the potential for regional environmental

18 **Kiss and Shelton, 97.**

conventions to deal with specific issues of importance within a particular region, many global conventions are now beginning to encourage states to adopt regional agreements. These regional agreements are sometimes designed to supplement the global convention. They may also allow for the development of a specific regional regime protecting the environment.

An example of this type of approach has been the 1959 Antarctic Treaty.[19] The Treaty has formed the basis for a very extensive legal regime which has increasingly had a focus on protection of the environment. The following additional international instruments have been adopted which have sought to protect the Antarctic environment:

- 1972 Convention on the Conservation of Antarctic Seals;
- 1980 Convention on the Conservation of Antarctic Marine Living Resources; and
- 1991 Protocol on Environmental Protection to the Antarctic Treaty.

One aspect of international environmental law which has had a particular regional focus has been the protection of the marine environment. This has been partly as a result of the potential for states to effectively join together in cooperative regimes in protecting the marine environment because it is a resource which they all share. Examples of such a regional approach are those agreements established to deal with the North and Baltic Seas, including the:

- 1969 Bonn Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil;[20]
- 1972 Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft;[21] and
- 1974 Paris Convention on the Prevention of Marine Pollution from Land-based Sources.[22]

The success of the regional approach in this area been, in large part, due to the interest of the United Nations Environment Programme (UNEP). Under the UNEP Regional Seas Programme regional conventions have been established for nine maritime regions. These regions are the Mediterranean, Persian Gulf, West and Central Africa, South-East Pacific, South Pacific, Red Sea, and Gulf of Aden, Caribbean, East Africa and Black Sea. Action Plans, the preliminary step to the development of a convention have also been adopted for the East Asian Seas, the South Asian Seas and the North-West Pacific. An Action Plan is also under discussion for the South-West Atlantic.

Kiss and Shelton have noted in regard to the UNEP conventions:

> ***These conventions draw upon the same principles and generally apply the same solutions, often incorporating norms contained in global instruments, including some not yet in force. The regional approach is justified by the geographic and climatic similarity among neighbouring states bordering regional seas, as well as the similarities which may exist in economics, culture and politics.***
>
> ***Apart from systematic regionalisation in UNEP's regional seas program, specific environmental problems of geographically limited areas generally are better regulated by the small number of affected states. This is the case, for example, with efforts to combat pollution in rivers, lakes and certain seas, such as the Baltic Sea. Regional organizations such as the Council of Europe or the OECD frequently play the role of initiator in the development of conventional solutions to these problems.***[23]

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19 402 UNTS 71

20 702 UNTS 3

21 (1972) 11 ILM 263

22 (1974) 13 ILM 352

23 Loc cit.

The UNEP Regional Seas Programme is an excellent example of the potential for regional environmental conventions to have an important impact on the legal regime for the protection of the environment.

The substantive aspect of any regional programme is outlined in an "action plan" which is formally adopted by an intergovernmental meeting of the Governments of a particular region before the programme enters into an operational phase. In the preparatory phase leading to the adoption of the action plan, Governments are consulted through a series of meetings and missions about the scope and substance of an action plan suitable for their region. In addition, with the cooperation of appropriate global and regional organizations, reviews of the specific environmental problems of the region are prepared in order to assist the Governments in identifying the most urgent problems in the region and the corresponding priorities to be assigned to the various activities outlined in the action plan. UNEP coordinates directly, or in some regions, indirectly, through existing regiona organizations, the preparations leading to the adoption of the action plan.

All action plans are structured in a similar way, although the specific activities for a given region are dependent upon the needs and priorities of that region. An action plan usually incudes the following components:

- **Environmental assessment**: This involves assessing and evaluating the causes of environmental problems as well as their magnitude and effect on the region. Environmental assessment is undertaken to assist national policy makers to manage their natural resources in a more effective and sustainable manner and to provide information on the effectiveness of legal and administrative measures taken to improve the quality of the environment.
- **Environmental management**: Each regional programme includes a wide range of activities in the field of environmental management. Examples of such activities are: cooperative regional projects on training in environmental impact assessment, control of industrial, agricultural and domestic wastes, and formulation of contingency plans for dealing with pollution emergencies.
- **Environmental legislation**: An umbrella regional convention, supported by specific technical protocols, often provides a legal framework for cooperative regional and national actions.
- **Institutional arrangements**: When adopting an action plan, Governments agree upon an organization to act as the permanent or interim secretariat of the action plan.
- **Financial arrangements**: UNEP, together with selected United Nations and other organizations, provides "seed money" or catalytic financing in the early stages of regional programmes. However, as a programme develops, it is expected that the Governments of the region will progressively assume full financial responsibility.

Once the Action Plan has been adopted, the states may choose to proceed with the development of a convention, often further expanded upon in one or more protocols. A list of the Conventions and Protocols adopted to date under the Regional Seas Programme is provided at the conclusion of this chapter.

Although the Conventions and Protocols are developed to address regional needs, they have some common traits.

The Conventions

The Conventions all have an article which defines the geographical reach of the convention. Inland waters are generally excluded from the convention, the exception being the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, which specifically includes "related inland waters"[24], and the Convention for the Protection of the Marine Environment and Coastal Area of the South-east Pacific, which does not address the issue of inland waters.

The conventions all also contain a section dealing with general obligations. Such obligations generally include:

- taking all measures necessary for the conservation of the affected sea, including the prevention, abatement and combating of marine pollution;

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24 Article 1.

- establishing national standards, laws and regulations to protect the sea environment in conformity with the convention and to cooperate with international, regional and subregional organizations to develop regional standards;
- ensuring that in taking measures to prevent, reduce, combat and control pollution in the convention area that the parties do not transfer damage from one area to another or transform one type of pollution into another; and
- cooperating to develop protocols prescribing agreed measures, procedures and standards for the implementation of the convention.

Each convention then goes on to address specific issues of concern in the region. These may include pollution from land-based activities; airborne pollution; pollution from seabed activities; pollution from vessels; specially protected areas and protection of wild flora and fauna; cooperation in combating pollution in cases of emergency; pollution caused by dumping from ships and aircraft; and erosion of the coastal area. The Convention for the Protection of the Natural Resources and Environment of the South Pacific Region also includes provisions on disposal of wastes, storage of toxic and hazardous wastes, and testing of nuclear devices.[25] These general clauses serve as the basis for the establishment of protocols outlining in greater detail the specifics of the actions to be taken by states in regards to these issues.

At least one protocol has been developed under each of the regional seas conventions. The protocols adopted under each convention are listed at the conclusion of this chapter.

The conventions also generally provide for environmental impact assessment, scientific and technical cooperation, technical and other assistance, and liability and compensation. The South Pacific Convention also provides that the parties will cooperate to transmit information to the other parties on measures adopted by them in the implementation of the Convention as agreed to by the parties.

The conventions also establish the necessary institutional arrangements for assisting with the implementation of the convention, authorizing an organization to carry out the functions of secretariat for the convention. Often UNEP serves as the secretariat initially. The South Pacific and the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution are served by independent secretariats and the Convention for the Protection of the Mediterranean Sea against Pollution, the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region and the East Asian Seas Action Plan secretariats are provided by specialized units within UNEP. The conventions also deal with matters such as meetings of the parties, amendment of the convention and protocols, adoption of protocols, settlement of disputes, and other standard final clauses.

The Protocols

Each of the Conventions has at least one Protocol, setting out in greater detail specific duties outlined in the Convention. As noted earlier, the Protocols generally address one of the specific pollution concerns of greatest importance to the region. For example, the Protocol concerning Regional Cooperation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency under the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment recognizes the threat to the environment imposed by the amount of tanker traffic through the region. In fact, each of the conventions has a protocol for cooperation to address environmental emergencies, generally specifically oil spills. Other subjects for protocols include:

- pollution from dumping from ships and aircraft;
- pollution from land-based sources;
- special protected areas; and
- pollution from exploration and exploitation of the seabed and continental shelf and the subsoil thereof.

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25 Articles 10, 11 and 12.

The South-east Pacific Convention is unique with its Protocol for the Protection of the South-east Pacific against Radioactive Contamination.

The protocols deal with the same geographic region outlined in the conventions and spell out the relationship between the convention and the protocol. Generally the rules of procedure and financial rules of the convention apply to the protocols. The parties to the convention are generally also required to become a party to at least one protocol at the time. Sometimes this is automatic. Conversely, no one may be a party to a protocol without also being a party to the convention. A complete list of the conventions and protocols is provided below.

We shall examine two specific Conventions and their Protocols for a more detailed understanding of the issues.

Protection of the Mediterranean Marine Environment

The protection of the Mediterranean marine environment was one of the initial areas which UNEP concentrated on in its regional seas programme. This reflected the threat to this regional marine environment from both marine and land-based activities from European states and also the extensive use made of the Mediterranean as a major international waterway between Europe and the Asia via the Suez Canal.[26]

Barcelona Convention

The core convention dealing with the protection of the Mediterranean Marine environment is the 1976 Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution. This Convention has recently been amended at the Conference of Plenipotentiaries on the Convention for the Protection of the Mediterranean Sea Against Pollution and its Protocols, Barcelona, 9-10 June 1995. Resolution II of this Conference adopted amendments to the Convention in the Annex Section I. The Convention contains a range of core provisions dealing with the protection of the marine environment. The state parties are however also encouraged to enter into other bilateral or multilateral, or regional and subregional agreements for the promotion of sustainable development, the protection of the environment and the conservation and preservation of natural resources in the Mediterranean Sea Area (Art 3).

AREA OF APPLICATION

The Convention applies to the Mediterranean Sea Area, which means the maritime waters of the Mediterranean Sea proper, including the gulfs and seas, bounded to the west by the Cape Spartel lighthouse at the entrance to the Straits of Gibraltar and to the east by the southern limits of the Straits of the Dardanelles between the Mehmetcik and Kumkale lighthouses (Art 1). The Convention may be extended to coastal areas as defined by each contracting party within its own territory.

GENERAL OBLIGATIONS

The Convention imposes a general obligation upon states to, either individually or jointly, take appropriate measures in accordance with the convention to prevent, abate, combat, and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and also to protect and enhance the marine environment in the Area so as to contribute towards its sustainable development (Art 4(1)). The Parties also pledge to pursue protection of the marine environment and the natural resources of the area as an integral part of the development process, meeting the needs of present and future generations in an equitable manner (Art.4(2)). The Parties shall also apply the "precautionary principle" and the "polluter pays principle", promote integrated management of coastal zones, and undertake environmental impact assessment for proposed activities that are likely to cause a significant adverse effect on the marine environment within areas of national jurisdiction or upon areas outside of national jurisdiction or upon other States (Art. 4(3)). The Parties also agreed to

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26 **Amendments to the Barcelona Convention and its protocols were made in 1994, 1995 and 1996. This section will discuss the amended versions of these instruments in anticipation of their eventual acceptance by State Parties.**

adopt programmes and measures which contain, where appropriate, time limits for their completion, to utilize best available techniques and best environmental practices, and to promote the application of, access to and transfer of environmentally sound technologies (Art. 4(4)).

SPECIFIC OBLIGATIONS

In addition to the Convention's general obligations, specific obligations exist with respect to particular types of marine pollution. Four specific types of marine pollution are dealt with. The contracting parties agree to take all appropriate measures to prevent, abate and to the fullest possible extent eliminate pollution within the Area caused by dumping from ships and aircraft or incineration at sea (Art 5). In conformity with existing international law, the parties also agree to prevent, abate, combat and to the fullest possible extent eliminate pollution within the Area caused by discharges from ships. They also agree to ensure the effective implementation within the convention Area of rules generally recognized in international law dealing with the control of this type of pollution (Art 6). Measures are also to be taken to prevent, abate, combat and to the fullest possible extent eliminate pollution resulting from exploration and exploitation of the continental shelf, and the sea-bed and its subsoil (Art 7). Pollution from land-based sources is also dealt with. The parties are under an obligation to prevent, abate, combat and to the fullest possible extent eliminate pollution from land-based sources originating in their territories and reaching the sea including direct outfalls discharging into the sea or through coastal disposal, indirectly through rivers, canals or other watercourses, including underground watercourses or through run-off, and that transported through the atmosphere (Art 8). The Parties shall also take all appropriate measures to protect and preserve biological diversity, rare or fragile ecosystems, as well as species of wild flora and fauna which are rare, depleted, threatened or endangered and their habitats (Art 10). Finally, the parties agree to take all appropriate measures to prevent, abate and to the fullest possible extent eliminate pollution which can be caused by transboundary movements and disposal of hazardous wastes, and to reduce to a minimum and if possible eliminate such transboundary movements (Art 11).

COOPERATION

The Convention encourages the contracting parties to cooperate and take all necessary measures for dealing with pollution emergencies within the Area, whatever may be the cause of such emergencies, and to reduce or eliminate the damage resulting from them (Art 9(1)). Once a party becomes aware of a pollution emergency, they are to without delay notify UNEP and also ensure that any other party likely to be affected is notified (Art 9 (2)). Provision is also made for scientific and technological cooperation and also the exchange of data as well as other relevant scientific information (Art 13(1)). The Parties also undertake to promote research on, access to and transfer of environmentally sound technology, including clean production technologies, and to cooperate in the formulation, establishment and implementation of clean production processes. (Art 13(2)). A commitment is also made to cooperate in the provision of technical and other possible assistance in fields related to marine pollution, with priority to be given to the special needs of developing countries in the Mediterranean region (Art 13(3)). The Parties also agree to cooperate in the formulation and adoption of appropriate rules and procedures for the determination of liability and compensation for damage resulting from pollution of the marine environment in the Mediterranean Sea Area (Art 16).

IMPLEMENTATION

A number of mechanisms are established under the Convention designed to deal more effectively with implementation. Pollution monitoring mechanisms are to be established, not only within areas under national jurisdiction, but also in areas beyond national jurisdiction (Art 12). The Parties agree to adopt legislation to implement the Convention and Protocols, and the Secretariat may assist parties, at their request, with drafting such necessary legislation. (Art 14). The Parties shall transmit to the Organization reports on legal and administrative or other measures taken by them for the implementation of the Convention, Protocols and recommendations adopted at their meetings, and the effectiveness of these measures and problems encountered in the implementation of the instruments (Art 26). There is also provision for the parties to assess the compliance with the Convention and its Protocols. Where appropriate, the parties shall recommend necessary steps to bring about full compliance (Art 27).

UNEP is designated as being responsible for carrying out the secretariat functions under the Convention (Art 13). One of the most important roles it has is the convening of meetings of the parties. The meeting of contracting parties is to be held once every two years, with extraordinary meetings held at other times as deemed necessary (Art 19). At these meetings the implementation of the Convention and its Protocols is to be kept under review. There is also provision for the adoption of Protocols, in addition to those which were originally adopted with the Convention (Art 21).

PUBLIC INFORMATION AND PARTICIPATION

In the amended Convention the Parties agree to ensure that their competent authorities give to the public appropriate access to information on the environmental state in the field of application of the Convention and its Protocols, on activities or measures adversely affecting or likely to affect it, and on activities carried out or measures taken in accordance with the Convention and Protocols (Art 15(1)). Opportunity shall also be given to the public to participate in decision-making processes relevant to the field of application of the Convention and Protocols (Art 15(2)). It should be noted that Article 15(3) provides, however, that the Article shall not prejudice the right of the Parties to refuse, in accordance with their legal systems and applicable international regulations, to provide access to information on the ground of confidentiality, public security or investigation proceedings, stating the reason for such refusal.

PROTOCOLS

A number of Protocols have been adopted to support the Convention. The Protocols deal with specific measures to combat marine pollution within the Mediterranean area and contain more detailed provisions than the Convention. Two Protocols were adopted at the same time as the Convention and three other Protocols have been adopted since.

The first is the 1976 Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft. The title has now been changed to include incineration at sea. The Protocol applies to the same sea area as the Convention (Art 2). The dumping of wastes or other matter is prohibited, with the exception of:

- dredged material;
- fish waste or organic materials resulting from the processing of fish and other marine organisms;
- vessels, until 31 December 2000;
- platforms and other man-made structures at sea, provided that material capable of creating floating debris or otherwise contributing to pollution of the marine environment have been removed to the maximum extent, without prejudice to the Protocol concerning Pollution Resulting from Exploration and Exploitation of the Continental Shelf, the Seabed and its Subsoil; and
- inert uncontaminated geological materials the chemical constituents of which are unlikely to be released into the marine environment (Art 4).

However, the dumping of these permitted wastes requires a prior special permit from the competent national authority (Art 5). This permit may only be issued after careful consideration of the factors set forth in the Annex to the Protocol, which have not yet been established by the Parties (Art 6). Exceptions may be allowed in the case of *force majeure* when human life or the safety of a ship is threatened (Art 8). Further, if a Party is in a critical situation of an exceptional nature and considers that wastes or other matter not listed in Article 4(2) of this Protocol cannot be disposed of on land without unacceptable danger or damage, above all for the safety of human life, the party shall forthwith consult the Organization, which shall in turn consult the Parties and recommend methods of storage or the most satisfactory means of destruction or disposal under the circumstances (Art 9). All incineration at sea is prohibited (Art 7).

The parties to the Protocol are required to designate competent authorities for the purposes of issuing permits and also keeping records on the quantities and nature of wastes which have been dumped (Art 10).

The Protocol requires each party to apply these measures to:

- ships and aircraft registered in its territory and flying its flag;
- ships and aircraft loading in its territory wastes or other matter which are to be dumped; and
- ships and aircraft believed to be engaged in dumping in areas under its jurisdiction (Art 11).

The second Protocol adopted at Barcelona in 1976 was the Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency. The purpose of this Protocol is to encourage cooperation between the contracting parties to take all necessary measures in cases of grave or imminent danger as a result of the presence of oil or other harmful substances to:

- the marine environment;
- the coast; or
- related interests of one or more of the parties, (Art 1).

The term 'related interests' is given a wide meaning so as to include:

- activities in coastal waters;
- the historical and tourist appeal of the area;
- the health of the coastal population; and
- the preservation of living resources (Art 2).

The contracting parties are encouraged to either individually, bilaterally, or through multilateral cooperation, develop contingency plans and means for combating pollution of the sea by oil and other harmful substances, (Art 3) and for monitoring activities in the Mediterranean Sea Area so as to be aware of possible threats (Art 4). The Protocol also contains provisions dealing with the obligation of states to disseminate information concerning the relevant national authorities which they have designated to deal with these emergencies, (Art 6) and to also coordinate the activities of these authorities so as to ensure speedy and reliable response to dangers to the marine environment (Art 7). To also assist in this process, the contracting parties are to instruct the masters of ships flying their flags to report all incidents, and observations of incidents, causing pollution of the sea (Art 8). A mechanism is also established to deal with instances where a party requires assistance to deal with marine pollution threats (Art 10).

The 1980 Athens Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources reinforces the obligations imposed upon the contracting parties to deal with land-based marine pollution dealt with in the Convention, specifically to take all appropriate measures to prevent, abate, combat and eliminate to the fullest possible extent pollution caused by discharges from rivers, coastal establishments or outfalls, or emanating from any other land-based sources and activities within their territories, giving priority to the phasing out of inputs of substances that are toxic, persistent and liable to bioaccumulate (Art 1). The Protocol, however, not only deals with the Convention area but also the hydrological basin of the Area and brackish waters, coastal salt waters including marshes and coastal lagoons and ground waters communicating with the Mediterranean Sea (Art 3).

Parties to the Protocol undertake to eliminate pollution from land-based sources from substances listed in annex I, in particular to phase out inputs of substances which are toxic, persistent and liable to bioaccumulate by either joint or individual action (Art 5 (1)). National and regional action plans and programmes, containing measures and time-tables for their implementation are to be developed, and shall take into account the best available techniques and the best environmental practice, including, where appropriate, clean production technologies taking into consideration the criteria set forth in annex IV (Art 5(4)). The parties shall also take preventive measures to reduce, to a minimum, the risk of pollution caused by accidents (Art 5(5)).

The types of pollution which the Protocol covers include:

- discharges originating from land-based point and diffuse sources and activities within the territories of the parties that may affect directly or indirectly the Area as defined in Article 3 through coastal disposals, rivers, outfalls, canals or other watercourses, including ground water flow or through run-off and disposal under the seabed with access from land;

- pollution transported by the atmosphere emanating from land-based sources or activities within the territory of the parties; and
- pollution from fixed man-made offshore structures under the jurisdiction of a party which serve purposes other than the exploration and exploitation of mineral resources (Art 4(1)).

States not party to the Protocol, and which have in their territories parts of the hydrologic basin of the Area, are invited to cooperate in the implementation of the Protocol (Art 4(3)).

Point source discharges into the Protocol Area and releases into water or air that reach and may affect the Area shall be strictly subject to authorization or regulation by competent national authorities of the parties (Art 6(1)). To this end, the parties agree to provide for systems of inspection by their competent authorities to assess compliance with authorizations and regulations (Art 6(2)). The parties may be assisted by the Organization, upon request, in establishing new or strengthening existing, competent structures for inspection of compliance with authorizations and regulations, including special training of personnel (Art 6(3)). The parties also agree to establish appropriate sanctions in case of non-compliance (Art 6(4)).

The parties are also to formulate and adopt common guidelines to deal with various other sources of land-based marine pollution, such as the length, depth and position of pipelines for coastal outfalls (Art 7). The parties also agree to carry out monitoring activities and make access to the public of the findings to assess levels of pollution along their coasts and to evaluate the effectiveness of action plans, programmes and measures taken under this Protocol (Art 8). Provisions also exist dealing with cooperation between the parties in scientific and technological fields related to land-based sources of marine pollution (Arts 9 and 10).

The 1982 Geneva Protocol Concerning Mediterranean Specially Protected Areas was amended in 1985 and is now called the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean. This Protocol creates a general obligation upon parties to:

- protect preserve and manage in a sustainable and environmentally sound way areas of particular natural or cultural value, notably by the establishment of specially protected areas;
- protect, preserve and manage threatened or endangered species of flora and fauna;
- cooperate, directly or through competent international organizations, in the conservation and sustainable use of biological diversity in the area;
- identify and compile inventories of the components of biological diversity important for its conservation and sustainable use;
- adopt strategies, plans and programmes for the conservation of biological diversity and the sustainable use of marine and coastal biological resources and integrate them into their relevant policies; and
- monitor the components of biological diversity and identify processes and categories of activities which have or are likely to have a significant adverse impact on the conservation and sustainable use of biological diversity (Art 3).

The objective of establishing specially protected areas is to safeguard:

- representative types of coastal and marine ecosystems of adequate size to ensure their long-term viability and to maintain their biological diversity;
- habitats which are in danger of disappearing in their natural area of distribution;
- habitats critical to the survival, reproduction and recovery of endangered, threatened or endemic species of flora or fauna; and
- sites of particular importance because of their scientific, aesthetic, cultural or educational interest (Art 4).

The Protocol outlines the procedure for establishing specially protected areas (Art 5) and for establishing and listing specially protected areas of Mediterranean importance (Art 8). Each party agrees to establish protection measures to ensure the viability of such areas including regulation of activities in the area (Art 6), planning,

management, supervision and monitoring measures (Art 7), adopt national measures for the protection and conservation of species (Art 11). The parties also agree to take all appropriate measures to regulate intentional or accidental introduction of non-indigenous or genetically modified species and to eradicate species that have already been introduced that scientific study demonstrates cause or are likely to cause damage to ecosystems, habitats or species in the area (Art 13).

Cooperation between the parties and with other appropriate international organizations, to implement measures, is also encouraged (Art 12).

Finally, in 1996, the parties adopted the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movemnets of Hazardous Wastes and Their Disposal. At the date of printing this Manual, the Protocol was not yet in force.

The Protocol applies to wastes listed in annex I to the Protocol, those defined as such by national legislation of the State of export, import or transit, and wastes that possess characteristics listed in Annex II (Art 3(1)). Further, hazardous substances that have been banned or are expired or whose registration has been cancelled or refused through government regulatory action in the country of manufacture or export for human health or environmental reasons, or have been voluntarily withdrawn or omitted from the government registration required for use in the country of manufacture or export are also subject to this Protocol (Art 3(1)(d)).

The parties have a general obligation to take all appropriate measures to prevent, abate and eliminate pollution of the Area which can be caused by transboundary movements and disposals of hazardous wastes (Art 5(1). Further, the parties agree to take all appropriate measures to reduce to a minimum, and where possible eliminate, the generation of hazardous wastes (Art 5(2)). The parties shall take all appropriate measures to reduce to a minimum the transboundary movement of hazardous wastes and, if possible, to eliminate all such movements in the Mediterranean (Art 5(3)). Parties may individually or collectively ban the import of hazardous wastes and other parties shall respect such decisions and not permit the export of such wastes to such parties (Art 5(3)). Parties also agree to prohibit export and transit of hazardous wastes, within the area under their jurisdiction and subject to the provisions relating to transboundary movement of hazardous wastes through the territorial sea of a State of transit, to developing countries. Parties which are not Member states of the European Community (Monaco is considered to have the same rights and obligations of Member States for the purposes of this Protocol) shall prohibit all imports and transit of hazardous wastes. (Art. 5(4)). Finally, parties shall cooperate with other UN agencies and relevant international and regional organizations to prevent illegal traffic and take appropriate measures to achieve this goal including criminal punishment of offenders in accordance with national legislation (Art 5(5)). Illegal traffic is defined as any transboundary movement in contravention of this Protocol or other rules of international law (Art 9).

Transboundary movements can be authorized under certain circumstances if the wastes cannot be disposed of in an environmentally sound manner in the country in which they originate, provided there is prior written notification by the state of export and prior written approval from the states of import and transit (Art 6). Parties have a duty to reimport hazardous wastes if the transboundary movement cannot be completed (Art 7).

The parties agree to inform one another of measures taken and results achieved in application of the Protocol (Art 11). They also agree to provide information to the public about transboundary movements of hazardous wastes and to allow the public an opportunity to participate in relevant procedures with the aim of making known its views and concerns (Art 12). The Protocol also contains provisions for verification procedures where there is reason to believe that a party has acted in breach of its obligations under the Protocol and for developing appropriate guidelines for the evaluation of damage and rules and procedures for liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes (Arts 13 and 14).

The Barcelona Convention and its accompanying Protocols is the longest running Regional Seas Programme and it can be looked to for its experience and example.

Within the South Pacific region there has been cooperative action taken by states to deal with the protection of the marine environment. This is an especially vital issue in a region where there are a large number of small island states whose economies are reliant upon marine resources. The region also faces the impact of activities that extra-regional states engage in. This especially applies with respect to fishing and navigation activities.

Noumea Convention

The 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region is the major instrument operating within the region dealing with the protection of the marine environment. While the Convention provides basic obligations with respect to the protection of the South Pacific marine environment, the state parties are also encouraged to conclude bilateral or multilateral agreements, including regional and sub-regional agreements, for the protection, development and management of the marine and coastal environment of the Convention area (Art 4(1)).

AREA OF APPLICATION

The convention applies within the 200 nautical miles zones established in accordance with international law off the states that are part of the region (Arts 1 & 2). These states are:

American Samoa	Australia (East Coast and eastward islands)
Cook Islands	Federated States of Micronesia
Fiji	French Polynesia
Guam	Kiribati
Marshall Islands	Nauru
New Caledonia	New Zealand
Niue	Northern Mariana Islands
Palau	Papua New Guinea
Pitcairn Islands	Solomon Islands
Tokelau	Tonga
Tuvalu	Vanuatu
Wallis and Futuna	Western Samoa (Art 2).

The Convention also applies to the high seas areas which are enclosed from all sides by the 200 nautical mile zones proclaimed by these states. The Convention's coverage does not include internal waters or archipelagic waters (Art 1).

GENERAL OBLIGATIONS

The Convention imposes a general obligation upon states to, either individually or jointly, take appropriate measures in accordance with international law and the convention to ensure sound environmental management and development of natural resources and to also prevent, reduce and control pollution of the Convention area (Art 5(1)). In addition to the Protocols which are attached to the Convention, the parties also undertake to cooperate in the formulation and adoption of other Protocols to reduce pollution from all sources or the promotion of environmental management in conformity with the Convention's objectives (Art 5(3)).

While the Convention creates specific obligations upon the state parties for the convention area, there is also an expectation that efforts will be made to establish and adopt recommended practices, procedures and measures in conjunction with other competent organizations for the control of pollution (Art 5(4)).

SPECIFIC OBLIGATIONS

In addition to the Convention's general obligations, provision is also made for dealing with particular sources and types of pollution. Measures are to be taken to prevent pollution caused by discharges from vessels and to ensure the implementation of generally accepted international rules and standards (Art 6). Appropriate

measures are also to be taken to prevent, reduce and control pollution from land-based sources (Art 7) and sea-bed activities (Art 8). The control of airborne pollution resulting from discharges into the atmosphere from activities under their jurisdiction is also dealt with (Art 9).

Measures are also to be taken to prevent and control the disposal of wastes by dumping at sea from vessels, aircraft, or man-made structures. In particular, there is to be no disposal into the seabed and subsoil of radioactive wastes or other radioactive matter (Art 10). The storing of toxic and hazardous wastes is also to be prevented and measures taken to reduce the threat of pollution caused from the storage of such wastes (Art 11). Pollution resulting from the testing of nuclear devices is also to be controlled (Art 12). Coastal erosion resulting from various land-based activities is also to be controlled so as to reduce environmental damage (Art 13).

There is also provision for the establishment of specially protected areas such as parks and reserves. Within these areas activities which may have an adverse impact on the species or ecosystem may be regulated. (Art 14) While these provisions deal with specific types of pollution which may impact upon the marine environment, there is also a commitment to deal with future activities. To that end, the contracting parties agree to pursue the balanced development of their natural resources so as to prevent or minimize harmful impacts on the marine environment of the Convention Area (Art 16(1)). This is extended to a consideration of the potential effects of such projects on the marine environment so that measures may be taken in advance to prevent any substantial pollution or significant harmful effects (Art 16(2)).

COOPERATION

The Convention has a number of provisions which seek to facilitate cooperation between the parties in relation to the protection of the marine environment. This particularly applies to pollution emergencies, where the contracting parties are to develop and promote individual and joint contingency plans for responding to pollution threats within the Convention area (Art 15(1)). If the Convention area is in imminent danger of being polluted, contracting parties are also under an obligation to notify other countries or territories which it deems likely to also be under threat (Art 15(2)).

Cooperation is also encouraged with respect to scientific research, environmental monitoring. and the exchange of data and other scientific and technical information related to the purposes of the Convention (Art 17(1)). Research and monitoring programmes are also to be developed for the purposes of the Convention (Art 17(2)). This cooperation is also extended to the provision of technical and other assistance in fields relating to pollution monitoring and sound environmental management, taking into account the special needs of the island developing countries (Art 18).

PROTOCOLS

An important aspect of the Convention is the two additional Protocols which were adopted with it. These Protocols deal with the prevention of pollution of the South Pacific Region by dumping, and cooperation in combating pollution emergencies in the South Pacific region. The contracting parties may, if they wish, adopt additional Protocols (Art 5(3), Art 23). States which become parties to the Convention are also required to become a party to one or more of the Protocols (Art 27).

The Protocol on the Prevention of Pollution by Dumping applies to the Convention area, together with the continental shelf of any party which extends beyond the Convention area (Art 2). The Protocol generally seeks to limit the dumping of waste within the Convention area. Any dumping which does take place within the territorial sea, EEZ or continental shelf of any party is to be by way of permit only. (Art 3) Any laws which the contracting parties implement to regulate dumping are also to be no less effective than internationally recognized rules within the framework of the 1972 London Dumping Convention (Art 3). Certain substances are prohibited from being dumped (Art 4), while others require the issuance of a special prior permit (Art 5). Where a permit is being issued to allow dumping to take place, a set of criteria have been established so as to determine whether dumping is acceptable (Art 7, Annex III). It is also possible for permits to be issued to allow for dumping in certain emergencies which pose unacceptable risks to human health (Art 10).

The Protocol concerning cooperation in combating pollution emergencies is designed to facilitate greater cooperation amongst the contracting parties in dealing with pollution incidents once they have occurred. The Protocol defines a pollution incident to include a discharge or significant threat of a discharge of oil or other hazardous substance which results in pollution to the marine and coastal environment or which adversely affects the related interests of one or more of the parties (Art 1). The parties are to establish and maintain means of preventing and combating pollution incidents. This may include the enactment of legislation, the preparation of contingency plans, and the development of the capacity to respond to pollution incidents (Art 3(2)).

A key aspect of the Protocol is the establishment of appropriate procedures to ensure that information regarding pollution incidents is reported as rapidly as possible to appropriate authorities (Art 5(1)). There is also provision for mutual assistance between parties following a pollution incident (Art 6). There is established a series of operational measures which can be followed in response to a pollution incident (Art 7). Finally, the Protocol provides that the South Pacific Commission has certain institutional responsibilities (Art 9).

CONCLUSION

Considering the immensity of the world's seas and oceans and the significant importance they have for human life, careful attention must be paid to the protection of this vital resource. International cooperation is essential to address emergency pollution situations and to curb the impact of common polluting elements and activities. The international regime, developed over the past forty years, attempts to codify States' rights and responsibilities for protection of the coastal and ocean environment. Through global framework agreements and codes of conduct as well as specific and detailed regional protocols, States have affirmed their responsibility for the protection and conservation of the marine environment and imposed upon themselves strict measures to ensure this end. National governments must now act to implement these agreements and guarantee local compliance.

EXERCISES ON THE MARINE ENVIRONMENT

Global Marine Agreements

1. Does the 1982 United Nations Convention on the Law of the Sea contain many detailed provisions dealing with the protection of the marine environment, or is it designed to be primarily a framework convention on this topic?
2. What is the importance in international environmental law of the provisions of Part XII of the 1982 United Nations Convention on the Law of the Sea?
3. Do the provisions in the 1982 United Nations Convention on the Law of the Sea dealing with safeguards (Articles 223-233) create any substantial limitations on the enforcement of provisions dealing with the protection of the marine environment?
4. Does the 1972 London Dumping Convention prohibit the dumping of all wastes and other matter?
5. What are the different types of marine pollution dealt with in MARPOL?
6. What type of civil liability regime is created under the Civil Liability Convention?
7. Does the flag state or the coastal state have the main obligation for enforcement under the terms of MARPOL?
8. Why does MARPOL designate certain 'special areas' in Annex I within which discharges are absolutely prohibited?
9. Within what maritime zone can a coastal state take action under the terms of the 1969 Intervention Convention?

10. What type of danger must exist to the coastal state before it can intervene in the event of a maritime casualty under the terms of the Intervention Convention?

11. What are the specific obligations imposed upon state parties by the terms of the 1990 Oil Pollution Preparedness Convention?

12. Which international organization is responsible for authorizing shipboard oil pollution emergency plans under the terms of the 1990 Oil Pollution Preparedness Convention?

13. Which body is responsible for the administration of the 1971 Fund Convention?

14. Which states are responsible for contributions to the Fund Convention and how is the system of making contributions administered?

15. Is the discharge by a vessel at sea of ballast water considered to be a matter which falls under the terms of MARPOL or the London Dumping Convention?

16. What is the relationship between the Civil Liability and Fund Conventions?

17. What is the distinction in intent and purpose between the Intervention Convention and the 1990 Oil Pollution Preparedness Convention?

18. If a vessel had a maritime accident on the high seas but then drifted into the territorial sea of a coastal state, under what circumstances could the coastal state intervene?

19. Do the provisions of the 1982 United Nations Convention on the Law of the Sea dealing with flag, coastal and port state jurisdiction go beyond the regime which currently exists in international law, or does it reinforce that regime?

20. Do the major oil pollution conventions create a comprehensive global regime which protects the marine environment, or is there scope for additional provisions?

21. Will an injured state be able to claim against the Fund Convention in all instances when it has suffered injury following a marine pollution incident, or must it first seek to make a claim through other avenues?

22. The 1982 United Nations Convention on the Law of the Sea only deals with land-based marine pollution very briefly. What are the difficulties which arise in attempting to implement a global convention dealing with land-based sources of marine pollution that imposes strict obligations upon the contracting parties?

23. What are persistent organic pollutants and why is it necessary to control their production, use and disposal?

24. What should a national management plan contain for protection of the marine environment from land-based activities?

25. What is the clearing house mechanism envisaged under the GPA, how will it operate and what will it provide?

26. Describe recommended actions to be taken with regard to one source category of environmental degradation.

Regional Instruments

1. Do any of the regional sea conventions extend to the internal waters of contracting states?

2. What provisions exist in the UNEP Regional Seas Programme for the adoption of additional Protocols by the contracting parties?

3. What specific types of marine pollution does the 1976 Barcelona Convention for the Mediterranean deal with?

4. Do Protocols to the UNEP Regional Seas Conventions contain more detailed provisions than the main body of the Conventions?
5. What financial or other provisions are contained in the Regional Seas Conventions to assist developing states in meeting their obligations under the Conventions?
6. Do the provisions in the 1980 Athens Protocol dealing with land-based pollution go beyond those provisions envisaged in the 1982 United Nations Convention on the Law of the Sea?
7. What role does UNEP play in the implementation of these regional marine conventions?
8. Who has the obligation under these Conventions for enforcement?

Discussion points for small groups

1. Consider the provisions of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) dealing with marine pollution and discuss whether its terms are consistent with, or go beyond, the provisions dealing with the protection of marine environment found in the other international conventions detailed above.
2. The Conventions which have been discussed above are the major global international instruments dealing with the protection of the marine environment. Consider whether they adequately cover all the principal issues dealing with the protection of the marine environment and identify any gaps which exist in the legal regime.
3. Why is it important for there to be regional conventions dealing with the protection of the marine environment rather than relying on existing global regimes dealing with that topic?
4. What difficulties exist in attempting to ascertain the legal obligations imposed upon states with respect to the protection of the marine environment when there exist global conventions such as UNCLOS and MARPOL and also regional seas conventions?

Case Study

1. Consider the facts surrounding the *Torrey Canyon* incident and then assess the legal issues which would now arise given the current international legal regime dealing with protection of the marine environment. These issues include the ability of the UK to take certain action to protect its coastline from the pollution, the liability of the shipowners, and the ability of the UK to ask for assistance from other states and international organizations in dealing with the problem.
2. The *SS Liberty* is a cargo ships registered in Vulpinia. While en route between Singapore and San Fransisco 200 litres of diesel oil is discharged in the middle of the Pacific Ocean. A 4 litre container of mercury is also dumped at sea. When the vessel arrives in the United States, consider the relevant international legal issues which may arise and what action, if any, Vulpinia may take against the master and owners of the ship.
3. Vulpinia announces that it intends to transport plutonium from Europe to East Asia on the SS Vulpinia. The planned route will take the SS Vulpinia down the west coast of Africa, then across the Indian Ocean, through the Tasman Sea between Australia and New Zealand and north through the Southwest Pacific to its final destination in East Asia. The contracting parties to the Noumea Convention, concerned about the potential for marine pollution damage which may be caused if there is an incident to the SS Vulpinia, call an emergency meeting. Consider what measures the contracting parties may be able to take under the Convention or its Protocols. What other international instrument(s) come into play?

References

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- 1976 Protocol. 16 ILM (1977) 617. In force 8 April 1981
- 1992 Protocol.

International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Damage (Brussels) 9 ILM (1970) 25. In force 6 May 1975. And its related Protocol:

- 1973 Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other than Oil.

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London) 11 ILM (1972) 1294. In force 30 August 1975. And its amendments:

- Amended 1978, in force 11 March 1979;
- Amended 1980, in force 11 March 1981; and
- Amended 1989.

Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels) 11 ILM (1972) 284. And its amendements and related protocols:

- Amended 1976 Protocol 16 ILM (1977) 621; and
- 1984 Protocol.

Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo) 11 ILM (1972) 262. In force 7 April 1974. And its related amendments and protocols:

- Amended 1983 Protocol, in force 1 September 1989; and
- Amended 1989 Protocol.
- Amended 1996 Protocol.

International Convention for the Prevention of Pollution by Ships (MARPOL) (London) 12 ILM (1973) 1319. (Amended by 1978 Protocol before it entered into force).

Protocol Relating to the Convention for the Prevention of Pollution from Ships (MARPOL) 17 ILM (1978) 546. In force 2 October 1983. And its related Annexes:

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- Annex II in force 6 April 1987; and
- Annex V in force 31 December 1988.

The United Nations Convention on Law of the Sea (Montego Bay) (UNCLOS) 21 ILM (1982) 1261. In force 16 November 1994.

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- 1992 Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-based Sources, in force 15 January 1994; and
- 1992 Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations, in force 15 January 1994.

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- 1989 Protocol Concerning Marine Pollution Resulting from Exploration and Exploitation of the Continental Shelf, in force 17 February 1990; and
- 1990 Protocol for the Protection of the Marine Environment Against Pollution from Land-based Sources, in force 2 January 1993.

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- 1985 Protocol Concerning Cooperation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region, in force 30 May 1996.

Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific. In force 19 May 1986.

Convention for the Protection of the Mediterranean Sea Against Pollution, 15 ILM (1976) 290. In force 12 February 1978. Amended 10 June 1995, amendments not yet in force. And its related Protocols and Amendments:

- Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency, in force 12 February 1978;
- Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, in force 12 February 1978, amended 10 June 1995, amendments not yet in force;
- 1980 Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources (Athens) 19 ILM (1980) 869, in force 17 June 1983, amended 7 March 1996, amendments not yet in force;
- 1982 Protocol Concerning Mediterranean Specially Protected Areas (Geneva), ND (loose leaf) Doc. J.20, in force 23 March 1986, amended as Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, 10 June 1995, amendments not yet in force;
- 1994 Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, not yet in force;
- 1996 Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal, not yet in force.

Convention for the Protection of Natural Resources and Environment of the South Pacific Region (Noumea), in force 25 November 1996, and its related Protocols:

- 1986 Protocol concering Cooperation in Combating Pollution Emergencies in the SOuth Pacfic Region, in force 22 August 1990; and
- 1986 Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, in force 22 August 1990.

Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment; in force 20 August 1985. And its related Protocols:

- 1982 Protocol Concerning Regional Cooperation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency, in force 20 August 1985;

- 1986 Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, 26 ILM (1987) 38, in force 18 August 1990;
- 1986 Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region, 26 ILM (1987) 38, in force 18 August 1990;
- 1989 Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South-east Pacific, in force 17 October 1994; and
- 1989 Protocol for the Protection of the South-east Pacific Against Radioactive Contamination, in force 23 January 1995.

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2. Kilifoti Eteuati, "The implementation of environment conventions in the South Pacific"[27]
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B. INTERNATIONAL LAW OF SHARED WATER RESOURCES

RATIONALE FOR THE DEVELOPMENT OF AGREEMENTS ON SHARED WATER RESOURCES

Many of the original concerns with regard to shared water resources involved the issue of navigation. Though there was some limited use of rivers and lakes for agricultural, industrial or domestic purposes, navigation was by far the most important use to which they were put. One of the first European agreements on shared water resources, the Final Act of the Congress of Vienna in 1815, stipulated that there was to be freedom of navigation on all navigable rivers. Increasingly, however, water resources have been put to other uses, such as the generation of hydroelectricity or for waste disposal, and their use for transportation purposes has declined with the invention of trains, planes and automobiles. The growing demands on water for agricultural, domestic, and industrial purposes have required cooperation between States on the allocation of water resources. Without such cooperation and negotiation, conflicts were bound to arise. It has been essential to establish a regime that would allow all States with water access to have equal enjoyment of the resource. However, access and right to use the water has been an insufficient guarantee in the face of mounting pollution of water resources. The declining quality of water has become as significant a concern as access. Poisoned by industrial excess, nutrified by farm runoff and fouled by sewage, the existing water supply, already sorely inadequate in some parts of the world, has become a mounting concern. Water that is unfit to drink is as bad as not having water at all. So States have come to recognize the need to balance their rights to develop and exploit the natural resource with the obligation to ensure that their activities do not have a detrimental effect on themselves or, under international law, on their neighbor.

The growing demands on limited water resources as a result of industrialization, urbanization and swelling populations make the need for reasoned and peaceful resolutions of potential conflicts between States as critical today as ever. This section outlines basic tenets of the international law of shared water resources, illustrates the major components of the legal regimes and relates them to national legislation.

What are Shared Water Resources?

What constitutes a shared water resource? The term "international water resources" or "shared water resources" includes rivers and lakes, together with their tributaries and distributaries, or fluvial inlets and outlets – now commonly known as drainage basins – and groundwater systems which lie within the jurisdiction of two or more States.[1] Examples of shared water resources include many major international river systems such as the Nile, Danube, Mekong, Indus, and Niger Rivers, and major lakes and inland seas such as the Great Lakes, Lake Victoria and Aral Sea.

However, international law has not yet adopted a common view on how much of the international watercourse is included within the concept of a shared water resource. Imagine a lengthy river system running through several countries. The river may have its source in snow-covered mountains, be fed by streams running through various countries along the course of the river, and ultimately feed into a lake bounded by several other countries. What constitutes the shared water resources? Are the snow fields where a river originates to be considered part of the system because, if the source of the river was at all affected, the entire course of the river would be affected? Are the various streams that feed the river along its course part of the system? What if the streams originate in a country that does not otherwise border on the river – does that country have a responsibility to the States that border the river? What about the countries that border on the lake, but not the river; are they owed a duty to protect the lake by the countries that border the river? One

1 Bonaya Adhi Godana, Africa's Shared Water Resources (London: Frances Pinter (Publishers), 1985) p.1

of the primary difficulties in negotiating agreements on shared water resources lies in defining the area to be covered by the agreement.

Theories of State Rights and Responsibilities Regarding Shared Water Resources

Over the years conflicts over shared water resources have arisen from differing approaches to the issue of sovereignty. States have traditionally held that they have a sovereign right to utilize resources within their boundaries in any way they choose. However, the way that the resources are used in one State may well have a detrimental effect on the other States sharing that resource. For example, if one country was to construct a major dam on a river which runs through several countries in order to divert a substantial volume of water for irrigation, the downstream users would suffer from inadequate water supply, or from salt water intrusion into a river delta area. Downstream States, particularly, have argued that they have a right to absolute territorial integrity, that is that they have a right to protect that which comes into their territory and ensure that nothing harmful affects their territory. What has developed is a more pragmatic approach based on compromise.

There are five doctrines of law with regard to shared water resources:

- absolute territorial sovereignty;
- absolute territorial integrity;
- limited territorial sovereignty;
- limited territorial integrity; and
- community of interests theory.[2]

The first theory of absolute territorial sovereignty, or the Harmon Doctrine, named after the American who first espoused it, holds that States have the right to do anything within their own borders regardless of the effect on other States. This theory has never had much support in the international community, although it was used to support the American diversion of the Rio Grande River that divides the United States of America from Mexico, by India with regard to the Indus River that flows between India and Pakistan, and by Ethiopia with regard to the Nile.[3] The concept of absolute territorial sovereignty was rejected in the *Lac Lanoux* arbitration between France and Spain where it was stated:

> ***...that the upstream State has, according to the rules of good faith, the obligation to take into consideration the different interests at stake, to strive to give them all satisfaction compatible with the pursuit of its own interests, and to demonstrate that on this subject it has a real solicitude to reconcile the interests of the other riparians with its own.***[4]

The theory of absolute territorial integrity is based on the concept that those States lower down the river have a right to an unrestricted and unadulterated flow of water. This theory is stated as follows:

> ***Every State must allow rivers over which it does not exercise unrestricted territorial sovereignty... to follow their natural course; it may not divert the water to the detriment of one or more of the other States with rights to the river, interrupt, artificially increase or diminish its flow.***[5]

The West Punjab Government advanced this theory when India insisted that it had absolute territorial sovereignty to do as it wished with the Indus River.[6] However, this theory too has been discarded.

The other two theories, limited territorial sovereignty and limited territorial integrity are, as with the two noted above, opposite sides of the same coin. These theories are, in practice, observed together, thereby imposing corresponding rights and responsibilities on riparian States.

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2 Note 1, p. 32

3 Note 1, pp. 34 - 36.

4 Note 1, p. 37.

5 Max Huber cited in Note 1, p. 38.

6 Note 1, p. 39.

[E]very State is free to use the waters flowing on its territory, on the condition that such utilization in no way prejudices the territory or interests of the other States.[7]

Increasingly, however, States have adopted the concept of equitable utilization of shared water resources. The community of interests theory recognizes that both upstream and downstream States have a legitimate interest in the water resources and tries to balance the use of the resource to the mutual benefit of all parties concerned. In 1929, the Permanent Court of International Justice concluded that riparian States shared a "natural community of interest" and, therefore, a "common legal right" in the equal use of both contiguous and successive rivers.[8] The Helsinki Rules on the Uses of Waters of International Rivers drafted by the International Law Association embodied this concept and adopted the notion of equitable utilization. The Helsinki Rules constitute a non-binding statement of the standards of international law with regard to shared water resources. Chapter 2 of the Rules dealing with the equitable utilization of the waters of an international drainage basin states at Article IV:

Every basin State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin.

The Helsinki Rules have now been superseded by the recently adopted Convention on Non-navigational Uses of International Watercourses. The General Assembly of the United Nations adopted this Convention in 1997.[9] Article 5 of the Convention states:

1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.

2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.

The Convention lists what is reasonable and equitable use of water resources in light of the relevant factors in each case. These include geography and climate of the basin, the past uses of the water, the economic and social needs of each State, the population dependent on the watercourse in each watercourse State, and the effects of the use of the watercourse by one State on another, and the existing and potential uses of the watercourse. The various factors are to then be taken together as a whole to reach a conclusion about the reasonable and equitable use of the resource.[10] This obviously requires the various States involved to reach a negotiated settlement. This system has been preferred, as it provides an opportunity for all interested riparian States to reach a reasoned conclusion about the allocation of the water resources and draft a harmonious agreement.

International law has consistently accepted that States have the sovereign right to explore and exploit their own natural resources.[11] However, there is a corresponding obligation upon States to be aware of the

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7 Note1, p. 40.

8 Case Concerning the International Commission of the River Oder, PCIJ. Ser.A. No. 23, p. 27, 1929.

9 United Nations General Assembly 21 May 1997.

10 Convention on the Non-navigational Uses of International Watercourses, 21 May 1997, Article 6.

11 Report of the United Nations Conference of the Human Environment, Stockholm, June 1972, (United Nations Publication, Sales No. E.73.II.A.14 and corrigendum) Chapter 1, Principle 21; Rio Declaration on Environment and Development, Rio de Janeiro, June 1992. Principle 2.

transboundary impact of their activities, and to be liable for pollution for which they are responsible.[12] These two principles have been confirmed by decisions in arbitral tribunals.[13] Article 7 of the Convention provides that States must take all appropriate measures to ensure their activities do not cause significant harm to other watercourse States. Further, where significant harm is caused, the State which causes the harm has the obligation in consultation with the affected State to eliminate or mitigate the harm, and, where appropriate, discuss compensation.

States also have a general obligation to exchange information and consult with each other regarding possible effects of planned measures. This is made clear by the decision in the *Lac Lanoux* arbitration.[14] This duty is reiterated in Article 12 of the Convention.

> ***Before a watercourse State implements or permits the implementation of planned measures which may have a significant adverse effect upon other watercourse States, it shall provide those States with timely notification thereof. Such notification shall be accompanied by available technical data and information, including the results of any environmental impact assessment, in order to enable the notified States to evaluate the possible effects of the planned measures.***

This duty does not apply in emergency situations where swift action is required to protect public health or safety or other equally important interests, but a formal declaration of the urgency of the measures must be communicated to the other watercourse States (Art 19).

The Convention also provides that watercourse States shall individually or jointly protect and preserve the ecosystems of an international watercourse (Art 20), prevent, reduce and control pollution of an international watercourse (Art 21), prevent the introduction of new or alien species which may have detrimental effects on the ecosystem of a watercourse (Art 22), take all measures necessary to protect and preserve the marine environment, including estuaries, taking into account generally accepted international rules and standards (Art 23), and take all appropriate measures to prevent or mitigate conditions that may be harmful to other watercourse States whether from natural or human causes such as flood or ice conditions, water-borne diseases, siltation, erosion, salt-water intrusion, drought or desertification (Art 27).

Problems Encountered in the Negotiating Process

Work on the development of the Convention has taken a number of years. The text of the Convention was not adopted by a consensus of the Working Group with one-third of the membership of the Group voting against the text or abstaining from the vote. Articles 3, 5, 6, 7, 32 and 33 caused the most difficulties for States. These Articles refer to the: development of watercourse agreements; equitable and reasonable utilization and participation; factors relevant to equitable and reasonable utilization; obligation not to cause significant harm; and settlement of disputes. Upon presentation to the UN General Assembly, Burundi, China and Turkey voted against the adoption of the Convention. Turkey felt that the principle of equitable reasonable utilization should have been made primary to the obligation to not cause significant harm. Pakistan favoured obligatory and binding settlement procedures, whereas Turkey complained that compulsory rules regarding settlement of disputes were inappropriate in a framework convention. China stated that the text did not adequately reflect the principle of territorial sovereignty of a State over a watercourse that flowed through its territory, and that there was an imbalance of rights and obligations of upstream and downstream States. This last issue was also a concern for Ethiopia. Several States expressed the opinion that compulsory dispute settlement procedures were inappropriate. The degree to which States are prepared to overcome these objections shall be evidenced by the number which sign and ratify or accede to the Convention, which shall come into force upon the deposition of the 35th instrument of ratification or accession.

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12 **Stockholm Declaration; ILC Draft Articles on State Responsibility, Art 21 (2).**

13 **Lac Lanoux Arbitration (1957) 24 ILR 101; Gut Dam Arbitration (1968) 8 ILM 118.**

14 **Lac Lanoux Arbitration, (1957) 24 ILR 101.**

With regard to the development of agreements addressing specific international watercourses, beyond the issues of a State's sovereignty and its responsibilities to other States, are other factors that may influence a State in negotiating an agreement on shared water resources. These might include:

- the differences and similarities in the evaluative frameworks of co-riparian nations, such as various costs and benefits as determined by each State;
- the uncertainties that exist with regard to the possible future effects of any joint arrangement and the possible long term needs of each State;
- the physical and economic characteristics of the water resource management system as related to international boundaries; where equal access may reduce benefits to one State because of use by the other, where use by one does not affect the same use by the other State, or where net benefits to all States increase through cooperation;
- the state of international relations between the various States involved;
- domestic factors within each riparian State, including political, economic and social issues; and/or
- the number of nations involved in the negotiation, as the difficulty of reaching consensus increases with the number of participants.[15]

These issues will form the background for the negotiation of an agreement. The agreement eventually reached will depend on the skill and creativity of the negotiating teams.

Examination of the Major Components of the Legal Regime of International Watercourse Agreements

A number of advantages exist in having a river or other body of water, which is shared by two or more States, be the subject of an agreement which regulates its use and seeks to implement measures for the preservation and conservation of the resource. In establishing an agreement to deal with shared water resources, States are free to construct a system that best suits their needs. There are a number of variations and combinations of structures, financial mechanisms, jurisdiction, etc., that can be adopted.

International Management Commissions

One of the major components of most regimes is the creation of an international river commission. International river commissions or authorities offer a forum for the notification, consultation and negotiation of issues which are relevant to the management of the water resource. Such institutions, often originally designed to deal with issues of access and regulation of transport and development, have increasingly begun to have an environmental focus, such as assisting in the adoption, implementation and review of common environmental standards. Some examples of this approach are:

- the River Niger Commission;[16]
  - the Permanent Joint Technical Commission for Nile Waters;[17]
  - the Intergovernmental Coordinating Committee of the River Plate Basin;[18]

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15 I.K. Fox and LeMarquand, "International River Basin Co-operation: The Lessons From Experience", Report prepared for the United Nations Water Conference (undated).

16 Agreement Concerning the River Niger Commission and the Navigation and Transport on the River Niger, 587 United Nations Treaty Series 19.

17 Agreement between the UAR and the Republic of the Sudan for the Full Utilization of Nile Waters, 1959, and Protocol Establishing Permanent Joint Technical Committee, 1960, in UN, Legislative Texts and Treaty Provisions Concerning the Utilization of International Rivers for Purposes Other than Navigation, UN Doc. ST/LEG/Ser.B/12, 143

18 1969 Treaty on the River Plate Basin, 875 UNTS 12550

- the Amazonian Cooperation Council;[19] and
- the Mekong Commission.[20]

Examined in turn below are a number of factors to consider when creating a system to oversee the management of shared water resources.

LEGAL STATUS AND MEMBERSHIP

Although the membership of such agencies is generally restricted to the governments which are party to the agreements, this is not always the case. There are several examples where private companies have been permitted to join the agency, particularly where the development of hydroelectric facilities is one of the objectives of the agency.[21] The legal status of the agency is usually established under a treaty or similar multilateral agreement. The Salto Grande Joint Technical Commission was established under the Agreement of 30 December 1946 to deal with "all matters relating to the utilization, damming, and diversion of the waters of the Uruguay River". The Commission can hold property and enter into binding legal agreements with other organizations at the national or international level.[22]

FUNCTIONS, TERRITORIAL COMPETENCE AND RELATED POWERS OF THE AGENCY

Of course, the decisions taken in regard to this aspect depend on the nature of the water resource and the intended use of the resource. Five basic types of territorial jurisdiction have been identified including:

- agencies with jurisdiction over all rivers forming boundaries between two countries;
- agencies with jurisdiction over a basin, sub-basin or section of a river;
- agencies established solely to build and operate hydraulic engineering works;
- agencies with jurisdiction over extra-basin areas or matters; and
- agencies with jurisdiction over ground waters.[23]

The functions of the various agencies may also differ, including:

- data collection, project planning and design;
- advisory services;
- regulation and policing;
- adjudication;
- responsibility for other natural resources and the environment;
- construction of hydro facilities; and
- operation of hydro facilities and provision of services.[24]

The River Niger Authority[25] is responsible for the harmonization and co-ordination of the policies, projects and programs of the member States, the centralization of hydrological and related data and its dissemination, formulation of general policy with regard to the basin, and conception and implementation of studies, research and surveys, formulation of plans, construction, exploitation, and maintenance of works and projects. Further-

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19 1978 Treaty for Amazonian Co-operation, (1978) 17 ILM 1045

20 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin. Chiang Rai, Thailand 5 April, 1995. 34 ILM 864

21 Guillermo J. Cano, "Institutional and Legal Arrangements", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series 10, (New York: United Nations Publication, Sales No. E.82.II.A.17, 1983) p. 44-64

22 Salto Grande Technical Commission, "Salto Grande: The Binational Multi-Purpose Development Project", Experiences in the Development and Management of International River and Lake Basins, Natural Resources Water Series No. 10, pp. 217-244.

23 Cano, p. 49-50.

24 Cano, pp. 50-51.

25 Convention Creating the Niger Basin Authority, done at Faranah, 1980, Selected Multilateral Treaties in the Field of the Environment, Volume 2, eds. I. Rummel-Bulska and S. Osafo (Cambridge: Grotius Publications, 1991).

more, the Authority will undertake the following activities: statistics and planning; infrastructure; control and use of waters; control and preservation of the environment; control and regulation of navigation; land development and agro-pastoral development; regulation of water use; and financing of projects and works.[26] The Permanent Joint Technical Commission for Nile Waters[27] is responsible for drawing up basic outlines of projects to increase the Nile yield and supervise studies needed to complete the designs of such projects, supervise the implementation of such projects, draw up working arrangements and supervise works to be constructed on the Nile River, and devise a fair arrangement in the event of a series of low flow years.[28]

MECHANISMS AND PROCEDURES IN THE DECISION-MAKING PROCESS

The technical and administrative rules for decision-making are contained in the agreement establishing the agency and any regulations issued under that agreement. These rules may establish only one level of authority, as with the Indus Commission, or may have several levels of authority and various organs. These may consist of heads of State, a council of ministers, a secretary general, and a commission as is the case with the Organization pour la Mise en Valeur du fleuve Senegal.[29] Most, such as the Organization for the Management and Development of the Kagera River Basin, have a permanent secretariat.[30]

Agencies are permitted to adopt meeting agendas, and most agreements establish requirements for quorum and majority. Some agreements require that decisions be referred to higher levels for specific issues. With regard to public participation, some instruments, such as that establishing the Indo-Bangladesh Commission state that the meetings are closed to the public, while others, such as the International Joint Commission between Canada and the United States are open to the public.[31]

FUNDING ARRANGEMENTS

The funding arrangements may provide for an initial capital input by the parties and provide for loans from the parties and from third parties as is the case with the Salto Grande Agreement. The Mekong Secretariat has had substantial financial assistance from the United Nations.[32] There may also be arrangements for funding to be obtained from tolls and charges.[33]

SETTLEMENT OF DISPUTES

International agreements addressing the management of shared watercourses are themselves a dispute settlement mechanism, because the primary purpose of such agreements is to provide a means to coordinate the use of a shared resource. The agreement may also contain specific reference to dispute settlement and provide extensive mechanisms for dealing with contentious issues, as with the Indus Waters Treaty.[34] On the

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26 River Niger Commission, "Technical Note on the River Niger Commission", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series 10, pp 191-196.

27 Agreement for the Complete Utilization of the Nile Waters, done at Cairo, 8 November 1959, United Nations Legislative Series (United Nations Publication Sales No. 63 V. 4) p.143.

28 Permanent Joint Technical Commission for Nile Waters, "The Permanent Joint Technical Commission for Nile Waters: Egypt-Sudan", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series No. 10, pp. 158-164.

29 Cano, p. 48-49.

30 S.A. Rick, "The Mano River Basin Development Project", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series 10, pp. 165-183.

31 Cano, p. 51-52.

32 Mekong Secretariat, "Co-operation in the Lower Mekong River Basin", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series 10, pp. 245 - 252.

33 Cano, p. 54.

34 Ministry of Irrigation, India, "The Indus Commission and the Indo-Bangladesh Joint Rivers Commission", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series 10, pp. 359-363.

other hand the agency may have authority to adjudicate on issues presented to it, as is the case with the Joint Finnish-Soviet Commission on the Utilization of Frontier Watercourses.[35]

BOUNDARY DEMARCATION

The are several ways of fixing an international boundary along a watercourse including:

- at either bank;
- in the middle; or,
- in the case of navigable rivers, at the deepest channel.[36]

NON-NAVIGATIONAL USES

Non-navigational uses of shared water resources are all those uses which entail the withdrawal of water from its natural channel or storing or damming the flow of water. Hydroelectric power generation, irrigation, city water supply, and sanitation are the most prominent among non-navigational purposes.

APPORTIONING WATER

In negotiating their respective rights of access to, use, and share of water for non-navigational purposes, States may decide to apportion available water resources between themselves. Each State is then free to use and develop its own allotted share as it sees fit, regardless and independently of the other watercourse States. Classic cases in point are the 1959 Nile Waters Treaty between Egypt and Sudan, and the 1960 Indus Waters Treaty between India and Pakistan. The 1977 Indo-Bangladesh agreement, whereby India (the upstream State) agreed to scheduled releases of Ganges river waters to downstream Bangladesh past the barrage India built at Farakka, also belongs to this group. A complex apportionment scheme of the Jordan and Yarmouk river waters, and of ground water reserves straddling the border, is provided in the 1994 Peace Treaty between Israel and Jordan. The United States and Mexico apportioned the flow of the Colorado River when they agreed in 1944 to scheduled releases of waters by the upstream United States to downstream Mexico. These water apportionment schemes have entailed the construction of works needed to effect the partition of the waters, and the monitoring of agreed releases and the quality of the water released.

JOINT DEVELOPMENT AND UTILIZATION OF WATERS

States may also decide to enter into partnership for the joint development and utilization of the waters they share. The hallmark of this approach is that each partner State derives a benefit in terms of increased storage and power-generating capacity, availability of raw water, flood mitigation, and improved navigation; and it contributes to the cost of constructing, operating, and maintaining the necessary works.[37] Trade-offs are also possible when a State chooses to trade its own share of the benefits from a joint project in return for the other partner paying the full cost of the project, as did Laos when it gave Thailand the right to use all the power generated by the construction of the Nam Ngum reservoir on a tributary of the Mekong River in exchange for Thailand paying for the construction.

Joint development and use involves the construction, operation and maintenance of physical works, which raises complex legal issues about ownership and jurisdiction over the facilities. Generally each partner retains

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35 The Joint Finnish-Soviet Commission, "The Joint Finnish-Soviet Commission on the Utilization of Frontier Watercourses", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series 10, pp. 252-269.

36 A recent example of the latter is the 1975 treaty between Iraq and Iran delimiting the boundary along the Shatt-al-Arab waterway, which is formed by the confluence of the Euphrates and the Tigris rivers.

37 This approach was taken in the multipurpose development of the Columbia River which was agreed to in 1964 by Canada and the United States, the development of the Senegal River by Senegal, Mali, and Mauritania, the construction of storages built jointly on the Rio Grande River by the United States and Mexico, the 1946 treaty between Argentina and Uruguay for hydroelectric development of the Salto Grande, in a number of treaties concluded by the Alpine countries of Europe for the development of hydroelectric potential and in the provisions on the storage of the waters of the Yarmuk River in the 1994 Peace Treaty between Jordan and Israel.

jurisdiction and sometimes, but not always, outright ownership of the works or parts which fall within their territory. This is the case with the St. Lawrence Seaway between Canada and the United States, the Laos-Thai Nam Ngam dam and reservoir, or the Itaipœ dam built by Brazil and Paraguay. Joint and indivisible ownership of "common" works is the exception, but has been incorporated in the agreement regarding the construction of works built by Senegal, Mali and Mauritania in the Senegal River basin and in works constructed on the Gambia River basin by the States of Gambia, Guinea and Guinea Bissau.

POLLUTION CONTROL

The prevention and abatement of pollution of shared water resources is one of the elements of international responsibility States owe to each other as noted in the Convention on Non-navigational Uses of International Watercourses and is generally an element of an agreement with regard to the watercourse. How each State proposes to meet the obligation is generally left to the discretion of each State, especially with regard to the enactment of national legislation and creation of the necessary administrative machinery. Increasingly, States are trying to harmonize their legislation as a result of the growing problems with water quality.

Direct and Indirect Costs and Benefits of Participation in an Agreement by Governments

There are many opportunities for successful cooperation in the development and utilization of shared water resources. The will to cooperate, of course, relies on all parties, perceptions of the costs and benefits. Clearly one of the most important benefits of multilateral agreements on shared water resources is the potential to realize greater mutual benefits than could be achieved through unilateral action.

As noted above, these benefits might include sharing capital costs of major water works, the peaceful resolution of disputes, and certainty regarding water quality and quantity. For example, Argentina and Uruguay cooperated to develop hydroelectric power on the Salto Grande River providing power to both countries; the Indus Waters Treaty provided a solution to a developing conflict between Pakistan and India; and cooperation with regard to the development of the Mekong River has guaranteed consistent water flow to Vietnam. In some cases, as with the Pakistan-India Indus River Treaty and the Canada-United States Columbia River Agreement the benefits take the form of direct or indirect cash remuneration as compensation for lost water or the construction of storage dams, respectively.[38]

The benefits for cooperation will vary depending on many factors including the geography of the basin, the current uses, and the planned projects. The advantages of cooperation may not be readily evident in some circumstances, such as those which might accrue to an upstream riparian State which has no direct benefit from altering its current use of the resource. However, the creative use of incentives may draw an otherwise reluctant State into an agreement. An example can be drawn from the Rhine River agreement where The Netherlands, Germany and Switzerland agreed to provide financial assistance to France to offset the cost of construction of pollution prevention systems to reduce the impact of polluting activities in France.[39]

Obligations Assumed by a Government When it Becomes a Party to an Agreement and National Measures Taken to Give Effect to These Obligations

The obligations each State will have to assume in giving effect to any given agreement will depend on the circumstances in each case. Obviously the most important obligation is for the States involved to honour the agreement. Each agreement will impose different requirements on signatory States, and it will be the respon-

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38 K.-E. Hansson and R. Revesz, "Economic and Other Considerations for Co-operation in the Development of Shared Water Resources", Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series No. 10_pp. 82 - 106.

39 ILM

sibility of each State to draft and implement the necessary domestic legislation and create the necessary administrative structure to give effect to the agreement.

Obligations under the agreements may require States to enact domestic legislation to control emissions into the water resource or to control the diversion of waters. For example, the Convention for the Protection of the Rhine against Chemical Pollution[40] requires that the discharge of particular substances into the river be subject to national regulations and restrictions. Likewise, explicit requirements for national regulation of water abstractions and waste disposal have been incorporated in Article 2(8) of the Proposed Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC) Region. On the other hand, the Principles for the Utilization of the Waters of the Lower Mekong Basin merely implies the need for government regulation of diversion of water or discharges into the Mekong and environmental impact assessment (EIA) legislation to determine the detrimental impact of river projects in order to give effect to the principles set forth in the agreement to avoid or minimize harm.

Regulatory requirements of the same kind can also be implied in straightforward "water apportionment" agreements, that is, agreements whereby countries sharing a water body allocate between or among themselves quantities or volumes of available waters, for separate use and development. The Indo-Pakistan Indus Water Agreement is a classic case in point, where Pakistan's and India's mutual obligations under, among others, Article II(2), (3) and (5) not to interfere or to allow limited interference with flow of certain rivers, presupposes the availability of legislation regulating water abstractions in both countries.

Finally, implicit or explicit requirements as to the availability of national legislation are not limited to regulatory-type legislation, regulating water abstractions and waste disposal into water resources. For instance, Article 8 of the Convention Concerning the Legal Status of Works of Common Interest to the Member States of the Senegal River Development Organization (OMVS) expressly obligates party States to enact land acquisition legislation, so as to enable OMVS to gain access to the lands required for the construction of works of "common interest" to its member States. In this case, the enactment of domestic legislation is the very object of the international obligation undertaken by the OMVS member States whereas, in all other cases cited above, it constitutes the instrument by which an international obligation can be performed.

Recent Trends in the Development of National Legislation

There have been interesting and novel responses to the difficulties currently facing policy makers and legislators with regard to water resources. Included in this is, of course, the negotiation and implementation of multilateral agreements with regard to shared water resources. National legislation and administrative systems are also currently undergoing changes.

One of the trends is the increasing use of planning tools to offset potentially disastrous water development projects and to curtail the impact of land-based developments on water quality and quantity. Governments are requiring the development of master plans to guide all government decisions allowing such plans to be used in conjunction with land use and economic development plans. Recent legislation in Algeria and China offer examples of the importance attached to planning for the sound management of water resources.[41]

Second, Governments are realizing that it is not possible to manage water resources adequately without taking land-based uses into consideration. Land-based activities causing pollution are divided into "non-point sources" and "point sources".

Point sources are those where the harm is coming directly from an identifiable activity. This might include pollution from factories or sewage treatment plants. Legislation is increasingly being enacted to curb the

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40 A.C. Kiss, ed., Selected Multilateral Treaties in the Field of the Environment, (Nairobi: UNEP, 1983) P.468

41 S. Burchi, "Current Developments and Trends in the Law and Administration of Water Resources - A Comparative State-of-the-Art Appraisal" in the Journal of Environmental Law Vol.3 No.1 (Oxford: Oxford University Press, 1991), p. 72.

impact of point sources of pollution through the use of ambient water quality standards and effluent quality standards. Thailand, for example, has enacted legislation permitting the National Environment Board to issue water quality standards and to issue standards for waste water or effluent discharge or the Minister of Industry may issue regulations regarding standards for discharge of wastes from factories.[42]

The term non-point sources refers to activities that impact on water resources in a diffuse manner. This refers primarily to run-off from agricultural practices, from waste dumps, or mining activities. The types of impacts that can occur are pollution of water sources including ground water, or subsidence from over-pumping of ground water. The control of non-point sources is a little more difficult, as the source of the problem is less easy to identify and check. Algeria and Mauritania have adopted zoning laws to restrict activities around water sources, the Philippines has enacted legislation to restrict or ban the use of fertilizer and pesticides which may affect the quality of water, and China has issued statues that attempt to curb the over-pumping of ground water by miners to control land subsidence.[43] Evidence of the international concern for the protection of water resources from land-based activities is the recently adopted Global Program of Action to Protect the Marine Environment from Land-Based Activities.

A final trend is the dissolution of private property rights in water. To ensure that the State is better able to manage water resources, absolute individual rights to utilize water are being curtailed. Jordan for example has declared all waters State property. Surface waters are currently in the public domain in Chile, Colombia, Ecuador, and parts of Argentina and these countries are currently moving to incorporate ground waters into the pubic domain as well.[44]

Conclusion

The fundamental aspects of international customary law regarding shared water resources, as enumerated in the Convention on Non-navigational Uses of International Watercourses, include the equitable and reasonable use of the resource, the duty to inform other States when proposed uses may have a significant adverse effect on other watercourse States, and the duty not to cause significant harm to other watercourse States. These obligations are included in numerous international treaties and agreements between watercourse States regarding the use of the resource. As concerns about the quantity and quality of water resources multiply, negotiated international agreements and national legislation to give effect to the agreements are a valuable tool in protecting such a precious resource.

Exercises on Shared Water Resources

Rationale for international action

1. What are shared water resources?
2. Why is it necessary to have international cooperation on shared water resources?
3. What is the objective of agreements on shared water resources?
4. How is Principle 21 of the Stockholm Declaration similar to the theory of limited territorial sovereignty and limited territorial integrity. Is the theory of territorial sovereignty the most reasonable doctrine for the equitable utilization of shared water resources?

Negotiation

5. What are the differences in negotiation positions between the upper basin state and the lower basin state? Are these differences a major stumbling block to the negotiation process?

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42 Thailand *National Environment Quality Act*, B.E. 2535, (1992), ss. 32, 55, and the Thailand *Factories Act*, B.E. 2535, (1992), s. 8(5).

43 S. Burchi, pp. 73-75.

44 Note 43, pp. 78-79.

6. Relate the five doctrines governing shared water resources to the difficulties of the negotiation process.

Major components of the legal regime

7. Why are international river commissions created?
8. What are the functions of an international river commission?
9. Is equitable utilization of water resources the primary object of shared water agreements? Do projects such as hydro-power and inter-basin transfer affect equitable utilization?

Obligations

10. What are the obligations of a government which enters a shared water agreement?
11. Is the concept of intergenerational equity relevant to a discussion of shared water resources?
12. How do you apply the precautionary principle in this area?
13. Is it possible to have a multilateral convention on shared water resources? What would be the difficulties in negotiating such a convention?

CASE STUDY

Identify a large river or lake in your country. Is this water resource shared with another country (in federal systems this could be another state)? What are the main problems affecting this resource? Is this shared water resource the subject of an international agreement? If not, why not? Would an agreement of this type help improve your local environment?

Shared freshwater agreements around the world focus on different issues. Examine two shared freshwater agreements (as supplied by workshop coordinators) and make notes on the similarities and differences between them.

CHAPTER 7

UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

INTRODUCTION

The call for an international convention to combat desertification gained momentum at the Rio Summit in June 1992 when the African countries mobilized the support of other developing countries, particularly South American countries, and eventually succeeded in gaining the attention and support of the United Nations Conference on Environment and Development (UNCED) for such an instrument. African countries took the lead on the desertification issue because they are the most affected by the problem.

International concern over the issue, however, predates the UNCED. The first all-Africa Seminar on the Human Environment convened in August 1971, under the auspices of the United Nations Economic Commission for Africa (ECA), was the first international forum to make specific recommendations to combat the spread of deserts in Africa. This seminal meeting, and its recommendations, increased international action to respond to the problem. The United Nations by General Assembly Resolution 3337(XXIX) of 17 December 1974, decided to convene a United Nations Conference on Desertification (UNCOD) in 1977. The Conference resulted in the adoption of the United Nations Plan of Action to Combat Desertification (PACD) in the same year.

It was subsequently suggested under Chapter 12 of *Agenda 21* that the General Assembly establish an intergovernmental negotiating committee for a convention to combat desertification (INCD) to be completed by June 1994. The formation of this negotiating committee and the subsequent adoption of the United Nations *Convention to Combat Desertification in those Countries Experiencing Drought and/or Desertification particularly in Africa*[1] demonstrate the growing need to combat the problem of desertification and the key role the UN plays in this task. This Paper outlines the basic tenets of the emerging international law on desertification, illustrates the major components of the legal regime, and relates them to national legislation and practice.

WHAT IS DESERTIFICATION?

Land degradation is worldwide in its geographical spread, leaving no continent unaffected; it is global in its environmental and socio-economic impacts. Over 100 countries, including more than 80 developing countries, are affected by land degradation in their drylands. Drylands, excluding hyper-arid deserts, cover over one third of the land mass of the Earth. At present, about 40 million people are said to be suffering from malnutrition in the drylands of Africa alone. Hundreds die daily because of their inability to feed themselves from exhausted desertified dryland soils.

Unfortunately, there has been much confusion over the meaning of the term "desertification". To some, the term desertification suggests that the world's deserts are spreading, extending their sands over more fertile land. The borders of the deserts expand and shrink cyclically with fluctuations in the climatic conditions and rainfall, but this is a different matter. Desertification, an ugly word for an ugly process, is more like a skin disease. Patches of degraded land erupt separately, sometimes as far as thousands of kilometers away from the nearest desert. Gradually, the patches spread and join together, creating desert-like conditions. This is the issue that affects so many people and is largely man-made. If fully recognized and tackled, it should be resolved by man.

Desertification was defined by UNCOD in 1977 as follows:

> ***"Desertification is the diminution or destruction of the biological potential of land, and can lead ultimately to desert-like conditions. It is an aspect of the widespread deterioration of ecosystems, and***

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1 33 ILM (1994) 1332-82.

has diminished or destroyed the biological potential, i.e. plant and animal production, for multiple use purposes at a time when increased productivity is needed to support growing populations in quest of development."

This definition was found inadequate and insufficiently operational when attempts started in different parts of the world to implement various recommendations of the Plan of Action to Combat Desertification and to undertake the quantitative assessment of desertification. A series of definitions were developed by individual scientists, scientific institutions and implementing agencies.

As defined by UNEP, "desertification is land degradation in arid, semi-arid and dry sub-humid areas resulting mainly from human activities. " This definition was modified by the UN conference on Environment and Development in 1992,[2] and subsequently adopted by the United Nations Convention to Combat Desertification, to read as follows:

"Desertification is land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities".(Article 1(a))

This definition has been internationally negotiated and approved and should be acceptable to all as the operational standard. The Convention adds that desertification is caused by complex interactions among physical, biological, social, cultural and economic factors.

THE MAGNITUDE OF THE PROBLEM

The problem is more acute in the drylands which stretch across more than a third of the Earth's land surface. It is here where the soils are especially fragile, vegetation is sparse and the climate is particularly unforgiving that desertification takes hold. Some 70 percent of the 5,200 million hectares of the drylands used for agriculture around the world are already degraded. This is almost 30 percent of the total land area of the world. Just over a million hectares of Africa, 73 percent of its drylands, are moderately or severely affected by desertification. Another 1.4 million hectares are affected in Asia. However, it is not just a problem of developing countries: the continent which has the highest proportion of its dryland severely or moderately desertified – 74 percent – is North America. Five of the European Union's countries also suffer from it, and many of the other affected areas are in the countries of the former Soviet Union.

In all, 99 countries, 18 developed or oil-producing and 81 developing, are affected, and even more are at risk. The United Nations Environment Programme estimates that desertification costs the world $42 billion a year. Africa alone loses some $9 billion a year, equivalent to the GNPs of Uganda, Tanzania and Ethiopia combined.

The human cost is even higher. The livelihoods of at least 900 million people – about a sixth of the entire population of the globe – are now at risk. Over 135 million – equivalent to the population of France, Italy, Switzerland and the Netherlands combined – may be in danger of being driven from their land. Nobody knows how many have already had to abandon their land as it turns to dust, but it certainly runs into millions: one-sixth of the population of Mali and Burkina Faso has already been uprooted in this way.

As a result of the numerous problems posed to the world by desertification, it became apparent in Rio that desertification is a serious problem which not only threatens hundreds of millions of people, but is also an obstacle to sustainable development. Indeed, it was the Sahelian drought of 1968-73 and its tragic effect on the peoples of that region that drew the world's attention to the chronic problems of human survival and development on the desert margins. Consequentially, the General Assembly recommended in resolution 3202 (S-VI) that the international community undertake concrete and speedy measures to arrest desertification and assist in the economic development of affected areas.

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2 **Chapter 12 of Agenda 21 of the United Nations Conference on Environment and Development (1992).**

THE NEGOTIATION PROCESS

The Inter-Governmental Negotiating Committee for the Convention on Combating Desertification (INCD) held five substantive meetings which concluded the negotiating process of the Convention.

The first substantive session was held in Nairobi from May 24-3 June 1993, while subsequent sessions were held from 13-24 September 1993 in Geneva, 17-28 January 1994 in New York and 21-31 March 1994 in Geneva respectively. The final session, where the convention was adopted and opened for signature was held in Paris from the 6-17 June 1994.

The two areas that provoked divergent views in the negotiation process were, financial resources and mechanisms and regional instruments. Although there appeared to be agreement on the need for improved donor coordination and more effective utilization of existing funds, disagreement prevailed in a number of areas. These include: new and additional resources; establishment of a special fund; a new window in the GEF to fund desertification; and mandating the contribution of 0.7 percent of GNP for development assistance.[3]

Difficulties also developed between the G-77 and the Western European and Other Group (WEOG) over one major issue: the "global" nature of desertification. Some developed country delegates felt that the term "global" had specific connotations within the Climate Change Convention. In this regard, the responsibility of developed countries had been established and certain obligations assumed. At the INCD, developed countries wanted to avoid any possible linkages that would alter the nature of future assistance, making it, in essence, an obligation. In addition, some delegates felt that by using the word "global" would allow for a claim to be laid to access GEF funds for combating desertification.

MAJOR COMPONENTS OF THE CONVENTION

The final draft of the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, Paris, 1994, contains 40 Articles and four regional implementation annexes for Africa, Asia, Latin America and the Caribbean, and the Northern Mediterranean. The convention takes an innovative approach, breaking new grounds both in the way it tackles desertification and in international environmental law as a whole. It is designed to forge a new deal between Governments, the international community, development practitioners and local people. Here, only the major components of the legal regime of this convention are examined.

Objective

Article 2 states in the first part that, the objective of the Convention is to combat desertification and mitigate the effects of drought through action at all levels, supported by international cooperation and partnership arrangements, with the aim of achieving sustainable development in affected areas (Article 2(1)). The Convention gives particular priority to Africa, where the problem has its most serious effects. Indeed, the last session of the Intergovernmental Negotiating Committee which finally agreed on the text of the convention, passed a resolution on urgent action for Africa – calling on affected African countries urgently to prepare action programmes and on donors to support them – even before the convention formally comes into force.[4]

The second paragraph of Article 2 stresses the importance of long-term integrated strategies (Article 2(2)).

Principles

In order to achieve its objectives and ensure adequate implementation, the Convention lists four principles to guide the parties. The convention pioneers a democratic, bottom-up philosophy in international environmental law. It clearly emphasizes that the people who bear the brunt of the desertification and who best under-

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3 Desertification Control Bulletin, No. 23, 1993 at page 6.

4 The resolution is contained in document A/AC.241/L.22/REV.1. Also see the summary of the 5th substantive session of the INCD (Paris, 6-17 June 1994), in " Earth Negotiations Bulletin", Vol.4 No.55, 20 June 1994.

stand the fragile environment in which they live, must be fully involved and be allowed to participate in the decisions that will shape their lives. The first principle binds parties to ensure the participation of populations and local communities in the design and implementation of programmes to combat desertification (Article 3(a)).

The second principle calls for the improvement of cooperation and coordination at sub-regional, regional and international levels on the basis of a spirit of solidarity and partnership (Article 3(b)).

The third principle extends the concept of partnership to relationships within the affected countries and, in doing so re-emphasizes the importance of ensuring the participation of local communities (Article 3(c)).

In the fourth principle, the Convention further stresses the consideration of the special needs of affected developing countries (Article 3(d)).

General Obligations of Parties to the Convention

The convention prescribes a general obligation to all Parties acceding to it, and further sets special obligations to affected countries and developed countries respectively.

Article 4 lists the general obligations of all Parties under the convention, emphasizing the need to coordinate efforts and develop a coherent long-term strategy at all levels. These obligations include: adopting an integrated approach in addressing desertification and drought (Article 4(2)(a)); giving due attention to the situation of affected developing country parties with regard to international trade, marketing arrangements and debts (Article 4(2)(b)); integrating strategies for poverty eradication into efforts to combat desertification and mitigate the effects of drought; promoting cooperation among affected country parties; strengthening sub-regional, regional and international cooperation; and cooperating within relevant intergovernmental organizations (Article 4(2)(c-h)).

Obligations of Affected Country Parties

The obligations of affected country Parties are set out in Article 5 of the convention. They include giving due priority to combating desertification and mitigating the effects of drought by allocating adequate resources and establishing strategies (Article 5(a) and(b)); paying special attention to the socio-economic factors when addressing the causes of desertification (Article 5(c)); promoting awareness and facilitating participation of local populations (Article 5(d)); strengthening existing legislation or enacting new laws; and establishing long-term policies (Article 5(e)).

Obligations of Developed Country Parties

Article 6 defines the obligations of developed country Parties. This paragraph proved to be one of the most contentious paragraphs in the entire convention.[5] It states that developed countries undertake actively to support the efforts of affected developing country parties to deal with desertification and drought (Article 6(a)), and to provide substantial financial resources and other forms of support to assist them in developing and implementing their own long-term plans and strategies in that regard (Article 6(b)). It further obliges developed countries to encourage the mobilization of funding from the private sector and other non-governmental sources (Article 6(c) and (d)); to promote and facilitate access by affected country parties to appropriate knowledge, know-how and technology (Article 6(e)).

Priority For Africa

Article 7 calls on parties, in implementing this convention, to give priority to affected African country parties, while not neglecting affected developing country parties in other regions.

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5 **See summary of the 5th substantive session of the Intergovernmental Negotiating Committee for the Elaboration of an International Convention to Combat Desertification (Paris, 6-17 June 1994) in " Earth Negotiations Bulletin", vol.4, No. 55, 20 June 1994. At page 6.**

Transfer, Acquisition, Adaptation and Development of Technology

Article 18 of the Convention deals with this subject.[6] It states that parties shall fully utilize relevant existing information systems and clearing-houses for the dissemination of information on available technologies (Article 18(1)(a)); facilitate access to technologies most suitable to practical application for specific needs of local populations (Article 18(1)(b)); facilitate access to technology among affected country parties (Article 18(1)(c)); and take appropriate measures to create domestic market conditions and incentives conducive to the development, transfer, acquisition and adaptation of suitable technology, knowledge, know-how and practices (Article 18(1)(e)).

The parties shall also make inventories of technology, knowledge, know-how and practices and their potential uses (Article 18(2)(a)); ensure that such technology, knowledge, know-how and practices are adequately protected (Article 18(2)(b)); encourage and support the improvement and dissemination of technology; and facilitate the adaptation of such technology (Article 18(2)(c) and (d)).

Capacity Building, Education and Public Awareness

Under Article 19 which deals with these issues, parties agree to promote the building of institutions, the training of people and development of capacities both locally and nationally. They agree to do so in the cooperative and participatory spirit that pervades the treaty.

Affected developing countries are to review their capacities and facilities and the potential for strengthening them, in cooperation with other parties and intergovernmental and nongovernmental organizations. National institutions and legal frameworks are to be strengthened and new ones created where needed.

All parties undertake to "promote capacity building through the full participation of local people, particularly at the local level, especially women and youth, with the cooperation of non-governmental and local organizations." In a bottom-up approach, the parties further agree "to foster the use and dissemination of the knowledge, know-how and practices of local people."

Similarly, they undertake to provide training and technology "in the use of alternative - especially renewable - energy", to lessen dependence on fuelwood, while agreeing to "adapt traditional methods of agriculture and pastoralism" and environmentally sound technology to modern conditions. Article 19 also provides for the promotion of "alternative livelihoods, including training in new skills."

Pursuant to Article 19, Parties are to cooperate in strengthening developing countries' capacity to collect, analyze and exchange scientific and technological information, and to train "decision makers, managers and personnel" responsible for data on food production and early warnings of drought.

The parties further agree to cooperate amongst themselves, and with intergovernmental and non-governmental organizations, in organizing campaigns to raise public awareness, encouraging the establishment of associations that contribute to it and helping people obtain permanent access to the information they need.

They also agree to assess educational needs in affected areas; expand educational and literacy programmes - especially for women and girls, and elaborate school curricula; develop "interdisciplinary participatory programmes" integrating desertification and drought awareness into educational systems and programmes. The parties also undertake to establish and strengthen regional educational and training centres.

Regional Implementation Annexes

The Convention contains regional implementation annexes for Africa, Asia, Latin America and the Caribbean, and the Northern Mediterranean.

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6 The decision arrived at in this Article was based on Chapter 34 on technology transfer in Agenda 21.

The Regional Implementation Annex for Africa comprises 19 Articles and addresses a broad range of issues including scope; commitment and obligations of both African and developed country parties; strategic planning, framework and content of the national, subregional and regional programmes; technical assistance and cooperation, as well as transfer, acquisition, adaptation and access to environmentally sound technology; financial mechanisms and resources; and coordination, partnership and follow-up arrangements.

The Regional Implementation Annex for Asia is much shorter and more general in scope than the African Annex. It contains only eight articles: purpose; conditions of the region; framework and content of national action programmes; regional activities financial resources and mechanisms; and coordination and cooperation mechanisms.

The Annex for Latin America and the Caribbean is similar in content and scope to the Asian Annex. It is also general and concise but contains only seven articles.

The annex for the Northern Mediterranean covers mainly Greece, Portugal and Spain. It differs from the other annexes in its orientation. It is the only Annex that provides for coordinated activity with other regions, particularly with North Africa, in preparation and implementation of action programmes.

Financial Resources and Mechanisms

Articles 20 and 21 address financial resources and mechanisms, respectively. They are considered, at least by the affected parties, as the two most important Articles of the convention and are the outcome of intense consultations during the final stages of the negotiations.

Given the central importance of financing to the achievement of the objective of the convention, Article 20 states that the parties, taking into account their capabilities, undertake to make every effort to ensure that adequate financial resources are available for programmes to combat desertification and mitigate the effects of drought (Article 20(1)).

Among other measures, developed country parties agree to promote the mobilization of adequate, timely and predictable financial resources including new and additional funding from the Global Environmental Facility (GEF) of the agreed incremental costs of those activities concerning desertification that relate to its four focal areas, namely reduction of global warming, preservation of biological diversity, protection of international waters and prevention of further depletion of the ozone layer.

They also agree to explore innovative methods and incentives for mobilizing and channelling resources, including those of private-sector entities, particularly debt swaps and other innovative means which increase financing by reducing the external debt burden of affected developing country parties. The affected country parties undertake to mobilize adequate financial resources for the implementation of their national action programmes (Article 20(2)-(7)).

Article 21 establishes a Global Mechanism to promote actions leading to the mobilization and channelling of substantial financial resources, including for the transfer of technology, on grant and/or concessional terms, to affected developing country parties. That mechanism should function under the authority and guidance of the Conference of the Parties and be accountable to it (Article 21(4)).

The Conference of the Parties should identify, at its first session, an organization to house the Global Mechanism. Also at its first session, the Conference of the Parties should make the administrative arrangements for the operation of such a mechanism, and at its third session it should review its policies, operational modalities and activities (Article 21(5)-(7)).

INSTITUTIONS

1. Conference of the Parties

Article 22 of the Convention establishes the Conference of the Parties (COP). The COP is established as the "supreme body" of the Convention. It will meet not more than a year after the treaty enters into force, and

then annually for the next three years. After that its meetings will be held at two yearly intervals and it can call extraordinary sessions.

The mandate of the COP is to make "the decisions necessary to promote the effective implementation" of the Convention (Article 22(2)). It will, among other things, review its implementation and the functioning of its institutions; establish subsidiary bodies; give them guidance and review their reports; promote and facilitate the exchange of information on measures adopted by the parties; adopt its own rules of procedure by consensus and approve its own programme and budget and those of subsidiary bodies (Article 22(2)-(8)).

2. The Permanent Secretariat

The Convention also establishes a permanent Secretariat. It will among other duties, make arrangements for sessions of the COP and its subsidiary bodies and compile and transmit reports submitted to it. It will also facilitate assistance to developing country parties, particularly in Africa, to compile and communicate the information required by the Convention.

It will report on the execution of its functions to the COP and coordinate its activities with the secretariats of other international bodies and conventions (Article 23(1)-(3)).

3. Committee on Science and Technology

Article 24 of the Convention provides for a Committee on Science and Technology. It is established as a subsidiary body of the Conference of the parties to provide it with information and advice on scientific and technological matters relating to combating desertification and mitigating the effects of drought. The Committee will be composed of government representatives and open to all parties (Article 24(1)).

The COP will set up and maintain a roster of independent experts and draw on this for ad hoc panels to give it information and advice on specific issues (Article 24(2)).

Cost and Benefits of Participating in the Convention by States

The Convention is based on the principle of a global partnership for sustainable development established by Agenda 21. Country Parties are enjoined to co-operate in the development of strategies and action plans, the transfer, adaptation and development of technologies for dealing with the problems of desertification and drought; in the exchange of information, know-how and practices; in capacity-building; and in ensuring adequate financial resources required for the effective implementation of the demands of the Convention. Developing Country Parties will derive **benefits** from these arrangements since they largely suffer from lack of national capacities, technological endowment, and financial resources to address these issues.

The **costs** related to participation in the Convention will include: the costs of structural changes in administration and legal arrangements associated with the implementation of the Convention at the national level; the financial resources required for the implementation of action plans and programmes; and reporting costs.

Obligations Assumed by a State When it Becomes a Party to the Convention and National Measures Required to Give Effect to These Obligations

Ratification, Acceptance, Approval and Accession

Article 34 states that the Convention and any additional regional implementation annexes or amendments to regional implementation annexes will be subject to the ratification, acceptance, approval or accession by States and regional economic integration organizations.

As mentioned previously, the obligations of parties to the Convention are clearly listed in Articles 4, 5 and 6.

The Convention has set out to refocus measures to be undertaken from simply combating desertification and mitigating the effects of drought, by integrating social and economic issues into the heart of its analysis and implementation.

Affected country parties undertake, therefore, to " address the underlying causes of desertification, and pay special attention to the socio-economic factors contributing to the desertification processes" (Article 5(c)).

All parties have an obligation to "adopt an integrated approach addressing the physical, biological and socio-economic aspects of the processes of desertification and drought" (Article 4(2)(a)). More specifically, they are required to integrate strategies for poverty eradication into efforts to combat desertification and mitigate the effects of drought.

The Convention also insists at the outset that programmes to combat desertification must not be conceived and implemented in isolation, but should be integrated into development policies as a whole.

Communication and Information

All Parties are to give reports to the COP on what they have done to implement the convention (Article 26(1)). Developing countries are to describe their strategies to fulfill their obligations under the Convention, and those that have implemented action programmes are to give detailed descriptions of them (Article 26(1) and (2)). The COP will facilitate the provision of technical and financial support to do this to affected developing countries, particularly in Africa (Article 26(7)).

National Legislation to Effectively Implement the Convention

Country Parties are expected to adopt national legislation for the effective implementation of the Convention. In the light of the provisions of the Convention such legislation may provide for:

- the formulation of strategies and action plans and programmes
- the establishment of national co-ordinating bodies
- the sustainable management and use of land and land-based resources
- the regulation of land use activities
- the integration of programmes to combat desertification into national development policies
- public participation in decision-making and implementation
- public education and awareness
- the use of appropriate technologies in land husbandly
- providing for regional cooperation
- facilitating capacity-building

Conclusion

It is true that any agreement is only as good as the action taken to implement it. The United Nations Convention to Combat Desertification is not an exception to this statement. There are many steps to be taken in order to ensure effective implementation of the Convention.

Countries will need to create national co-ordinating bodies. This will act as a catalyst for preparing, implementing and evaluating the national action programmes. Such national focal points should work out what institutional arrangements will be needed to implement the programme of action, what it will cost, and what the nation can spend. It should start a broad and thorough process of consultation both with its own nation's citizens and with donor countries and international organizations. It should ensure full participation of the people of the drylands and non-governmental organizations in assessing the strengths and weaknesses both of the past and current programmes, and of the strategies proposed for implementing the new ones. A national forum should also be organized to formalize this interactive process and lead to setting up a consultative group with donors that would conclude partnership agreements.

Donor countries should in the meantime be urged to mobilize resources and rearrange priorities so as to play their part in these partnerships and provide the substantial, timely and predictable finance that is needed.

Another important step is the necessity to mobilize local and community interest in the Convention and the preparation of national action programmes. Most challenging is that many governments do not have a tradition of popular participation. Access to information is very limted and bottom-up input practically does not exist. Thus, NGOs and government alike must embark on a major campaign to disseminate information to grassroots and community organizations to ensure that bottom-up input is received and incorporated into the action programmes.

Desertification is a global problem that affects first and foremost the economies and well-being of the people as well as the economies of nations that the dryland people subsequently turn to for survival. In addition, to the individual losses and sufferings of about 900 million people, costs due to desertification include the loss of biological diversity, loss of the earth's biomass and bioproductivity and effects on global climatic change. The immediate ratification and implementation by States of the UNCCD will have a salutary effect on their efforts to deal with the problems of desertification and drought and, consequently, reduce human suffering.

Exercises on the Desertification Convention

Rationale for international action

1. What was the rationale for developing the Desertification Convention?
2. Prior to the Desertification Convention, what other international instruments existed to combat drought and desertification?

The negotiation process

3. What were the main issues faced by the participants in the negotiation process?

Major components of the Desertification Convention

4. Rewrite the Objective of the Desertification Convention, and how it is to be achieved, in your own words. (Articles 2 and 4 (2)(a) - (h)
5. Rewrite the definitions of "desertification" and "drought" in your own words. (Article 1)
6. What are the elements of land degradation? (Article 2)
7. Summarize the Principles of the Desertification Convention. (Article 3)
8. How is the concept of sustainable development relevant to the Desertification Convention? (Preamble, recitals 9 and 11, Articles 4 (2)(b) and 9)
9. What are the obligations of affected country parties? (Articles 4 and 5)
10. Why does the Desertification Convention promote public participation, especially in relation to local populations, women, youth and non-government organizations, in efforts to achieve the Convention's objective? (Articles 2, 3 and 5(d))
11. What obligations does the Desertification Convention place on developed country Parties? (Article 6)
12. Summarize how the Desertification Convention approaches its task. (Part III)
13. Why is it important to encourage international cooperation in the implementation of the Convention? (Articles 12, 13, 14, 16, 17)
14. Summarize the information collection, analysis and exchange provisions of the Desertification Convention. (Article 16)

15. The Desertification Convention provides for acquisition, adaptation and development of technology. Why was it important to have such provisions included in the Convention? (Articles 15 and 16)

16. How is capacity-building promoted in the Desertification Convention? (Article 19)

17. What obligations are placed on Parties in providing adequate financial resources to achieve the objective of the Convention? (Article 20)

18. What distinctions does the Desertification Convention make in relation to financial resources from developed and developing countries? (Article 20 (2) and (3)

19. The Desertification Convention provides for financial mechanisms to maximise the availability of funds. Summarize the approaches and policies referred to in Article 21.

20. What is the Global Mechanism to which Article 21 (4)and (5) refers?

21. What is the role of the Conference of the Parties? (Article 22)

22. What is the role of the Permanent Secretariat? (Article 23)

23. What functions does the Committee on Science and Technology play? (Article 24)

Costs and benefits of becoming a Party

24. What are the costs and benefits of becoming a Party to the Desertification Convention?

Measures to be taken by the Parties

25. What obligations are placed upon the Parties to the Desertification Convention to cooperate with each other in their implementation of action programmes under the Convention? (Article 14)

26. What is the extent of the obligations imposed upon contracting parties to the Desertification Convention in relation to action programmes within their national jurisdiction? (Article 10)

27. What obligations are there upon contracting parties to the Desertification Convention to put in place legal mechanisms for the achievement to the Convention? (Article 19 (j).

Relationship with other international instruments

28. What relationship does the Desertification Convention have with the Convention on Biological Diversity and the Convention on Climate Change? What strategies does the Desertification Convention offer to address any overlap with these instruments (Article 8)

Discussion point for small groups

29. The Desertification Convention is a framework instrument and not one which seeks to create hard legal obligations and targets to be reached by certain dates. Is this appropriate to the subject matter? Should the Convention be more specific? What would be appropriate subjects for subsequent Protocols?

CHAPTER 8

BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL

RATIONALE FOR PUBLIC CONCERN AND ACTION

As the world becomes more developed and societies become more consumer-oriented in nature, giving rise to a wide range of industrial, commercial, agricultural and even domestic activities, the inevitable consequence is a parallel increase in waste. Thousands of millions of tones of waste are generated in the world every year. Over 300 million tonnes of these wastes are potentially hazardous to humans and the environment because of their toxic, explosive, corrosive, exotoxic, flammable or infectious nature. As the problems become more pronounced both nationally and internationally, waste management has acquired a prominent position in environmental protection. The general public's concern about waste is well-founded, being a potential threat to human health and the environment as a whole.

The continued regulation of hazardous waste is essential to the endeavour to reduce and dispose of such waste in an environmentally sound manner, having regard to individual countries' economic, social and political climates. Thus regulations for the control of hazardous wastes, both national and international, are essential. Nationally, the responsibility is shared among industry, government (especially the environmental protection authority) and the general public. There should be effective communication and a tight administrative bond with concerned ministries and agencies. International regulation is governed by international cooperation between States, which is essential to control the hazardous wastes which cross national frontiers. A significant amount of waste continues to be transported from industrialized countries to developing countries as well as to countries in Eastern and Central Europe.

The regulation of hazardous waste requires a holistic approach that will consider comprehensively all alternatives available and institute a cradle-to-grave management system. This approach tracks waste from its origin to any treatment or storage facility and finally to any destruction or disposal activities, allowing for a complete record to be made of the wastes' handling.

In response to the growing worldwide awareness of the problem of international traffic in hazardous waste the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal ("The Basel Convention"),[1] developed under the auspices of the United Nations Environment Programme (UNEP), was adopted in 1989. This treaty, which entered into force on 5 May 1992, is the first and foremost global environmental treaty that strictly regulates the transboundary movement of hazardous wastes and other wastes and obligates Parties to ensure their environmentally sound management, especially during the disposal process.

Previously the issue was addressed in a fragmented and incomplete manner. Principle 21 of the Stockholm Declaration[2] states that States should refrain from activities within their territory which result in serious harm

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1 UN Doc UNEP/WG.190/4. [28 ILM (1989) 657]

2 Declaration of the United Nations Conference on the Human Environment, adopted by the UN Conference on the Human Environment, Stockholm, 16 June 1972 (A/CONF.48/14/Rev.1). [reprinted in (1972) 11 ILM 1416 et seq.]

Principle 21 of the Stockholm Declaration: 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 jurisdiction or control do not cause damage for the environment of other States or of areas beyond the limits of national jurisdiction.

to the environment. This principle also operates under customary law with States having the obligation to exercise due diligence as held in the *Trail Smelter* arbitration (1938)[3] and the *Corfu Channel* case (1949)[4]. A general obligation of international cooperation in environmental matters between all States, not only those directly affected by a certain activity, has been established by Principle 24 of the Stockholm Declaration.[5]

NEGOTIATION PROCESS

The international regulation of hazardous wastes was an important issue and was included as one of the goals of the Montevideo Programme for the Development and Periodic Review of Environmental Law, 1981. The recommendations in this Programme were adopted by the UNEP Governing Council in 1982 and UNEP initiated work with government experts on constructing The Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes (the "Cairo Guidelines")[6], a non-binding legal instrument formulated to assist governments in the development of national waste-management policies. The Governing Council of UNEP in June 1987 requested the development of a global convention on the control of transboundary movements of wastes, which ultimately resulted in the Basel Convention.

Although the positions of negotiating parties were widely divergent, with different interests and perceptions regarding the issue, in the course of negotiations conducted during six sessions of a Working Group of government legal and technical experts, held from October 1987 to March 1989, the provisions of the draft Convention were progressively strengthened. The Working Group addressed various issues, including, at its first session, the definition of waste. Initially, this was left for definition solely by national legislation, but the variability of possible definitions as well as the considerable technical and legal demand among developing States for clarification of the matter, led the Working Group to define the wastes covered by the Convention by a core list of wastes commonly recognized as hazardous.

UNEP, under whose auspices the negotiations were conducted, promoted and encouraged the widest possible participation of African countries by providing them with funds to cover the cost of their participation throughout the negotiation process. The Government of Senegal, in cooperation with UNEP, convened a Conference on Hazardous Wastes at the African Ministerial level which took place in Dakar from 26-27 January 1989. Several African and Western European Ministers of Environment, as well as representatives of UNEP, were present at this conference. During the discussions, a number of issues were recognized as having particular importance for all African States. The conference adopted a joint Declaration which strongly encouraged all African countries to participate in the negotiation on the Basel Convention. At the Plenipotentiary Conference in Basel the Minister for Environment of Mali proposed, on behalf of the Organization of African Unity (OAU), a number of substantive modifications to the draft Convention.[7] All of these, except one, were incorporated into the draft text of the Basel Convention and the remaining modification was withdrawn by the Minister because it was already satisfactorily covered by the Convention.

There were still however, some major differences in opinion in drafting the provisions and there existed a deep rift between industrialized and developing countries. The latter, led by Member States of the Organization of African Unity, demanded a complete ban of all transboundary movements of hazardous wastes world-

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3 33 AJIL 182 (1941) 35 AJIL 684

4 ICJ Rep. (1949) 4

5 **Principle 24 of the Declaration of Stockholm**: "International matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries ,big and small, on an equal footing. Co-operation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres in such a way that due account is taken of the sovereignty and interests of all States."

6 UNEP/GC.14/17 (1987) Annex II

7 The Basel Convention and The African Countries, Basel Convention Series/SBC No: 94/010, Geneva, November 1994, pp.2,3

wide. The proposed ban would have applied to waste intended for recycling as well as that destined for disposal; a view also adopted by a number of environmental non-governmental organizations. Many industrialized States, however, did not want to impose total restrictions. Hence, a range of compromises had to be made in order to facilitate expression of both views in the final convention text. UNEP's Governing Council and the United Nations General Assembly called on all States to ratify the Basel Convention, but without prejudice to regional policies[8], in an effort to seek an effective system of control.

After failing to incorporate a ban into the final text of the Basel Convention, African countries negotiated and concluded a separate regional agreement, the 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa. The Bamako Convention categorizes hazardous wastes in two ways: wastes generated in Africa and waste generated outside of Africa. For the latter category, the Convention prohibits and criminalises importation into Africa (Art 3); for waste generated in Africa the provisions are generally similar to the Basel Convention.

Major Components of the Legal Regime in the Basel Convention

Objectives

The Basel Convention strictly regulates the transboundary movements of hazardous and other wastes and imposes obligations on the Parties to the Convention for ensuring their environmentally sound management, in particular, their disposal.

As stated in the Preamble, the Basel Convention recognizes that the most effective way of protecting human health and the environment from the danger posed by such wastes is the reduction of their generation to a minimum in terms of quantity and/or hazard potential. This is the underlying philosophy behind the objectives set out in the Convention, together with the environmentally sound management of the hazardous wastes generated. In this respect, the Basel Convention stipulates three main interdependent and mutually supportive goals that have to be fulfilled:

> *transboundary movements of hazardous wastes should be reduced to a minimum consistent with their environmentally sound management;*
>
> *hazardous wastes should be treated and disposed of as close as possible to their source of generation; and*
>
> *hazardous waste generation should be reduced and minimized at its source.*

The Basel Convention recognizes the need to continue the development and implementation of environmentally sound low-waste technologies, recycling options, good house-keeping and management systems with a view to reducing to a minimum the generation of hazardous wastes.

Definition of Wastes

WASTES COVERED BY THE CONVENTION

The Convention defines "wastes" as being "substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law" (Art 2(1)). The range of materials that can be classified as wastes is thus very broad.

"Hazardous wastes" are defined as being substances listed in Annex I of the Convention (Art 1(a)), as long as they also possess characteristics contained in Annex III, and are disposed of by any operations specified by Annex IV to this Convention or if they are defined as such in the national and domestic legislation of the party

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8 UNEP/GC.15/33, Report of the Governing Council on its 15th Session (1989), GAOR 44th Session UN Doc./A/44/25, 160; UNGA, Res 44/226(1989)

of export, import and transit. Every party has a sovereign right to include in its national or domestic legislation other wastes that it considers hazardous in addition to those referred to in the Annexes to the Convention. The Annex III list of hazardous characteristics for wastes includes explosives, flammable liquids or solids, organic peroxides, poisonous or infectious substances and corrosives.

The wastes listed in Annex I of the Convention are divided into two groups. The first 18 types of wastes are the by-product of a particular *process*. This includes wastes from medical care in hospitals, pharmaceutical products, the production of paints, or from the production of photographic chemicals. An additional 27 categories of wastes are identified because they contain certain *constituents*. This includes wastes which contain such substances as copper or zinc compounds, arsenic, lead or mercury.

"Hazardous wastes" also includes items which are defined as, or considered to be, hazardous wastes by the domestic legislation of the contracting party of export, import or transit (Art 1(1)(b)).

In addition to wastes classified in Annex I, wastes collected from households and residue from incinerated household wastes as listed in Annex II, are also covered by the Convention, the so-called "other wastes" for the purpose of the Convention.

WASTES NOT COVERED BY THE CONVENTION

Wastes, which as a result of being radioactive, are subject to other international controls and conventions, are excluded from the Basel Convention (Art 1(3)). Wastes which derive from the normal operations of a ship, the discharge of which are covered by other international conventions, are also excluded from the operation of the Convention (Art 1(4)).

The Environmentally Sound Management of Hazardous Wastes

In the Basel Convention, the environmentally sound management of hazardous wastes is defined as "taking all practicable steps to ensure that hazardous wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes" (Art 2(8)). What constitutes the "environmentally sound management" of hazardous wastes? There is no simple answer to this question. The issue of environmentally sound management of wastes is both difficult and complex and it encompasses ecological, social, economical and behavioral dimensions. It cuts across different disciplines which often do not relate to each other.

The Technical Working Group of the Basel Convention initiated work in this regard through the preparation of Technical Guidelines for the environmentally sound management of hazardous wastes. While preparing Technical Guidelines for priority waste streams and disposal operations, the Technical Working Group has evolved the concept of environmentally sound management through the description of the elements that are considered essential for its actual implementation.

First of all, it concerns a series of inter-related principles to be considered in the development of hazardous waste strategies as listed below. These principles can be found in the Framework Document on the Preparation of Technical Guidelines for the Environmentally Sound Management of Wastes Subject to the Basel Convention which was adopted by the second meeting of the Conference of the Parties to the Basel Convention.

> ***The Source Reduction Principle:*** *The generation of waste should be minimized in terms of its quantity and its potential to cause pollution. This may be achieved by using appropriate plans and process designs.*
>
> ***The Integrated Life-cycle Principle:*** *Substances and products should be designed and managed such that minimum environmental impact is caused during their generation, use, recovery and disposal.*
>
> ***The Precautionary Principle:*** *Preventive measures should be taken, considering the costs and benefits of action and inaction, where there is a scientific basis, even if limited, to believe that release into the environment of substances, waste or energy is likely to cause harm to human health or the environment.*
>
> ***The Integrated Pollution Principle:*** *This principle requires that the management of hazardous waste*

should be based on a strategy which takes into account the potential for cross-media and multi-media synergistic effects.

The Standardization Principle: Standards should be provided for the environmentally sound management of hazardous wastes at all stages of their processing, treatment, disposal and recovery.

The Self-Sufficiency Principle: Countries should ensure that the disposal of the waste generated within the territory is undertaken there by means which are compatible with environmentally sound management, recognizing that economically sound management of some wastes outside of national territories may also be environmentally sound.

The Proximity Principle: The disposal of hazardous wastes must take place as close as possible to their point of generation, recognizing that the economically and environmentally sound management of some wastes will be achieved at specialized facilities located at greater distances from the point of generation.

The Least Transboundary Movement Principle: Transboundary movements of hazardous wastes should be reduced to a minimum consistent with efficient and environmentally sound management.

The Polluter Pays Principle: The potential polluter must bear the financial costs of preventing pollution and those who cause pollution pay for remedying the consequences of that pollution.

The Principle of Sovereignty: Every country shall take into account political, social and economic conditions in establishing a national waste management structure. A country may, for example, ban the importation of hazardous wastes into its territory in accordance with its national and environmental legislation.

The Principle of Public Participation: States should ensure that in all stages, waste management options are considered in consultation with the public as appropriate, and that the public has access to information concerning the management of hazardous wastes.

In addition, general criteria should be used for evaluating the environmental soundness of hazardous waste operations. The criteria include :

an existing regulatory infrastructure and enforcement that ensures compliance with applicable regulations;

facilities (including storage) that are authorized to an adequate standard of technology and pollution control to recover hazardous waste in the way proposed, in particular taking into account the level of technology and pollution control in the exporting country, and have the technical capacity to recover the waste as proposed;

operators of sites or facilities at which hazardous wastes are recovered, are required, as appropriate, to monitor the effects of those activities;

appropriate action is taken at the site in the case of accidental spillage, or in cases where there are indications that the recovery of hazardous wastes has resulted in unacceptable emissions;

persons involved in the recovery of hazardous wastes are capable and adequately trained;

any residues from the recovery operations and portions of unrecovered materials are managed in an environmentally sound manner, including final disposal; and

evidence of an action plan for emergencies or accidents occurring at the recovery operation or at the recovery facility.

Control of Transboundary Movement

The Convention creates a wide range of general obligations for the contracting parties under Article 4. Each contracting party may prohibit the import of hazardous wastes or other wastes. In return, other contracting

parties are obliged to ensure that hazardous or other wastes are not exported to contracting parties who have prohibited their importation (Art 4(2)(1)). Obligations with respect to how States should manage and deal with hazardous wastes domestically are spelt out in the convention (Art 4 (2)(a), (b), (c), and (d)). The contracting parties are also to cooperate with each other in order to improve and achieve environmentally sound management of hazardous and other wastes and to achieve prevention of illegal traffic (Art 4(2)(h)).

Strict obligations are created with respect to the movement of and dealing with hazardous wastes. Controls at border points are an essential and critical part of the global regulatory regime of the Basel Convention. Indeed, it is important that customs officers, adequately trained, be able to exercise full control over the hazardous wastes being moved across frontiers in order to make sure that the material being inspected corresponds to both the transport manifest and the movement document that accompany the wastes and to reveal cases of illegal traffic in such wastes. Illegal traffic in hazardous and other wastes is considered to be criminal (Art 4(3)).

Contracting parties which are exporting hazardous wastes are also to ensure that the waste is managed in an environmentally sound manner in the State of import or elsewhere (Art 4(8)).

The transboundary movement of hazardous wastes is only to be permitted in certain circumstances (Art 4(9)). These are:

> *when the State of export does not have the technical capacity and necessary facilities, capacity, or suitable disposal sites in order to be able to dispose of the wastes in question in an environmentally sound and efficient manner; or*
>
> *when the wastes are required as a raw material for recycling or recovery industries in the State of import; or*
>
> *when the transboundary movement accords with other criteria decided between the Parties, as long as those criteria do not differ from the objectives of the Convention.*

Transboundary movement between parties

The Convention sets out detailed procedures for the transboundary movements of hazardous wastes between exporting and importing States, and also for the movement of such goods through States of transit (Arts 6, 7 and 8).

Waste subject to transboundary movement must be packaged, labelled and transported in conformity with generally recognized international rules and standards and due account must be taken of relevant internationally recommended practices.

In the case of transfer between exporting and importing States, the following procedures apply:

> *The State of export must notify the proposed State of import of the movement (Art 6(1)).*
>
> *The State of import must be provided with the information listed in Annex VA. This includes the reason for export, name of exporter, generator and site of the generation, intended carrier, country of export, country(ies) of transit, country of import, means of transport, type of packaging, quantity, waste generation process and method of disposal (Art 6(1)).*
>
> *The State of import may respond by either consenting to the movement, denying permission, or requesting additional information (Art 6(2)).*
>
> *The State of export is not to allow the transboundary movement to commence until written consent to the movement has been received and there is evidence of a contract specifying environmentally sound management of the wastes (Art 6(3)).*
>
> *When hazardous wastes are in transit through States en route to the importing State, the State of transit is also entitled to be notified of the movement adopting the principle of prior informed consent. It may consent to the movement, deny permission, or request additional information. The State of export is not to allow the transboundary movements to commence unless written consent has been*

received from the State of transit. It is possible, however, for States to waive the requirement that they be consulted prior to goods transiting through their State en route to the State of import (Art 6(4)).

Transboundary Movement with Non-Parties

Contracting parties are also not to permit the exportation of hazardous or other wastes to non-parties or their importation from a non-party (Art 4(5)), unless there exists a bilateral, multilateral or regional agreement regarding transboundary movements. Such agreements, or arrangements must not derogate from the environmentally sound management of hazardous and other wastes (Art 11) and the provisions of these agreements should not be less environmentally sound than those provided for by the Convention.

At the second meeting of the Conference of the Parties (COP) it was decided that when States have entered into bilateral, multi-lateral or regional agreements and arrangements they shall report to the open-ended Ad Hoc Committee responsible for facilitating the implementation of the Convention, through the Secretariat, on the conformity of such agreements or arrangements taking into consideration a list of questions which were developed by the Committee itself. The purpose of using the set of questions is to assist parties, when reporting, in focusing on particular issues. Thus any groups or States could, for example, adopt an agreement providing for a total ban of imports of hazardous wastes and other wastes into their territories. Such an agreement would then be brought to the attention, through the Secretariat, of all parties to the Basel Convention, who would have an obligation to prohibit exports to or through any of the States party to the agreement.

Duty to re-import

If it is not possible to complete the transboundary movement of the hazardous wastes within the terms of the contract between the Parties, the State of export is to ensure that the wastes in question are taken back and alternative arrangements made for their disposal. To this end the State of export and any State of transit shall not oppose, hinder or prevent the return of the wastes to the State of export.

Special Area of Control

A special area for the control of hazardous wastes is also created for the area south of 60°S (Antarctica), within which the Contracting Parties agree not to allow the export of hazardous wastes (Art 4(6)). This is the area controlled by the 1959 Antarctic Treaty.[9]

Management of Hazardous Wastes

The Preamble to the Convention emphasizes that States should take the necessary measures to ensure that the management of hazardous wastes and other wastes including their transboundary movement and disposal is consistent with the protection of human health and the environment. The most effective way to do so, the Preamble emphasizes, is by reducing the generation of wastes to a minimum in terms of quantity and/or hazard potential.

The Preamble further states that hazardous wastes and other wastes should, as far as is compatible with environmentally sound and efficient management, be disposed of in the State where they were generated. Any transboundary movement of wastes must only be permitted under strict conformity with the provisions of the Convention.

Article 4 of the Convention lists a set of general obligations for Parties to the Convention (Art 4(2)(a)). Parties must take the necessary measures to ensure that hazardous wastes and other wastes are reduced to a minimum, taking into account the social, technological and economic aspects (Art 4(2)(b)). Each Party must also take appropriate measures for the availability of adequate disposal facilities, for the environmentally sound

9 402 UNTS 71. [9 ILM 860 (1980)]

management of hazardous wastes and other wastes, to be located, wherever possible, at the actual site where the waste is generated (Art 4(2)(c)). Persons involved in the management of hazardous wastes or other wastes must take the steps required to prevent pollution due to hazardous wastes and other wastes arising from such management and, if such pollution occurs, to minimize the effects thereof for human health and the environment.

Based on a proposal made by the Organization of African Unity, the Convention specifically prohibits exports of hazardous wastes or other wastes to a group of States belonging to an economic and/or integration organization – particularly developing countries – which have banned the import of such wastes (Art 4(2)(e)). Thus, the provisions of the Basel Convention set out to ensure that such a collective ban would be respected by all its Parties.

Financial assistance to achieve the goals of control and management

The Convention calls upon all States to consider making voluntary contributions, and trust funds have been set up. One of the tasks for the Bureau of the COP is to oversee the development and execution of the Secretariat of the Basel Convention's budget as derived from the Trust Fund and other sources. The Bureau also controls the expenditures of the adopted budget of the Trust Fund to implement the Basel Convention. Further, the Bureau controls the Technical Cooperation Trust Fund which has been established for the Basel Convention to assist developing countries in need of technical assistance in the implementation of the Basel Convention. The financial assistance made available by this Fund enables the full and wide participation of developing countries in issues concerning the Basel Convention as well as in its implementation. The provision of these funds are an important means of assistance in implementation of the Basel Convention.

Bodies formed under the Basel Convention

To facilitate the implementation of the Convention, the Contracting Parties are to designate or establish one or more competent authorities and a focal point (Art 2(6) and (7) and Art 5). It is these authorities which are to oversee the process of generating requests for consent to monitor and control the movement of hazardous wastes. The focal point is the entity designated by the Party as responsible for receiving and transmitting information (Arts 13, 16 and 19).

Secretariat

The Conference of the Parties to the Basel Convention, at its first meeting in December 1992, requested UNEP to carry out the functions of the Basel Convention Secretariat.[10] Consequently, the Secretariat of the Basel Convention was established in January 1993 in Geneva under the auspices of UNEP. It is responsible for a wide range of matters closely coordinating its functions with other UNEP offices, concerned United Nations bodies and relevant international/regional governmental organizations and cooperates with NGOs in industry and the private sector. The functions of the Secretariat include, inter alia, the following:

> *to arrange for and service meetings of the Conference of the Parties;*
>
> *to prepare and transmit reports as required in the Convention;*
>
> *to communicate with focal points and competent authorities established by Parties;*
>
> *to receive and convey information from and to Parties on relating technical assistance with a view to assisting them in such areas as are relevant to the implementation of the Convention;*
>
> *to assist Parties in identifying illegal traffic in hazardous wastes and circulate immediately to the Parties concerned any information concerning illegal traffic; and*
>
> *to cooperate with Parties and with relevant and competent international organizations in providing experts and equipment for rapid assistance to States in case of an emergency.*

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10 Decision I/7

In order to build up the capacity for comprehensive response to the issue of illegal traffic, the Secretariat further assists Parties in developing national legislation to deal with such traffic. Further, it assists Parties in capacity building, including the development of an appropriate infrastructure allowing for the monitoring and prevention, as well as the penalization of illegal traffic. It also has responsibilities in relation to verification of breaches of the Convention (Art 19). This is an essential and critical part of the global regulatory system of the Basel Convention.

Conference of the Parties

The Conference of the Parties keeps under continuous review and evaluation the effective implementation of the Convention and promotes the harmonization of the appropriate policies. In addition, it may adopt amendments to the Convention and its annexes, taking into consideration among other things, available scientific, economic and environmental information.

Costs and Benefits of Adopting the Convention

The Secretariat of the Basel Convention is to receive and convey information from and to Parties on sources of technical assistance and training, available technical know-how, sources of advice and expertise and availability of resources with a view to assisting them, upon request, in such areas as:

> *the handling of the notification system of the Convention;*
>
> *the management of hazardous wastes and other wastes;*
>
> *environmentally sound technologies relating to hazardous wastes and other wastes such as low-waste and non-waste technology;*
>
> *the assessment of disposal capabilities and sites;*
>
> *the monitoring of hazardous wastes and other wastes; and*
>
> *emergency response.*

Also, the Secretariat is to provide Parties, upon request, with information on consultants or consulting firms having the necessary competence in the management of hazardous wastes. It also assists Parties upon request with the identification of cases of illegal traffic.

Taking into consideration the situation in African countries, the provisions of the Basel Convention have been specifically developed with the intention of accommodating these countries' special needs including financial needs, and with the further related aim of assisting them to achieve the goals of the Convention. Parties shall employ appropriate means to cooperate in order to assist developing countries in reducing to a minimum the generation and transboundary movement of hazardous wastes, ensuring the availability of adequate disposal facilities for the environmentally sound management of hazardous wastes. Persons involved in such management must be able to prevent pollution, or if such pollution occurs, to minimize the consequence thereof, for human health and the environment (Art 10(3)).

International cooperation shall be extended to developing countries in the following fields (Art 10):

> *transfer of technology and management systems related to the environmentally sound management of hazardous wastes;*
>
> *the development and implementation of new environmentally sound low-waste technologies and the improvement of existing technologies, with a view to eliminating the generation of hazardous wastes and other wastes and achieving more effective and efficient methods of ensuring their management in an environmentally sound manner, including the study of the economic, social and environmental effects of the adoption of such new or improved technologies;*

monitoring the effects of the management of hazardous wastes on human health and the environment;

development and promotion of environmentally sound management of hazardous wastes and other wastes; and

public awareness.

The concerns of African countries regarding the lack of technical capacity which would enable them to handle the control system are therefore taken into account by this strong emphasis on international cooperation between Parties in technical matters related to environmentally sound waste management of hazardous wastes.

According to the specific needs of different regions and subregions, regional or subregional centres for training and technology transfers regarding the management of hazardous wastes and other wastes and the minimization of their generation are being established. The Secretariat of the Basel Convention has, since 1989, organized a number of seminars and workshops for developing countries in the management of hazardous wastes and the implementation of the Basel Convention.

The Convention stipulates that Parties shall consider the establishment of a revolving fund to assist on an interim basis in case of emergency situations to minimize damage from accidents arising from transboundary movements of hazardous wastes and other wastes, or during the disposal of these wastes. Developing countries will be the group of countries to benefit from the facilities provided by such a fund in cases of emergency (Art 14(2)).

In cases of illegal movement of hazardous wastes or other wastes to a developing country Party to the Convention as a result of conduct on the part of the exporter or generator, the State of export shall ensure that the wastes in question are taken back by the exporter or the generator or, if necessary, by itself into the State of export or are otherwise disposed of in accordance with the provisions of the Convention (Art 9(2)).

In turn, Parties to the Convention must adhere to the strict provisions provided by the convention, with any transboundary movements of hazardous wastes carried out in contravention of the provisions being considered as illegal traffic and a criminal act (Arts 4(3) and 9(1)) (see further below).

MEASURES TO BE TAKEN BY ALL PARTIES[11]

The most important and crucial aspect of the Basel Convention is its implementation by the Contracting Parties. Such implementation may only be achieved through the effective use of national instruments consisting of legislative and administrative measures adapted to local circumstances. In accordance with the Basel Convention, ..." Each Party shall take appropriate legal, administrative and other measures to implement and enforce the provisions of this convention, including measures to prevent and punish conduct in contravention of the Convention (Art 4(4)).

Minimize the generation of wastes.

Each Party shall minimize the generation of wastes, both hazardous and otherwise, while taking into account social, technological and economic aspects (Art 4(2)(a)).

Ensure the availability of adequate disposal facilities.

Each Party shall ensure the availability, to the extent possible, within its own boundaries, of adequate disposal facilities for the environmentally sound management of wastes, both hazardous and other (Art 4(2)(b)).

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11 Manual for the implementation of the Basel Convention, Basel Convention Series/SBC No. 94/004, general, April 1994

Prevent pollution arising from the management of wastes

Each Party shall ensure that persons managing waste take appropriate steps to prevent pollution arising from the management of hazardous or other wastes and, if such pollution occurs, to minimize its consequences for human health and the environment (Art 4(2)(c)).

National legislation

Parties shall promulgate new or adapt existing laws and regulations in accordance with the provisions of the Basel Convention (Arts 4(4)and 9(5)).

Bilateral, multilateral and regional agreements

The decision arrived at in this Article was based on Chapter 34 on technology transfer in Agenda 21.

Contracting Parties are not to permit the exportation of hazardous or other wastes to non-Parties or their importation from a non-Party (Art 4(5)), unless there exists a bilateral, multilateral or regional agreement regarding transboundary movements. Parties must notify the Secretariat of the Basel Convention expeditiously of any such agreement. These agreements or arrangements shall not derogate from the environmentally sound management of the hazardous and other wastes as required by the Convention (Art 11(1)) and shall not stipulate provisions which are not less environmentally sound than those provided by the Basel Convention, in particular taking into account the interests of developing countries.

For any such agreements entered into prior to the entry into force of the Basel Convention, the provisions of the Convention "shall not affect transboundary movements which take place pursuant to such agreements provided that such agreements are compatible with the environmentally sound management of hazardous wastes and other wastes as required by this Convention" (Art 11(2)).

Illegal Traffic

Under the Convention illegal traffic in hazardous wastes or other wastes is deemed criminal (Art 4(3)) and parties are obliged to "introduce appropriate national/domestic legislation to prevent and punish illegal traffic" (Art 9(5)).[12]

The Secretariat of the Convention assists Parties to identify cases of illegal traffic.

Under the Convention, any transboundary movement of hazardous wastes or other wastes is deemed to be illegal if it occurs:

(a) without notification pursuant to the provisions of this Convention to all States concerned; or

(b) without the consent pursuant to the provisions of this Convention of a State concerned; or

(c) with consent obtained from States concerned through falsification, misrepresentation or fraud; or

(d) in a manner that does not conform in a material way with the documents; or

(e) in a manner that results in deliberate disposal (e.g. dumping) of hazardous wastes or other wastes in contravention of this convention and of general principles of international law (Art 9(1).

Where such movement is deemed to be illegal traffic as the result of conduct on the part of the exporter or generator, the States of export shall ensure that the wastes in question are:

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12 Decision 1/15 of the First Meeting of the Conference of Parties to the Basel Convention has confirmed this obligation by requesting the parties to "promulgate laws that consider illegal traffic in hazardous wastes a criminal act"

(a) taken back by the exporter or generator or, if necessary, by itself into the State of export, or, if impracticable;

(b) are otherwise disposed of in accordance with the provisions of this Convention, within 30 days from the time the State of export has been informed about the illegal traffic or such other period of time as States concerned may agree" (Art 9(2)).

If the traffic is deemed illegal due to the conduct of the importer or disposer, the State of import shall ensure that the wastes in question are disposed of in an environmentally sound manner by the importer or disposer or, if necessary, by itself within 30 days from the time the illegal traffic has come to the attention of the State of import or within a period of time as the States concerned may agree (Art 9(3)).

Where the responsibility for the illegal traffic cannot be assigned either the exporter or generator or to the importer or disposer, or any other party, shall ensure, through cooperation, that the wastes in question are disposed of as soon as possible in an environmentally sound manner (Art 9(4)).

Designation of competent authorities and focal point

The Parties shall "designate or establish one or more competent authorities and one focal point" and "inform the Secretariat" of such designations "within three months of the date of the entry into force of the Convention for them." In the case of a State of transit, "one competent authority shall be designated to receive the notification" (Article 5).[13]

Cooperation among Parties

The Convention obliges the Parties to cooperate with each other to improve and achieve environmentally sound management of hazardous wastes and other wastes. They must make available information, including harmonization of technical standards and practices for the adequate management of hazardous wastes and other wastes;

> *cooperate in monitoring the effects of the management of hazardous wastes on human health and the environment;*
>
> *cooperate in the development and implementation of new environmentally sound low-waste technologies and the improvement of existing technologies with a view to eliminating the generation of hazardous wastes and other wastes; and*
>
> *cooperate in the transfer of technology and management systems related to the environmentally sound management of hazardous and other wastes (Art 10).*

Transmission of information

The Parties shall ensure that, in the case of an accident occurring during the transboundary movement of hazardous wastes or other wastes or their disposal, which could present risks to human health and the environment in other States, that those States are immediately informed (Art 13(1)).

Article 13 requires the Parties to transmit on an annual basis a report on the previous calendar year containing the following information:

(a) competent authorities and focal points that have been designated by them pursuant to Article 5;

(b) information regarding transboundary movements of hazardous wastes or other wastes in which they have been involved, including:

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13 The obligation to designate competent authorities and focal points has been confirmed by decision I/10 of the First Meeting of the Conference of the Parties to the Basel Convention

(i) the amount of hazardous wastes and other wastes exported, their category, characteristics, destination, any transit country and disposal method as stated on the response to notification;
(ii) the amount of hazardous wastes and other wastes imported, their category, characteristics, origin, and disposal methods;
(iii) disposal which did not proceed as intended; and
(iv) efforts to achieve a reduction of the amount of hazardous wastes or other wastes subject to transboundary movement;

(c) information on the measures adopted by them in implementation of this Convention;
(d) information on available qualified statistics which have been compiled by them on the effects on human health and the environment of the generation, transportation, and disposal of hazardous wastes or other wastes;
(e) information concerning bilateral, multilateral, and regional agreements and arrangements entered into pursuant to Article 11 of this Convention;
(f) information on accidents occurring during the transboundary movement and disposal of hazardous wastes and other wastes and on the measures undertaken to deal with them;
(g) information on disposal options operated within the area of their national jurisdiction;
(h) information on measures undertaken for development of technologies for the reduction and/or elimination of production of hazardous wastes and other wastes; and
(i) such other matters as the Conference of the Parties shall deem relevant (Art 13(3)).

The Parties must also ensure that copies of each notification about transboundary movement of hazardous wastes or other wastes, and the response to it, are sent to the Secretariat when a Party considers that its environment may be affected has requested that this should be done (Art 13(3)-(4)).

Use of Information Exchange and National Legislation to Give Effect to the Convention

One of the most important tools for the implementation of global international instruments is the exchange of information between Contracting Parties channelled through the Secretariat.

In accordance with the Basel Convention, information exchange is not only the tool for its implementation but also a condition *sine qua non* for its scope (ie. definition) and some of its provisions (ie. ban on import of hazardous wastes introduced by national regulations). Proper information exchange on the generation, export, import and control over disposal of hazardous wastes is necessary for the prevention of illegal traffic of hazardous wastes. To allow the Prior Informed Consent to be implemented as well as for technical assistance and knowledge-sharing on environmentally sound management of various waste streams and disposal options to be effective, full information has to be available on governmental bodies dealing with hazardous wastes, on measures undertaken by countries for development of technologies for reduction and elimination of wastes and on their national, regional and global activities in this field. The knowledge of the effects of hazardous wastes on human health and the environment is limited and, with a view to protecting humanity against the adverse effects, any information available on this subject should be shared, not only by Contracting Parties, but also by non-Contracting Parties, interested organizations, the private sector, industry and NGOs.

The implementation of the Basel Convention is to be achieved through the effective use of national instruments consisting of legislative and administrative measures adapted to local circumstances. In accordance with the Basel Convention, ". . . each Party shall take appropriate administrative and other measures to implement and enforce the provisions of this Convention, including measures to prevent and punish conduct in contravention of the Convention" (Art 4(4)).

In order to assist Parties to establish national legislation and institutional mechanisms which would allow them to implement the provisions of the Basel Convention, the Secretariat of the Basel Convention developed, with

the advice of experts, and presented to the first meeting of the Conference of the Parties (December 1992), a draft model national legislation which was further updated as requested by the Conference of the Parties. To develop this model of national legislation the Secretariat reviewed the existing national legislation and institutional arrangements in the field of environmentally sound management of hazardous wastes and the control of their transboundary movements.

The model national legislation publication should be of assistance to countries with economies in transition, developing countries and in particular the African countries, in order to develop appropriate legislation related to the control and management of hazardous wastes. The publication may also be used by countries in updating their existing legislation and by countries wishing to compare their existing legislation with the legislation of countries having similar industrial development and legal systems as well as similar geo-physical conditions.

The problem of the management of hazardous wastes is relatively new in the international arena. It was only in the mid-1980s that countries started to develop special national legislation in this field. Even today, several countries, mainly developing but also some developed, have not yet adopted separate national legislation dealing with the management of hazardous wastes. Some of them have incorporated provisions relating to environmentally sound management of hazardous wastes and the control of its transboundary movements into Acts dealing with other aspects of the environment (ie. water legislation, health regulations etc.). There is however, a very clear trend that national legislation in the field of hazardous wastes should be established as enactments in an effort to protect citizens and the environment against the increasingly damaging effects of the generation, transportation, storage and disposal of hazardous wastes.

Technical Measures and Training for Effectively Implementing the Convention

The Convention obliges Parties to manage hazardous wastes in an environmentally sound way. This means that the States Party to the Convention should aim towards activities for the reduction and minimization of all risks of harm caused by hazardous wastes to health and the environment. Such activities should include among other things:

steps to reduce or avoid the generation of hazardous wastes;

steps to ensure proper recovery of such wastes;

steps to reduce to a minimum or eliminate the export/import of hazardous wastes. This entails the planning of environmentally sound disposal facilities, located as close as practicable to the source of generation, and identification of the generators;

identification of the type of wastes subject to the Basel Convention and the total annual volumes by type acceptable for import, if any, and the corresponding environmentally sound disposal facilities to be used;

identification of all conditions required for granting of consent to exporters/importers desiring to move hazardous wastes through the territory of a transit country;

identification of the adequate and most effective process by which to optimize the environmentally sound disposal of wastes;

elaboration of contingency plans including risks analysis and emergency responses in case of accidents;

steps required to rehabilitate polluted land-filled areas or to replace ecological deterioration due to improper disposal of wastes;

steps needed to comply with recognized international transport rules, regulations, standards or code of practice;

steps to monitor pre- and post-disposal operations and effects;

steps to develop liability and compensation measures for damages resulting from transboundary movements and/or disposal of hazardous wastes; and

a timetable for implementation of the various and interrelated elements of a strategy for wastes management.

In addition to all provisions prescribed above, concrete management elements, which are based on the Convention, have already been developed in African Countries.[14]

Technical Guidelines for the Environmentally Sound Management of Hazardous Wastes and Other Wastes

The Convention requires the establishment of technical guidelines for the environmentally sound management of hazardous wastes (Art 4(8)). The development and implementation of these guidelines create less hazardous wastes and/or improve existing technologies with a view to eliminating the generation of hazardous wastes. In order to achieve this aim, a technical working group was established directly after the adoption of the Convention. As a first result, the First Meeting of the Conference of the Parties was able to adopt a Framework Document on the Preparation of Technical Guidelines for the Environmentally Sound Management of Wastes Subject to the Basel Convention and four Technical Guidelines, namely on:

Hazardous wastes from the production and use of organic solvents (Y6);

Hazardous waste: waste oils from petroleum origins and sources (Y8);

Wastes comprising or containing PCBs, PCTs and PBBs (Y10); and

Waste collected from households (Y46).

At its Second Meeting, the Conference of the Parties requested the Secretariat to publish and disseminate the Framework Document and the four Technical Guidelines between Parties and non-Parties together with a covering note explaining the nature of the document. This was immediately done by the Secretariat and all African countries have now at their disposal technical tools to assist in dealing with a number of hazardous wastes. In addition, the Second Meeting adopted provisionally three additional Draft Technical Guidelines on Disposal Operations:

Technical Guidelines on Specially Engineered Landfill (D5);

Technical Guidelines on Incineration on Land (D10); and

Technical Guidelines on Used Oil Re-refining or other Re-uses of Previously Used Oil (R9), which are being revised by the Technical Working Group. Further progress in the development of additional technical guidelines was also undertaken by the technical working group particularly in relation to Physio-Chemical Treatment (D9).

The Technical Working Group of the Basel Convention has in addition developed the technical *elements* for guiding States in their activities to be carried out within the framework of environmentally sound management of hazardous wastes which include:

provisions for the establishment of emergency plans specifying the steps to be taken in the event of occurrences such as fire, explosion and spillage, and

consideration of the problems created by contamination of the environment by hazardous wastes, taking into account their environmental and health effects in both the short and long term.

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14 The Basel Convention and The African Countries, Basel Convention Series/SBC No.: 94/010, Geneva, November 1994 pp.10-12

Regional Centres

The Basel Convention calls for the establishment of regional or subregional centres for training and technology transfer regarding the management of hazardous wastes and other wastes and the minimization of their generation. The successful implementation of the Convention and the achievement of the environmentally sound management of hazardous wastes relies upon developing the adequate capacity at the national or regional level, taking into account the needs of developing countries and African countries in particular. Such centres will be of the utmost importance for the African countries which lack trained manpower and technology. It was therefore decided to identify the specific needs of the regions in this field taking into account ongoing and future activities as well as ways and means for the establishment and functioning of such Centres, including appropriate funding mechanisms for this purpose and to undertake feasibility studies to this effect. The following aspects have been considered in these studies for the African Region:

identifying and prioritizing the needs of the region;

identifying the resources available in the region;

identifying the resources required to address the needs;

identifying the benefits to be gained through the establishment of a pilot centre;

obtaining views from the candidate regions as to the types of technical assistance or training they consider to be of the highest priority;

determining if a centre is immediately required to address the prioritized needs; and

determining what resources are available from each candidate region and what resources would be required.

Training and Seminars related to the Basel Convention

In the field of training, UNEP and the Secretariat for the Basel Convention have since 1988 organized a number of seminars and workshops for developing countries in the field of the management of hazardous wastes as mandated under the Convention according to Article 10 and to decisions of the Conference of the Parties. Future activities include to:

assist Parties and regions to develop training programmes, including curricula at the national level in collaboration with national authorities;

continue to organize national and regional seminars or workshops and training programmes and curricula on the implementation of the Basel Convention and the environmentally sound management of hazardous and other wastes; and

promote the adoption of cleaner production methods and new low-waste technologies.

Article 14 of the Convention sets forth that the Parties, according to the specific needs of different regions and subregions, should establish regional or subregional centres for training and technology transfer regarding the management of hazardous wastes and other wastes and the minimization of their generation. At the end of the First Conference of the Parties, the Parties requested the Open-ended Ad Hoc Committee to identify the specific needs of the different regions and subregions for training and technology transfer. The Second Meeting of the Conference of the Parties invited those countries in a position to do so, to supply financia and technical support for the feasibility studies to be conducted on the establishment of centres in the different regions. At the Third Meeting of the Conference of the Parties various sites were selected for the establishment of the regional and subregional centres. For Latin America and the Caribbean, Uruguay was selected as the coordinating centre with three subregional centres: Argentina for the South American subregion; El Salvador for Central America; and Trinidad and Tobago for the Caribbean. For Africa, three subregional centres should be established: one for Arabic-speaking countries, one for English-speaking countries; and one centre for French-speaking African countries. One centre for Central and Eastern Europe has already been

established in the Slovak Republic without substantive support from Switzerland. A centre in China has started its operation for the Asia and Pacific region. The establishment of a centre in Indonesia is in the pipeline.

The centres are aimed primarily at strengthening the capacity of the Governments of the regions in complying with the technical, legal and institutional requirements of the environmentally sound management of hazardous wastes, as specified by the Basel Convention and further elaborated by its technical and legal bodies. The regional centres therefore provide the adequate institutional framework for the coordination and implementation of technical and practical programmes. The increasing demands for assistance to developing countries and countries with economies in transition provided the basis for the Secretariat to coordinate feasibility studies in Africa, Asia and the Pacific, Latin America and the Caribbean, and Eastern and Central Europe for the establishment of regional centres in these geographical regions which resulted in recommendations of sites to host the centres.

THE BASEL CONVENTION: A CHALLENGE FOR TOMORROW

The Basel Convention had been ratified by 111 States and the European Economic Community as of 30 May 1997. There are 19 Parties from the African region, 31 from Asia and the Pacific, 26 from Western Europe and Others plus the European Commission, 11 from Central and Eastern Europe and 24 from Latin America and the Caribbean region. It is remarkable that, only five years after its entry into force, the Basel Convention has already over one hundred ratifications. It clearly shows that the Governments are ready to cooperate in the field of environmentally sound management of hazardous wastes, their transboundary movements and their disposal at the global level and also that they recognize this problem as one of the important and acute subjects of this century.

Strengthening of the agreement

The Second Meeting of the Conference of the Parties (COP) held from 21-25 March 1994 in Geneva less than two years after the entry into force of the Convention (May 1992), has adopted a full-fledged work programme for the implementation of the Basel Convention. The Conference of the Parties in particular decided that the exports of hazardous wastes from OECD to non-OECD Member States for final disposal is prohibited with immediate effect. This decision is the confirmation of the decision adopted by the Parties at their first meeting in December 1992 in Uruguay. Furthermore, in order to respond in a comprehensive manner to the needs of the non-OECD countries, both developed and developing countries agreed that the export of hazardous wastes for recovery operations to non-OECD countries from OECD Member States must cease by 31 December 1997. This transitional phase has been seen as necessary for those concerned with these movements to enable them to take appropriate measures consistent with the environmentally sound management of such wastes. This ban will have far-reaching consequences in a number of interrelated activities which together concur to achieve the objectives set in the Basel Convention. The ban should provide a strong incitation to efforts by countries to reduce transboundary movements of hazardous wastes. It should consolidate policies aiming at treating and disposing of those wastes as close as possible to their source of generation. It should also act as an incentive to promote the introduction of cleaner production methods in industrial processes, thus minimizing the generation of hazardous wastes.

First and foremost, the Parties to the Convention agreed during the Conference that it was imperative to render such a prohibition effective and decided on a control system through regular reporting on the implementation of the decision. In addition, those non-OECD States not possessing a national hazardous waste import ban and which allow the import from OECD States of hazardous wastes for recycling or recovery operations until 31 December 1997, should let the Secretariat of the Basel Convention know about their specific or particular situation and should specify the categories of hazardous wastes that are acceptable for import, the quantities to be imported, to which recovery process the waste will be subject and the final destination or disposal of the residues derived from such operations. The Parties also recognized the need to

cooperate and work actively to ensure the effective implementation of this decision. The UN Commission on Sustainable Development at its second session in New York, May 1994, endorsed this and other Decisions taken by the Parties to the Convention at their second meetings. The Commission emphasized that particular attention should be given to the prevention, to the extent possible, of hazardous wastes and a minimization of their toxicity through the development-dissemination and application of an integrated cleaner production approach in all planning, such as the UNIDO/UNEP Cleaner Production Centres. This approach also includes the use of an appropriate mix of institutional and regulatory measures as well as economic instruments; to the development of environmentally sound management and disposal of wastes with a view to ensuring the principles of proximity and self-sufficiency. The Commission urged industry to develop voluntary codes of conduct for the use of clean technologies and the safe management of hazardous wastes in all countries where they operate.

The Third Meeting of the Conference of the Parties adopted Decision III/1 on the Amendment to the Convention. This amendment stated that Parties which are members of OECD, EC, Liechtenstein are to prohibit immediately all transboundary movements of hazardous wastes destined for final disposal to other States. These States should phase out by 31 December 1997 and prohibit as of that date all transboundary movements of hazardous wastes which are destined for recovery, recycling, reclamation, direct reuse or alternative uses. A critical factor acknowledged by the Conference of the Parties was that transboundary movements of hazardous wastes, especially to developing countries, have a high risk of not constituting environmentally sound management of hazardous wastes as required by the Convention. The Parties also recognized the need to cooperate and work actively to ensure the effective implementation of this decision. Moreover, this amendment needs to be ratified by three fourths of the Parties who accepted it in order to come into force. As of April 1997, the amendment had been ratified by Finland.

A work programme for the Secretariat

The Parties at their Second Meeting adopted 27 decisions which constitute a detailed and comprehensive work programme containing legal, technical and financial components which are essential for the effective and efficient implementation of the Convention. The mandate of the Legal Working Group has been extended in order to finalize, if possible, its work on a Protocol on Liability and Compensation for Damage Resulting from the Transboundary Movements of Hazardous Wastes and their Disposal, to be submitted at future meetings of the Conference of the Parties. The Working Group has dealt with various issues including the objective, definitions, scope of application, liability, forms of compensation, and the financial and time limits of the liability under the proposed Protocol. Members of the Working Group also have heard the opinion of insurance companies in relation to the article on "Insurance and other Financial Guarantees." The same Working Group was also asked to continue to consider the elements that would be required for establishing an emergency fund, and the relation between such an emergency fund and the Protocol on Liability and Compensation. The Conference adopted a Manual to facilitate the implementation of the Convention and a strategy to prevent and monitor illegal traffic in hazardous wastes. It has also accepted model national legislation in order to assist Parties and non-Parties in revising their national legislation in relation to the management of hazardous waste. The Parties agreed on the programme for the Technical Working Group. This includes the preparation of new technical guidelines for the environmentally sound management of hazardous wastes and the further elaboration of criteria for such wastes destined for recovery operations. Decisions were taken to pursue the selection of sites for the establishment of regional centres for training and technology transfer, and on assisting Parties to develop training programmes on the implementation of the Convention and the environmentally sound management of hazardous wastes. Complementary to the Technical Guidelines and the draft Model National Legislation is the Manual for the Implementation of the Convention which has been approved by the Parties for immediate use. These three documents provide a comprehensive framework and guidance material to control and regulate the management of hazardous wastes including their transboundary movements. The Parties gave a strong mandate to the Secretariat to continue its cooperation with the United Nations bodies concerned, other intergovernmental and non-governmental organizations in order to achieve environmentally sound management of hazardous wastes at the global level.

The Basel Convention provides the framework for the world community to ensure that the environmental

and health problems associated with hazardous wastes generation and disposal can be modulated, reduced and eventually eliminated. Environmentally sound management is a new concept that fits perfectly well the challenge posed by the millions of tons of hazardous wastes that the world community has to manage in order to minimize harm to living creatures and the environment. To ensure developmental activities will be environmentally sound, provide sustained benefits and protect human health and natural resources, effective control of the generation, storage, treatment, recycling and reuse, transport, recovery and disposal of hazardous wastes is of paramount importance. The principles and criteria that constitute an environmentally sound way of managing hazardous wastes represent the baseline upon which the current situation could improve. However, it is already very difficult for many countries to take initial steps in the implementation of these principles and criteria. That is why it is of the utmost importance to strengthen international cooperation to consider both the best available practices and adequate or good practices that are helpful, and find innovative use of existing practices or technologies. While it is a promising concept, its practical implementation requires the collective knowledge of different disciplines, communication among the various sectors of society and a vision of what tomorrow should be.

EXERCISES ON THE BASEL CONVENTION

Rationale for international action

1. Why is it necessary to control the transboundary movement of hazardous wastes?

Major components of the Convention

2. Is a substance which falls under one of the categories listed in Annex I of the Basel Convention, but not Annex III, a hazardous waste? (Art 1)
3. Are wastes which are radioactive excluded from the operation of the Basel Convention? (Art 1)
4. Are wastes which derive from the normal operations of a ship covered by the Convention? (Art 1)
5. Is it important that a waste be one that is, or will be, disposed of for it to be covered under the terms of the Convention? (Art 2)
6. What are the consequences under the Convention if an import State defines wastes under its domestic legislation as hazardous which neither the Convention or the exporting State define as hazardous? (Arts 1 and 3)
7. What is a "competent authority" under the Convention, and what responsibilities does it have? (Arts 2 and 6)
8. What is a "focal point" under the Convention and what is it responsible for? (Arts 2, 5, 13 and 14)
9. What obligations exist upon the contracting parties to designate appropriate competent authorities and focal points? (Arts 2 and 5)
10. What requirements are there under the Convention to ensure the availability of adequate disposal facilities for hazardous wastes? (Art 4(2))
11. What impact does the Convention have on the export of hazardous wastes between Parties and non-Parties? (Art 4(5))
12. What is the standard information required under the Convention to be passed on to the State of import or State of transit by the exporting State when an application is made for a proposed transboundary movement of hazardous wastes? (Arts 4 (7), 6 and 7 and especially Annex VA; see also Art 2 (f))
13. What scope is there under the terms of the Convention for a State to implement its own domestic procedures to control the movement of hazardous wastes in support of, and in addition to, the procedures created by the Convention? (Art 4(11))

14. What obligations are placed on Parties to enact implementing legislation under the Convention? (Arts 4, 9 (5))

15. What is the effect of the provisions in the Convention in relation to financial aspects? (Art 14)

16. Is it necessary for any transboundary movement of hazardous wastes to be covered by insurance or other guarantees? (Art 6(11))

17. What obligations does the Convention impose on exporting States when they believe that the wastes being exported will not be managed in an environmentally sound manner by the State of import? (Art 4 (2)(e) and (g))

18. What is the role envisaged for the Contracting Parties at a Conference of the Parties and what role may the United Nations or any of its agencies have at these meetings? (Art 15)

19. What is the role of the Convention Secretariat? (Arts 16 and 19)

20. What are the consequences for the State of export in the case of transboundary movement of wastes which are deemed to be illegal traffic? (Art 9 (1), (2), (3) and (5))

21. What are the consequences under the Convention if hazardous waste is transported without having obtained the relevant consent of the importing State? (Art 9(1))

22. What implications does the Convention have for international trade laws?

23. Is there a need to specifically regulate hazardous wastes and why?

24. Is a waste hazardous because of its intrinsic properties (hazardousness)?

25. Is risk similar to hazardousness?

26. How can one determine if a waste is subject to the Basel Convention?

27. How can Annex III of the Basel Convention be related to Annex I to determine if a waste is hazardous or not?

28. Is a ship making a port call but not unloading its hazardous waste cargo subject to notification procedures applicable to the state of transit? (Article 6)

29. Is paper covered under the Basel Convention because of its flammable nature?

30. Do hazard classes H1 to H8 correspond to the hazard classes described in the UN Recommendations on the Transport of Dangerous Goods? (Orange book)

31. How can one identify a shipment of mixed hazardous wastes? Is the Harmonized System code number (World Customs Organization) sufficient (e.g. does the Harmonized System distinguish between a waste and a product and does it distinguish between a waste that is hazardous and one that is not)?

32. As the exporter, do you need to complete the Notification Document and transmit it to the importer through the Competent Authority of the state of export? (Article 6)

33. What means should one use to control hazardous wastes (eg. lists, criteria, etc...)? Please explain.

34. Is interim storage a disposal operation under the Basel Convention? (Annex IV)

35. What is the economic value of waste, bearing in mind price fluctuations?

36. What are the overall environmental benefits arising from recovery/recycling operations?

37. Does the Convention make provision in respect of liability and compensation?

38. In case of emergency, what assistance can a country get?

39. Is there an International fund to help victims of hazardous waste?

40. What are the costs and benefits of becoming a party to the Convention?

Relationship to other Conventions

41. What is the relationship between the Basel and regional conventions (eg the 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes Within Africa; the 1995 Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention))?

Discussion points for small groups

42. In the case of the movement of the hazardous wastes by ship, how does the Convention potentially conflict with the traditional freedom of movement on the high seas? (Art 4 (12))

43. The Convention provides that the illegal traffic in hazardous wastes is criminal. (Art 4(3)) Why is it necessary to characterize this activity as criminal and what implications does it have for State responsibility?

44. Does the Convention stop some States from actively seeking contracts from exporting States so as to receive hazardous waste and dispose of that waste, or stockpile the waste, under conditions which fall below internationally accepted standards?

45. Does the Convention adequately deal with the movement of hazardous waste on a global scale, or is there a need for other relevant international laws to be operative in this area? (Art 15(4)(5) and (7))

Case study

46. State A is land-locked. It wishes to export a quantity of hazardous waste. After discussions with authorities in State C, agreement is reached for State C to receive the waste as a State of import. For the waste to reach State C it will be necessary for the waste to be shipped through State B to a port, where it can then be loaded on a vessel for direct shipment to State C. What are the issues which arise under the Basel Convention for State A to successfully be able to export its hazardous waste?

CHAPTER 9

TRADE AND ENVIRONMENT

INTRODUCTION

Sustainable development is concerned, among other things, with the integration of environment and development policies. As the world community moves toward this integration, one of the major areas requiring work, in order to ensure mutual compatibility, is trade and environment. Environmental protection measures must reflect the relationship between socio-economic development and the environment. And if the free trade regime is to truly achieve its goals, it must acknowledge the environmental impact of the economic growth which it facilitates.

The interface between trade and environment arises from two concurrent trends:

- an increase in concern for environmental protection, and
- a continuing effort to remove restrictions on world trade.

The global environment suffers increasingly from problems created by human activity, and in response to this phenomenon there has been a marked increase in the number of environmental conventions and also in their stringency and comprehensiveness. This trend is particularly noticeable since the 1972 Stockholm Conference on the Human Environment, which was a landmark event in terms of international recognition of the seriousness of environmental problems and the consequent need for increased protection measures. Since 1972 there has been a burgeoning of environmental agreements at the international level and a related strengthening of environmental protection at the national level.

Under the auspices of the 1947 General Agreement on Tariffs and Trade (GATT) and, in the future, under the 1994 World Trade Organization (which superseded the GATT), the world community continues to remove restrictions on international trade. Free trade is promoted as a means of achieving a more efficient allocation of world resources, improved development conditions and a more prosperous world economy generally.

The interrelationship between these two bodies of law can be highlighted by the following two questions.

What are the environmental effects of free trade?

In the context of world history, the increase in environmental problems is a fairly recent phenomenon and there is a strong correlation between trends in industrialization and development, and the upsurge in environmental problems.

International trade represents one of the driving forces of economic growth within modern history. Annual growth in international trade is much faster than annual development growth. International trade in goods and services generates US$3 trillion per year for the global economy.

The exact effect on the environment of such trade is not easy to quantify. However, the United Nations Conference on Environment and Development reflects the generally agreed understanding that gains from development will not be sustainable if the environment has not been given equal attention. It must be recognized that the trading regime, with its huge impact on economic development and hence the environment, is also subject to this rule.

One particular issue should be highlighted: environmental problems are often created by the production processes used in creating products for modern society. However, under the free trade legal regime production process methods are largely irrelevant, with only the end product characteristics of any particular item being considered.

What are the trade and economic effects of environmental policies?

The theory of trade liberalization is based on the assumption of comparative advantage – basically, that when countries specialize in producing certain goods, overall efficiency is achieved on an international scale. Trade restrictions are considered to cause inefficiency because they disrupt the full exploitation by each country of its comparative advantage.

Environmental protection measures can restrict the easy application of comparative advantage which is derived from environmental factors, e.g., from abundant natural resources or high pollution tolerance. Environmental protection demands that certain standards are adhered to, placing restrictions on pollution levels and on the methods and amounts of resource extraction allowed.

Some environmental protection measures may, therefore, be in breach of free trade rules. At a general level, environmental protection may well reduce the total amount of free trade; the economic implications of environmental policies are estimated to be approximately two percent of national GDP in OECD countries and rising in transitional and developing economies. There are also fears, particularly on the part of developing countries, that environmental protection measures may be used as a guise for what are, in fact, trade protection measures.

Environmental protection laws are further seen as a threat to free trade when they incorporate trade restrictions in an attempt to encourage compliance.

As was emphasized at Rio, environment and trade policies should be mutually supportive. An open multilateral trading system makes possible a more efficient allocation and use of resources and thereby contributes to an increase in production and incomes and to lessening demands on the environment. It thus provides additional resources needed for economic growth and development and improved environmental protection. A sound environment, on the other hand, provides the ecological and other resources needed to sustain growth and underpin a continuing expansion of trade. An open, multilateral trading system, supported by the adoption of sound environmental policies, would have a positive impact on the environment and contribute to sustainable development.[1]

The challenge is to ensure that environmental protection law and international trade law work together, to strengthen sustainable development. Work is being carried out in this connection by a number of international organizations, e.g., WTO, UNCTAD, UNEP. It is crucial, however, that national governments understand the relevant issues so that they can facilitate and contribute to the ongoing process. Agenda 21 places an obligation on governments to encourage relevant international and regional economic institutions to examine certain propositions and principles[2]. Agenda 21 also records the intent of governments to make consensus-building at the intersection of environment, trade and development an ongoing activity not only in the existing international forums but in the domestic policy of each country as well.[3]

The remainder of this chapter provides more detailed information relevant to the trade and environment issue including: an overview of the trade law regime (GATT and WTO), its relevant trade provisions and of the work being undertaken by the WTO Committee on Trade and Environment; and trade and environment issues as they directly relate to international environmental conventions.

OVERVIEW OF THE TRADE LAW REGIME

The 1947 General Agreement on Tariffs and Trade

After World War II, governments created the Bretton Woods system which included the GATT, together with the World Bank and International Monetary Fund (IMF).

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1 Agenda 21, Chapter 2.19

2 Chapter 2.22.

3 Chapter 2.4

The GATT is a legal agreement and the original signatories were from 20 developed countries. The purpose of the GATT is to liberalize international trade flows, by establishing rules governing the international flow of goods. As noted above, the theory of trade liberalization is based on the assumption of national "comparative advantage", which in part reflects economic benefits from specialization and economies of scale.

The main focus of the GATT has been in the three basic areas of:

- tariff reduction;
- most favored nation and non-discrimination; and
- non-tariff barriers.

TARIFF REDUCTION

In the past forty years, national tariffs have been progressively reduced through tariff schedules, negotiated under the auspices of the GATT. New tariff levels have been agreed upon at successive negotiating processes, called "Rounds". These include the Kennedy, Tokyo and Uruguay Rounds.

MOST-FAVOURED NATION AND NATIONAL TREATMENT

When a country agrees to become a Contracting Party to the GATT, it adheres to the two guiding principles of most-favoured nation and non-discrimination (Arts I and III).

The most-favoured-nation principle requires that GATT/WTO members grant to all other GATT/WTO members, the best treatment they offer any nation or, as stated in Article I of the 1947 GATT Agreement:

> ***...any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.***

The non-discrimination (or national treatment) principle requires that goods imported by GATT Parties are treated the same as domestic goods.

NON-TARIFF BARRIERS

As tariffs have been progressively reduced, there has been increased concern over the use of non-tariff barriers (NTB) as a means of protectionism. NTBs can include technical standards for products, health standards, and national procurement programs which favor domestic producers.

The Uruguay Round and the World Trade Organization

In December 1993, the Uruguay Round of the GATT was completed after seven years of intense negotiations. The Uruguay Round established the World Trade Organization (WTO) which will supersede the GATT organization, as it had evolved.

Annex I to the WTO Agreement includes the General Agreement on Tariffs and Trade 1994 which incorporates most of the GATT 1947 as well as listed supplementary instruments such as decisions on waivers granted under GATT 1947 and Understandings on the interpretation of the GATT 1947.

However, new elements of the Uruguay Round, included also as Annexes to the WTO Agreement, render it the most broad, strict and comprehensive trade agreement ever struck. A range of measures are incorporated to further reduce tariffs: a broadened scope to include services as well as goods; an expanded set of domestic subsidies which can be found to be illegal (or "actionable"); new provisions covering agricultural subsidies; and the gradual elimination of the Multi-Fibre Agreement covering textiles.

Furthermore, the WTO – unlike the GATT – represents a universal legal regime, including developing as well as developed countries. The WTO entered into force on 1 January 1995 and as of April 1995, some 80 countries had ratified the Final Act of the Round. For the duration of 1995, GATT rules applied to those countries that had not yet signed the WTO. In 1996, the WTO entered fully into effect.

Implementation of the Uruguay Round will take up to 10 years. There are different "schedules" incorporating tariff codes for developing countries, to enable more time and flexibility for implementation.

Among the most important legal implications of the WTO are new rules regarding disputes – the WTO Dispute Settlement procedures will be binding, with stricter rules for enforcement.

Precise economic estimates of the Uruguay Round implementation are difficult. The WTO Secretariat estimates that the Round will add US$ 510 billion per year to the global economy. The overall volume in merchandise trade is expected to increase from between 9 and 25 percent per year. The biggest economic effects will take place in the largest trading countries – the European Community, North America and Japan. It is estimated that as much as 70 percent of total economic gains will be accrued in these three regions/countries. The rest will be divided among all developing and transitional economies.

Trade Provisions Relevant to Environment

RELEVANT GATT ARTICLES

The following three GATT Articles are important to the trade-environment interface due to the possibility of environmental protection measures breaching them. They will continue to have effect under GATT 1994:

- Article I, the most-favoured nation principle;
- Article III, the national treatment principle; and
- Article IX, a limitation on quantitative restrictions to trade.

A breach of these provisions can, however, be countered by recourse to Article XX which provides a range of exceptions to the trade rules for overriding public policy goals. Particularly relevant for environmental protection have been:

- subsection (b) which provides an exception for measures necessary to protect human, animal or plant life or health, and
- subsection (g) which provides an exception for measures relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.

In accordance with the preamble to Article XX, these exceptions must not be applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries or a disguised restriction on international trade.

The interpretations of these provisions are discussed in more detail below. At this stage, it is important to note that GATT Dispute Settlement Panels have focused on the requirement that measures be "necessary". Furthermore, the Panels have developed a requirement that the measures be the least trade restrictive reasonably available, and have left uncertainty regarding the territorial reach of "necessary" environmental measures, for example measures to protect fish species which encompass actions taken on the high seas.

ENVIRONMENT PROVISIONS OF THE URUGUAY ROUND

Uruguay Round provisions having environmental implications include references to environment issues in the preamble, the Agreement on Technical Barriers to Trade (TBT), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), non-actionable subsidies, and dispute resolution. Each will be discussed in turn.

The Preamble to the Agreement Establishing the World Trade Organization states, among other things, that:

> ***...relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development.***

For the first time, the multilateral trade rules contain a reference to "sustainable development" and the pursuit of environmental protection in its preamble. However, the preamble is not legally binding.

The Agreement on Technical Barriers to Trade (TBT Agreement), which is included in Annex I to the WTO Agreement, covers product regulations such as size, grade and quality standards. For example, a regulation requiring catalytic converters on automobiles would fall under the TBT's purview. Under the WTO, this would be an acceptable TBT, provided that both domestic and imported cars face the same product regulations.

There is some scope under the TBT for the inclusion of production process methods "related" to the characteristics of the final product. This is a new development in the trade regime. However, production process methods which are not physically reflected in the final product – such as the amount of sulphur dioxide emitted during production of the item – continue to be irrelevant to the trade regime.

There is considerable uncertainty about the role of "eco-labelling" criteria under the TBT. The TBT Agreement covers mandatory regulations and standards and yet there are a number of voluntary eco-label schemes (at least 25). It is unclear whether these will be covered.

The TBT Agreement places greater emphasis on national standards reflecting "relevant" international standards. Such standards include International Standards Organization Committee 207, which were to complete international standards for environmental considerations (auditing, eco-labelling, management) in 1996. It is unclear at this stage what the relationship will be between international standards and national standards, for example, regarding the burden of proof.

The TBT also requires national standards to conform to a "least trade restrictive" test: "...technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective".[4] This provision may also have implications for environmental protection (referred to below).

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) governs product standards which apply equally to domestic and imported products to protect human health, animals and plant life.

The major focus of the SPS is bench-line international standards. For example, international food safety standards will be based on standards established through CODEX Alimentarius.

While it is not mandatory for governments to follow international standards, certain constraints are placed on SPS national standards which deviate from them. Such national standards must be "necessary", be based on scientific principles and on risk assessment, and cannot be maintained without sufficient scientific evidence. Concern has been expressed by environmentalists regarding a lack of a legal definition of the terms "necessary" or "sufficient scientific evidence."

Under the WTO, an exception is provided for domestic subsidies to the private sector to cover the cost of improving the environmental standard of existing facilities. Allowable subsidies may cover up to 20 percent of the capital costs of such retrofitting.

Unlike the GATT, WTO dispute settlement findings are automatically binding. There appears to be no obligation that any environmental expertise need be sought in an environmental dispute. If a Panel finds that an environmental provision is illegal, the national standard must be changed.

WTO COMMITTEE ON TRADE AND ENVIRONMENT

The WTO Committee on Trade and Environment was established under the auspices of the WTO. Its preparatory meetings began in 1994 and its first official meeting was held in February 1995. Thereafter the Committee met fairly regularly until the end of 1996, when it reported back to ministers regarding the results of its deliberations. During the WTO meeting held in Singapore during December 1996, it was decided that the Committee should be continued and should report to the next ministerial meeting scheduled for May 1998.

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4 **Article 2.2 of the Technical Barriers to Trade Agreement.**

The Committee is dealing with nine major items, which fall broadly within the following categories:

- the trade effects of environmental regulation of production (this includes issues of compliance cost differences between countries and competitiveness);
- the trade effects of national environmental product and eco-labelling standards;
- the implications of environmental production process methods[5];
- the use of trade measures in international environmental agreements[6]; and
- domestically prohibited goods, in particular, chemicals and the possible trade implications of the proposed binding convention on Prior Informed Consent, as well as implications of the March 1994 export ban under the Basel Convention.

TRADE AND ENVIRONMENT ISSUES IN INTERNATIONAL ENVIRONMENTAL CONVENTIONS

A number of environmental conventions have implications for international trade. As of mid-1991, GATT listed 17 multilateral environmental agreements with trade provisions. The 1992 UN Framework Convention on Climate Change and the 1992 Convention on Biological Diversity are two further environmental conventions having trade implications.

The manner in which trade measures are incorporated into environmental conventions varies greatly and, likewise, implications for the trade law regime varies. Because this Manual cannot be exhaustive, three UNEP-administered conventions with some of the best examples of direct trade provisions have been chosen to illustrate the types of issues which can arise in this area.[7] Namely: the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Montreal Protocol on Substances that Deplete the Ozone Layer.

Rationale for Trade Provisions within International Environmental Conventions

A number of trade provisions within environmental conventions can be divided into two broad categories:

- import and/or export restrictions on Parties, and
- measures directed at non-Parties.

The two types of provisions raise different issues with regard to free trade law and so the following discussion is ordered according to this distinction.

IMPORT AND EXPORT RESTRICTIONS ON PARTIES

Trade measures which restrict the import and export of particular substances or species are premised on the assumption that trade is a significant contributing factor to the environmental problem. This is the case with endangered species protection, where foreign demand for endangered species motivates the activity which threatens them. With regard to trade in hazardous waste, unregulated trade acts as a disincentive for environmentally sound management. In the cases of endangered species and hazardous waste, restriction or limitation of trade is therefore one of the predominant purposes of the relevant Conventions, e.g., CITES and the Basel Convention.

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5 This issue is also being addressed in OECD Joint Experts Meeting on Trade and Environment.

6 GATT does not allow use of restrictive trade practices, such as quantitative exports, bans, etc. One possible model may be NAFTA.

7 For analysis of the trade implications of the Biodiversity Convention, the Climate Change Convention and the London Dumping Convention, the following UNEP publication should be consulted: The Use of Trade Measures in Select Multilateral Environmental Agreements (No. 10, Environment and Trade Series).

The Montreal Protocol also attempts to restrict imports and exports - not by placing direct limits on how trade between Parties is undertaken - but, rather, by restricting consumption levels and defining consumption so as to take into account imports and exports. The rationale for these restrictions also recognizes the contribution of trade to the environmental problem. Ozone depletion is a global problem and so to address it, it is essential to consider what happens outside and across national boundaries. It is not enough that the domestic production of Parties is reduced if they continue to import controlled substances to supplement their usage. Neither is it enough that Parties' usage is reduced if they continue to export controlled substances.

TRADE PROVISIONS DIRECTED AT NON-PARTIES

The broad rationale for measures which restrict trade with non-Parties is that non-Parties have the ability to defeat the positive effects of the Convention. Such measures are therefore designed to thwart free-riders and encourage wider ratification.

Specifically, by limiting trade with non-Parties, the economic advantages of being a non-Party are eliminated or at least reduced. Non-parties are unable to fully benefit by operating outside the controls of the Convention if a large proportion of countries are Parties and are therefore unable to deal with them. Very simply, there is no one to trade with. Without such measures there is a risk that activity which runs contrary to the Convention will increase within non-Party countries (e.g. the migration of CFC production plants to non-Party States).

Positions Taken by Various Countries on Environment/Trade

The attitude of various countries to trade provisions reflect differing interests in the free trade regime in accordance with factors such as levels of development, abundance of natural resources and domestic political priorities.

Those countries which profit from a broad free trade regime are generally wary of environmental protection, particularly where it involves overt trade restrictions. They benefit from competing in unprotected domestic markets. Environmental protection, therefore, represents a hindrance and/or a potential foil for trade protectionist measures.

Other countries argue that environmentally-based restrictions represent an unjustified imposition of environmental standards. Higher tolerances for pollution and a greater remaining abundance of environmental resources are considered as legitimate comparative advantages, and attempts to deny the benefits of them are therefore objected to.

A further concern of some countries is that they simply cannot always afford to meet the environmental standards which other countries desire.

Judging by the ratification of environmental conventions which contain trade provisions, it must be emphasized, however, that a broad consensus of countries has concluded that, in some cases, the need for effective environmental protection requires that trade measures be applied.

Major Trade Components of Selected International Environmental Conventions

EXPORT AND/OR IMPORT RESTRICTIONS ON PARTIES

Basel Convention

The Basel Convention makes the transboundary movement of hazardous waste and other waste conditional on a number of factors. The following list is not exhaustive but provides a general overview of the types of restrictions imposed.

- Exports are prohibited to importing State which have banned waste imports. The Convention affirms the sovereign right to institute such bans.
- Waste may not be transported unless the exporter has received the prior informed consent of the importing party and any other parties through whose territory the waste will be transported.

- The exporting State must require that the importing State will manage the waste in an environmentally sound manner.[8]
- Importing States must ban the import of waste if it has reason to believe that the wastes will not be managed in an environmentally sound manner.
- Export of wastes to places below 60 degrees South latitude (Antarctica) is banned.
- Exports must meet one of the following requirements:
  the export State does not have the technical and disposal capacity to dispose of the wastes in an environmentally sound and efficient manner, or the State of import needs waste as raw material for recycling or recovery industries, or export complies with criteria to be decided by the Parties (Art 4).

In addition, the Parties to the Basel Convention agreed at the Second COP Meeting to, among other things, ban all hazardous waste shipments from OECD countries to non-OECD countries. They further agreed that all shipments of wastes between OECD and non-OECD countries intended for recycling or resource recovery, shall be prohibited from 31 December 1997.

CITES

CITES provides for the monitoring of international trade in accordance with three Appendices which list species of wild fauna and flora in accordance with the risk of extinction they currently face. Very briefly, Appendix I species are threatened with extinction. Appendix 2 species may become threatened with extinction unless trade is subjected to strict regulation. Appendix 3 species are not at risk, but are covered by domestic protection measures in their country of origin (Art II).

The trade related measures within CITES differ for each Appendix, and Parties undertake to prohibit trade in listed species unless the requirements for the appropriate export and import permits or certificates are satisfied as provided for in the Convention (Art VIII).

Export permits are required for all exports of Appendix I species. An export permit may only be granted where the following conditions have been met:

- a designated scientific authority has advised that export will not be detrimental to the survival of the species, and
- a designated management authority is satisfied that:
  - the specimen was legally obtained;
  - live species will be prepared and shipped so as to minimize the risk of injury, damage to health or cruel treatment; and
  - an import permit has been granted.
- Re-export certificates are required for re-export and can be granted where the specimen was imported in accordance with the present Convention, and the designated management authority is satisfied that the live species will be properly handled in shipping and an import permit has been granted.

Import permits can be granted where:

- a designated scientific authority has advised that:
  - the import will be for purposes which are not detrimental to the species survival;
  - the recipient of a living specimen is suitably equipped to house and care for it, and
- a designated management authority is satisfied that the specimen will not be used for primarily commercial purposes (Art III).

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8 **"Environmentally sound management" of wastes is defined as requiring Parties to take all practicable steps to ensure that the 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 (Article 2(9)).**

Export permits are required for all exports of Appendix II species. Export authorities must certify the first three conditions listed above for Appendix I export permits.

As with Appendix I species, importation of Appendix II species requires either an export permit or re-export certificate. Re-export certificates can be granted where the specimen was imported in accordance with the present Convention and on the condition that the animal will be properly prepared and shipped (Art IV).

An export permit for Appendix III species is required where export is from the country which requested the specie be listed. Furthermore, the designated management authority must be satisfied that the specimen was legally obtained and live species will be properly prepared and shipped (Art V).

Introduction of Appendix I and II species from the sea also requires a certificate.

Montreal Protocol

The Parties' consumption of controlled substances is limited by the phase-out schedules (Art 1). Domestic consumption is calculated under the Protocol according to the following equation:

domestic production + imports - exports = domestic consumption.

Trade flows are therefore implicitly regulated.

TRADE RESTRICTIONS DIRECTED AT NON-PARTIES

Basel Convention

The Convention prohibits hazardous or other wastes to be exported to a non-Party or imported from a non-Party (Art 4(5)). An exception is granted where the trade is subject to a bilateral, regional or multilateral agreement which deals with hazardous wastes or other wastes and stipulates provisions which are not less environmentally sound than those in the Basel Convention, taking into account the interests of developing countries (Art 11).

CITES

Trade with non-Parties is sanctioned where comparable export and import documentation, which conforms substantially with the requirements of CITES, is issued by competent authorities in the non-Party State (Art X).

Montreal Protocol

Explicit provisions regulate trade between Parties and non-Parties under the Montreal Protocol.

- Parties are required to ban imports from non-Parties of controlled substances and certain listed products which contain controlled substances.[9]
- Parties are required to ban exports of controlled substances to non-Parties unless the importing country has submitted data showing that it is in full compliance with the phase-out schedules.
- Parties undertake, to the fullest practicable extent, to discourage the export to non-Parties of technology for producing or for utilizing controlled substances.
- Parties also agree to refrain from providing new subsidies, aid, credits, guarantees or insurance programs for the export to non-Parties of products, equipment, plants, or technology that would facilitate the production of controlled substances (Art 4).

Challenges: Contemporary Issues Related to Trade Provisions within International Environmental Conventions

The current relevant issues – as indicated by discussions within the WTO Environment and Trade Committee – will now be briefly described. Although there have to date been no challenges to the Basel Convention, CITES or

9 **The Convention also required there to be a determination of the feasibility of prohibiting imports from non-Parties of products produced with, but not containing, controlled substances. However, a report by the Protocol's Scientific and Technical Panel found that such a ban was not feasible and also not necessary in light of the accelerated phase-out schedules incorporated within Protocol amendments.**

the Montreal Protocol under the GATT regime, the trade provisions within those conventions can be useful for illustrating the issues.

DISCRIMINATORY NATURE OF TRADE PROVISIONS

Some environmental protection measures risk contravention of the principle of non-discrimination since they offer less favorable treatment to GATT members who offend environmental standards – as a way of deterring that behavior. For example, environmental conventions which apply favorable terms to Parties over non-Parties – including the Basel Convention, CITES and the Montreal Protocol – suggest contravention of the non-discrimination principle because they make a distinction that has implications within the realm of trade.

The Montreal Protocol can be used to illustrate the product-process issue that arises with regard to the non-discrimination principle. Prima facie, an argument could be made that products manufactured using CFCs are not the same as those produced by other processes. Their production method cannot be isolated from the nature of the end product. They are, therefore, not "like products" as specified in the legal test for discrimination and do not contravene the trade rule. Two decisions taken by GATT Dispute Panels involving United States' restrictions on tuna imports have made clear, however, that differences in production or processing method do not affect a product's characteristics as a product. A product manufactured using different production methods is deemed to be the same product and claims of discrimination can therefore be made. These conclusions remain contentious due to the fact that environmental damage is often caused during the production process.

Both CITES and the Montreal Protocol allow trade with non-Parties where certain conditions are met. Under CITES, comparable documentation must be provided. Under the Montreal Protocol, non-Parties must show evidence of meeting the Protocol phase out schedules. It could be argued then, that there is no direct discrimination between Parties and non-Parties. The countering argument is that discrimination is still sanctioned on the basis of conditions extraneous to the trade regime, e.g., CITES non-Parties are still held to CITES standards in order to receive equal trade treatment.

Where individual Parties have applied a complete ban against both Parties and non-Parties, discrimination could not be alleged. Such an import ban could, however, violate the GATT/WTO's prohibition on quantitative restrictions on imports (Art XI).

NECESSITY AND LEAST-TRADE-RESTRICTIVENESS OF TRADE PROVISIONS

As noted above, Article XX(b) of the GATT provides an exception for measures necessary for the protection of human, animal or plant life or health. It is with regard to exception (b) that the issue of **necessity** has arisen and it is in the connection with defining "necessary" that the term "least trade restrictive" has been raised.

Experience under the GATT regime – in particular, Dispute Panel Reports – has led to the understanding that for a measure to be "necessary", there must be no alternative measure which is less inconsistent with the GATT which the Member could reasonably be expected to employ.[10]

As suggested by this interpretation, the issue of trade-restrictiveness is integrally connected with that of necessity. The term least-trade-restrictive does not appear in the main body of the 1947 GATT and yet it has arisen in the context of determining necessity with respect to Articles XX(b) and (d). GATT Panel case law

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10 Panel Report on United States - Section 337 of the Tariff Act of 1930 (1989) (with reference to the term "necessary" within Article XX(d)) BISD 36S/345; Panel Report on Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes (1990) (affirming the applicability of the XX(d) interpretation to Article XX(b)) BISD 37S/200; Panel Report on United States - Import Restrictions on Tuna and Tuna Products from Mexico ["Tuna Dolphin I"] (Recalled Thai finding but also suggested a test of "unavoidable") DS21/R, 3 Sept. 1991; Panel Report on United States - Restrictions on Imports of Tuna (16 June 1994), 33 ILM 839 (1994) ["Tuna Dolphin II"]: "in cases where a measure consistent with other GATT provisions is not reasonably available, a contracting party is bound to use, among the measures reasonably available to it, that which entails the least degree of inconsistency with other GATT provisions." The Tuna Dolphin cases also raised questions regarding the acceptable territorial reach of environmental measures. Tuna Dolphin I held that conservation measures cannot be extended extra-jurisdictionally. Tuna Dolphin II held that certain "global" environmental problems may warrant extra-territorial use, but questions of national sovereignty remain unclear.

suggests that where no measure consistent with other GATT provisions is reasonably available, a contracting party is bound to use, among the measures reasonably available to it, that which entails the least degree of inconsistency with other GATT provisions.[11]

As indicated above, the Uruguay Round affirmed the principle of least-trade-restrictiveness within the context of standards. The Agreement on Technical Barriers to Trade (TBT) endorses the view that environmental protection could be a valid justification in deviating from international standards. However, the TBT states that relevant technical regulations shall not be more trade-restrictive than necessary to fulfil legitimate objectives taking account of the risks non-fulfilment would create. The Agreement on the Application of Sanitary and Phytosanitary Measures provides that when establishing or maintaining sanitary or phytosanitary measures to achieve the appropriate level of protection, Members shall ensure that such measures are not more trade-restrictive than required, taking into account technical and economic feasibility. When determining appropriate levels of protection, Members should take into account the objective of minimizing negative trade effects.

As applied to the three conventions in question, the necessity and least-trade-restrictiveness tests would require it to be shown that there were no alternative measures reasonably available to address the problems of:

- transboundary movements of hazardous waste,
- international trade in endangered species, and
- CFC production and consumption and ozone depletion

which were consistent with GATT and, also, that the trade measures taken were the least trade restrictive options available.

Arguments against such conclusions could delve into the broadest range of policy options for environmental protection. For example, with regard to CITES it could be argued that species management is a far more efficient, effective, and non-trade restrictive option. That the international community has considered such measures necessary in drafting the trade provisions of these conventions would be of no consequence to a GATT Panel, which can only consider a matter in light of the trade agreement provisions.

With regard to non-Party restrictions, the possibility of broader exceptions could be argued. In connection with the Basel Convention, for example, it would be less restrictive on trade to ban trade with non-Parties only where the non-Party could not prove that the wastes would be disposed of in an environmentally sound way.

EFFECTIVENESS OF TRADE PROVISIONS

With regard to import and export restrictions which – as in the Basel Convention and CITES – form a major component of the treaty, the question of effectiveness involves a determination as to whether the environmental problem is being successfully addressed by limiting and/or monitoring trade. The Conventions are premised on the basis that trade is a major contributing factor to the environmental problem. If the trade provisions are operating effectively, so then is the Convention's purpose being met.

The effectiveness of non-Party provisions concerns whether they are positively impacting on the implementation and compliance with the Convention. If non-Party provisions are working:

- they would have influenced **wider ratification** of the Conventions, and
- they would, in practice, be operating to **limit trade with non-Parties**.

The best evidence regarding wider ratification as a result of non-Party provisions is available in connection with the Montreal Protocol. Although empirical assessments are difficult, those who have attempted it conclude that trade provisions did play an important part in encouraging countries to join the protocol. However,

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11 **Panel Report on United States - Section 337 of the Tariff Act of 1930 (1989). The Panel Report on United States - Measures Affecting Alcoholic and Malt Beverages (1992) (DS23/R, 16 March 1992) appears to go further to suggest that for measures to be necessary, they must be the least trade restrictive.**

there were other factors involved as well, such as the financial assistance available and a longer phase-out period for some countries, and it is unclear what degree of impact these other factors had.[12]

Whether trade with non-Parties is limited involves, on one level, the direct question of Convention compliance. Are Parties honoring their commitment to limit or ban trade with non-Parties?

On another level, the effect on trade with non-Parties can be determined by making empirical comparisons between trading patterns with non-Parties both before and after the relevant Convention entered into force. Was there significant trade in the past between countries which are now designated Parties and non-Parties and between which such trade is now limited or banned?

SCIENTIFIC BASIS OF TRADE PROVISIONS

The concern for a scientific basis in the context of trade provisions is linked to a wider concern about environmental regulation based on scientific determinations which suffer from uncertainty. Despite endorsement by the international community of the precautionary principle, both the framework conventions on Ozone Protection and on Climate Change indicate a continuing concern to sanction environmental regulation in accordance with sound science.

In the free trade regime, the requirement that trade provisions in environmental conventions be "necessary" is illustrative of a general desire that they too are founded on a solid basis. In addition, as noted above, the Uruguay Round's Sanitary and Phytosanitary Agreement requires that standards be based on scientific principles and not be maintained without sufficient scientific evidence.

CONCLUSION

The area of trade and the environment and their impact on each other is a relatively new field of study in international law. This introduction provides a brief overview of some of the issues that nations are currently grappling with. Curtailing trade may be a logical method of protecting the environment, but this in turn restricts development. Although trade and the environment are spoken of as conflicting interests, perhaps there is hope that some day they will be made harmonious.

EXERCISES ON TRADE AND THE ENVIRONMENT

1. Why is the question of trade and environment so controversial? How can we harmonize trade and environment to make them mutually supportive? How are problems of developing countries taken care of in this inter-relationship? How can the benefits of trade be channelled and coordinated so as to benefit the global environment?
2. What does UNCTAD see as the relationship between trade and sustainable development? What is the rationale behind using trade measures to achieve environmental ends?
3. What are "green conditionalities"?
4. What are the main conclusions of Chapter 2 of Agenda 21 in relation to trade and environment?
5. What are the main elements of an eco-labelling scheme? What are the problems associated with successfully implementing such a scheme?
6. In 1991, a GATT dispute panel upheld Mexico's complaint against the United States restrictions on imports of "dolphin-unfriendly" tuna. What were the reasons for the panel's decision?
7. What are the environmental impacts of free trade? How can environmental considerations be balanced with free trade?

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12 **See for example, A. Markanday, "Chapter 6: International Trade Issues" from UNEP Economic Options Committee Report, Draft text (September 1994), pp. 10-11.**

8. What are the trade and economic effects of environmental policies? What environmental considerations should a country incorporate in its trade policy?

9. How can the competitiveness of developing nations be protected against unreasonable ecological demands of developed nations?

10. What are the possible mechanisms that can be utilized to encourage environmentally safe practices in the commercial arena? What are the possible fiscal advantages that can be offered to encourage environmentally safe operations?

11. Environmental measures can constitute a disguised non-tariff barrier to trade. What could be appropriate criteria to clearly distinguish one from the other? What criteria were used by the GATT in the Tuna-Dolphin case?

12. What criteria allow one to determine when to use the dispute resolution system of NAFTA common to the main treaty and the dispute resolution system of the Environment Protocol?

13. How has the removal of trade restrictions under WTO helped to free the transfer of products to developing countries? Why should the production process still be of some concern to environmentalists?

14. Comparative advantage is seen as a goal to improve trade relations. How can the application of environmental protections be recognized as helping free trade rather than restricting trade?

15. What is the purpose of GATT? What are its three main areas of concentration? How have these areas affected trade with the developing world. Is the GATT (WTO) structure an effective mechanism dealing with North-South conflicts on trade and environmental issues?

16. The Uruguay Round agreed to replace the former GATT with the newly established WTO. What are the most important implications of this? How are environmental issues factored into this new agreement? How has the new Dispute Resolution Mechanism strengthened environmental protection? What are the likely economic impacts of the Uruguay round?

17. What is the rationale for having trade provisions within international conventions? Which environmental conventions helped to place environmental issues into international trade policies? How have these conventions made governments adhere to environmental legislation? In what ways are the conventions' standards made applicable to non-Party members?

18. Identify the major trade components of the Basel Convention, Biological Diversity Convention, CITES, and the Montreal Protocol. What are some of the current issues related to trade provisions within international environmental conventions?

19. Why is it permissible in the Basel Convention to exempt the exporting or importing of hazardous waste to a non-Party where a bilateral, regional or multilateral agreement has been created? How does this transaction encourage countries to become Party members? Are the non-Party members being held to the same standards as Parties?

20. The non-discrimination principle of GATT poses a problem to environmental conventions that favor Parties over non-Parties. How can the conventions be interpreted to comply with the provisions in GATT? Does GATT Article XX help to solve the problem?

CASE STUDY

21. Country A is a member of GATT which allows the transfer of hazardous waste from Country B to flow through its boundaries to Country C. Although Countries B and C are not Parties to GATT, Country B is a Party to the Basel Convention and has entered into a regional agreement with the other countries to transfer the waste. Country C needs the waste to help in the production of essential products. Is Country A's participation in the agreement permissible under GATT and the Basel Convention? How can the definition of what is necessary be used? Is this the least trade restrictive policy?

CHAPTER 10

GLOBAL ENVIRONMENT FACILITY

WHAT IS THE GEF?

The Global Environment Facility (GEF) promotes international cooperation and fosters actions to protect the global environment. Its creation in 1991 stemmed from the worldwide momentum gathered in the preceding decade for international environmental action and funding. The 1992 United Nations Conference on the Environment and Development (UNCED) channeled that momentum when an international plan was forged for balancing human growth with responsible management of the world's natural resources. This action plan, Agenda 21, identified "sustainable development" as the path towards a more secure, environmentally sound future for the planet. The GEF was recognized as a means to that end, in that it provides funding to developing countries and those with economies in transition for projects and activities targeting global benefits in one or more of four focal areas - biological diversity, climate change, international waters and the ozone layer. Activities concerning land degradation, primarily those addressing desertification and deforestation, as they relate to the focal areas, are also eligible for GEF funding.

How did the GEF come about?

Awareness about worldwide environmental stress has steadily increased. Nevertheless, the Brundtland Commission's report concluded in 1987 that there was a "serious lack of funding for conservation projects and strategies that improve the resource base for development".

Shortly thereafter the United Nations Development Programme (UNDP) commissioned the World Resources Institute to study the problem. One suggestion that emerged from the study was the idea of an international environment facility. In September 1989, the French Government, in cooperation with Germany, suggested the establishment of the Global Environment Facility. The GEF was established as a pilot phase for three years in 1991. It was restructured in March 1994. The Instrument for the Establishment of the Restructured GEF was adopted by representatives of 73 countries and subsequently endorsed by the governing bodies of the implementing agencies.

Why was the GEF set up?

The GEF was set up to provide new and additional grant and concessional funding to developing countries and countries with economies in transition to meet the agreed incremental costs of measures to achieve global environment benefits in the following four focal areas:

- Global warming – particularly the global climatic effects of greenhouse gas emissions resulting from the use of fossil fuels and the destruction of carbon-absorbing forests.
- Pollution of international waters through, for example, oil spills and the accumulation of wastes in oceans and international river systems.
- Destruction of biological diversity through the degradation of natural habitats and the "mining" of natural resources.
- Depletion of the stratospheric ozone layer from emissions of chlorofluorocarbons (CFCs), halons and other gases.

Activities related to land degradation, primarily desertification and deforestation, as they relate to the four focal areas, also are eligible for GEF funding.

The Ten Operational Principles for Development and Implementation of the GEF's Work Program are:

1. For purposes of the financial mechanisms for the implementation of the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change, the GEF will function under the guidance of, and be accountable to, the Conference of the Parties (COPs). For purposes of financing activities in the focal area of ozone layer depletion, GEF operational policies will be consistent with those of the Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments.
2. The GEF will provide new, and additional, grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits.
3. The GEF will ensure the cost-effectiveness of its activities to maximize global environmental benefits.
4. The GEF will fund projects that are country-driven and based on national priorities designed to support sustainable development, as identified within the context of national programs.
5. The GEF will maintain sufficient flexibility to respond to changing circumstances, including evolving guidance of the Conference of the Parties and experience gained from monitoring and evaluation activities.
6. GEF projects will provide for full disclosure of all nonconfidential information.
7. GEF projects will provide for consultation with, and participation as appropriate of, the beneficiaries and affected groups of people.
8. GEF projects will conform to the eligibility requirements set forth in paragraph 9 of the GEF Instrument.
9. In seeking to maximize global environmental benefits, the GEF will emphasize its catalytic role and leverage additional financing from other sources.
10. The GEF will ensure that its programs and projects are monitored and evaluated on a regular basis.

Three implementing agencies

The Facility's organization is based on the understanding that no new bureaucracy will be created and that only modest organizational modifications will be made to the three implementing agencies: the United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP) and World Bank. Within this framework the agencies play distinct roles.

- UNDP is responsible for technical assistance activities and, through its worldwide network of offices, helps to identify projects through pre-investment studies. It is also charged with running the small grants program for non-governmental organizations (NGOs).
- The World Bank administers the Facility, acts as the repository of the Trust Fund and is responsible for investment projects.
- UNEP's role in the GEF is based on the following elements given its experience, expertise, and particular areas of strength:
    a) With its global perspective and through specialized units, UNEP is involved in the scientific assessment of, the promotion of international action on, and the development of environmental policy options for global warming, biological diversity, international waters and ozone layer depletion, which correspond to the four focal areas of the GEF;
    b) UNEP has established strong linkages with the international scientific community as a means of informing its work on environmental issues;
    c) Through its regional presence, UNEP plays a crucial part in promoting and coordinating sub-regional and regional environmental action;

d) UNEP plays a major role in the development of international legal agreements to advance environmental law as a tool in environmental management;

e) UNEP has capabilities in assessment, reporting, and data and information management at the global and regional levels through its Environment Assessment Program; and

f) UNEP is active in catalyzing capacity building for environmental management in developing countries, by developing tools and concepts, and promoting and undertaking projects to demonstrate their implementation.

UNEP's role in the GEF can be categorized in three distinct, but inter-related, groupings of activities:

g) Mobilizing scientific and technical expertise for the GEF, especially through the establishment of the Scientific and Training Advisory Panel (STAP) and providing its Secretariat;

h) Participating in the development of GEF policies and operational strategies in collaboration with the GEF Secretariat, UNDP and the World Bank; and

i) Undertaking specific types of catalytic project-related activities with significant value added to furthering the strategic objectives of the GEF and cooperating with the other implementing agencies in assisting developing countries and countries with economies in transition.

How Much Money is Available to the GEF?

The pilot phase of the GEF was established with a capital of US$ 1.3 billion for three years. The restructured phase I of the GEF was established in 1994 with a capital of US$ 2.1 billion. As of December 1996, about US$ 1.33 billion had been allocated in the GEF work program, composed of 200 ongoing and planned projects in some 85 eligible countries. This funding has been supplemented by almost US$ 3.3 billion in co-financing from various sources including international agencies and individual donor nations. International support for the GEF has been consistent since its establishment in 1991. At that time, 96 percent of the pledged contributions came from industrial nations, but the GEF also receives funds from developing countries and those with transitional economies, including Argentina, Bangladesh, China, Côte d'Ivoire, the Czech Republic, Egypt, Mexico, Pakistan, the Slovak Republic and Turkey. By the year 2000, it is projected that the GEF's portfolio will expand to commitments of almost US$ 3 billion.

The Governance Structure of the Restructured GEF

The GEF has an Assembly, a Council and a Secretariat.

The Assembly consists of representatives of all participating countries. It is responsible for reviewing the general polices of the Facility. Its chair is elected from among the representatives; its decisions are reached by consensus. It will meet every three years. The first meeting of the GEF Assembly will be held in New-Delhi in April 1998. More than 155 countries currently participate in the GEF.

The Council is the main governing body of the GEF for all issues related to operations. It is responsible for developing, adopting, and evaluating the GEF's operational policies and programs. The Council meets twice a year. Additional meetings are held when necessary. Decisions are reached on the basis of consensus. When consensus is not possible, the Council can turn to a voting system that safeguards the interests of both recipients and donors (see further below).

The Council comprises representatives of 32 constituencies; 18 members are from recipient countries and 14 from non-recipient (i.e. developed) countries. Some constituencies include a mix of recipient countries which are distributed as follows: 6 for Africa, 6 for Asia and the Pacific, 4 for Latin America and the Caribbean, and 2 for Central Eastern Europe and the former Soviet Union. The recipient country constituencies are formed through a process of consultation among GEF recipient countries, taking into account a number of criteria including:

(i) equitable and balanced representation;
(ii) commonality of environmental concerns;
(iii) policies toward sustainable development;
(iv) natural resource endowment and environmental vulnerability; and
(v) contributions to the Facility.

The 14 non-recipient constituencies will be formed through a process of consultation on the basis of contributions to the GEF. The larger donors can form their own constituencies. Each Member of the Council or Alternate will serve for three years, or until a new Member is appointed by the constituency. The Alternate will have full power to act for the absent Member.

The Council chair is shared between an elected Chairperson (the UN model) and the GEF's Chief Executive Officer (the Bretton Woods model), who will also be the Chairperson of the Facility. The Chairperson of the Council is elected for the duration of each meeting; the position alternates between recipient and non-recipient members.

The Secretariat services and reports to the Council and the Assembly. Its responsibilities include: ensuring the effective implementation of the decisions of the Assembly and the Council; coordinating the formulation, and overseeing the implementation of the GEF work program; and ensuring that the operational policies adopted by the Council are implemented. It is headed by the CEO of the Facility, who is nominated by the three implementing agencies and appointed by the Council. The CEO is appointed for three years but may be reappointed by the Council. The Secretariat is functionally independent of the Implementing Agencies and is supported administratively by the World Bank.

Scientific Advisory Panel

The GEF's Scientific and Technical Advisory Panel (STAP) is an independent advisory body that provides scientific and technical guidance to the Facility. UNEP reconstituted this body in consultation with the other implementing agencies on the basis of guidelines and criteria established by the Council. UNEP also provides the STAP's secretariat and liaises between the Facility and the STAP. Its role consists of:

- providing strategic scientific and technical advice on GEF policy, objectives, operations, programmes, monitoring and evaluation;
- advising on the state of scientific and technical knowledge;
- advising on the development of a research agenda and providing guidelines;
- ensuring high quality and independent external technical reviews;
- selectively reviewing projects based on criteria approved by the Council;
- reviewing all targeted research projects;
- scrutinizing work programmes to ensure scientific and technical integrity; and
- reviewing and updating the "Roster of Experts".

Principles of Decision-Making

(a) Procedure

The Assembly and the Council shall by consensus adopt regulations as may be necessary or appropriate to perform their respective functions transparently. In particular they are to determine any aspects of their respective procedures including the admission of observers and, in the case of the Council, provision for executive sessions.

(b) Consensus

Decisions of the Assembly and the Council shall be taken by consensus. In the case of the Council if, in the consideration of any matter of substance, all practicable efforts by the Council and its Chairperson have been made and no consensus appears attainable, any member of the Council may require a formal vote.

(c) Formal vote

(i) Unless stated otherwise, decisions requiring a formal vote by the Council shall be taken by a double-weighted majority, that is, an affirmative vote representing both a 60 percent majority of the total number of participants and a 60 percent majority of the total contributions.

(ii) Each Member of the Council shall cast the votes of the Participant or Participants he/she represents. A Member of the Council appointed by a group of Participants may cast separately the votes of each Participant in the constituency he/she represents.

(iii) For the purpose of voting power, total contributions shall consist of the actual cumulative contributions made to the GEF Trust Fund, contributions made to the GEF and the grant equivalent of cofinancing and parallel financing made under the GEF pilot programme, or agreed with the Trustee. Until the effective date of the GEF Trust Fund, advance contributions shall be deemed to be contributions to the GEF.

OPERATIONS

In addition to providing the agreed incremental cost of achieving global environmental benefits, each GEF project will: be designed to ensure cost effectiveness; be country-driven and based on national priorities to support sustainable development; and maintain sufficient flexibility corresponding to changing circumstances in order to achieve its purpose. In focal areas where GEF is the interim funding mechanism, projects must be directly responsive to implementation of the Convention. An emphasis will be placed on capacity building, on enabling activities and leveraging GEF funding and technology transfer.

How does a country become a member?

Any member state of the United Nations or one of its specialized agencies may become a GEF Participant by depositing with the GEF Secretariat a notification of participation. The notification form is annexed to the instrument establishing the restructured GEF.

Which countries are eligible for GEF funds?

Countries can obtain GEF funds if they are eligible to borrow from the World Bank (IBRD and/or IDA) or receive technical assistance grants from UNDP through a country program.

Can the GEF support private sector ventures?

The GEF can support eligible private sector ventures with the appropriate government's endorsement. All such investment projects pass through the IFC, the World Bank's private sector affiliate. GEF funds must not be used to avert normal commercial risks. The use of GEF funds is justified if they provide for a global environmental benefit that an entrepreneur in a developing country could not reasonably be expected to underwrite in prevailing market conditions. In addition, GEF funds might be used for a regular IFC project that is economic but could have important demonstration effects for the global environment with the addition of a GEF grant. An example would be a tourism project with a GEF component providing for the protection of a nearby area of biodiversity.

Is there a relationship between GEF investment projects and regular bank loans?

Yes, there can be. From the inception of the GEF a major objective was to "leverage" global benefits from Bank projects that might not otherwise take these global concerns into account. An example is a Bank loan for a coal-field power station. A potential borrower needs additional energy and is prepared to borrow the funds to build the fossil fuel power plant on regular Bank terms, incorporating technology that conserves the local environment. For an additional sum (say 20% of the total) the technology can be switched to allow use of a

nearby source of natural gas. The country is not prepared to pay the additional cost for what is perceived as a global benefit lower emissions of carbon dioxide. In this case the GEF can step in and cover the difference between what the country is willing to pay and the cost of the environmentally benign technology.

How are projects chosen and implemented?

Careful preparation of project ideas is an essential prerequisite for quality projects which are consistent with the country's national programs and priorities as well as the GEF operational strategies. When a recipient country needs financial and technical help with project preparation, it may seek such assistance from a variety of sources. GEF project preparation funding is available through the Project Preparation and Development Facility (PDF). Where feasible the GEF would normally complement other sources of finance for project preparation: World Bank loans, UNDP technical assistance grants, bilateral finance and private funds.

How are projects identified for GEF funding?

Proposals for GEF funding can be generated in several different ways. Governments, the Bank, UNDP, and UNEP, as well as NGOs and the private sector can all put forward suggestions on innovative projects that meet GEF criteria. All projects must be endorsed by the government of the country in which the project is situated. In most cases governments will submit project ideas directly to the implementing agencies, either through the UNDP Resident Representative, a World Bank field office, the appropriate World Bank Regional Environment Division/Country Department or UNEP.

What projects qualify for GEF funding?

Projects that are deemed to benefit the global environment as distinct from the local environment qualify for funding under the GEF. To this end, projects must fall into one of the four priority areas described above. But not all projects that benefit the global environment automatically qualify for support from the GEF. Projects financed by the GEF must also be innovative and demonstrate the effectiveness of a particular technology or approach.

How does the GEF distinguish among investment projects that have both domestic and global environmental benefits?

Projects that are economically viable on the basis of local costs and benefits would not normally be eligible for GEF funds. Whatever the benefits for the global environment, GEF funding is possible if a project offers substantial global benefits but is unlikely to be viable without some concessional funding. The same is true for a project that is economically viable but requires supplementary financing to bring about global benefits.

Applying for project funding

Governments may apply for GEF Funds directly to any of the implementing agencies. NGOs may do the same once the Government has endorsed the project in principle. Projects submitted for funding under the Small Grants Programme run by UNDP in the 33 countries where the program is operational, should apply directly to the national committee of the GEF Small Grants Programme. Private firms can apply to the International Finance Corporation (IFC) for eligible investment projects. GEF operations are intended to complement, not substitute, regular aid programs. GEF resources aim to facilitate projects with global environmental benefits for which official development funds are not normally available.

Approving GEF projects

All projects are screened to ensure that they meet the basic GEF criteria. Investment projects undergo a technical review by a panel that includes at least one person chosen from a roster of independent experts compiled by the STAP. If the project is cleared, it is submitted to the Implementation Committee, made up of three implementing agencies. The committee's role is to choose a group of projects that represents a balance

among the regions and the four thematic areas covered by the GEF. The projects selected by the committee are then forwarded to the participating governments for review at their biannual meetings. Each group of projects is known as a "tranche". After review by governments, projects return to their sponsoring agency for further preparation, appraisal and final approval according to each agency's regular procedures.

WHO IMPLEMENTS GEF PROJECTS?

The recipient of the GEF funds (mainly governments) has primary responsibility for implementing projects, and must seek and engage executing agencies according to established procedures for UNDP and World Bank projects.

Do GEF projects undergo environmental assessment?

Yes. Each agency follows its own procedures on environmental assessment for the projects it is managing. Thus, all investment projects are screened for their environmental impact according to the World Bank's operational directive on the subject. Under this directive, all projects likely to have a significant impact must undergo full-scale environmental assessment. The UNDP follows its Environmental Management Guidelines used for all its projects. Furthermore, GEF projects are checked for their possible impact on other areas covered by the GEF. Thus, a greenhouse gas project might be analyzed in terms of its impact on biodiversity and so on. In addition, the GEF endeavours to take account of the social impact of projects, notably in the area of biodiversity where local people may be displaced or their food supply affected. Investment projects are also subject to the World Bank's directives on tribal peoples, resettlement, wildlands, and so on.

THE NEW GEF TRUST FUND

The World Bank serves as Trustee of the new GEF Trust Fund. It has accepted contributions to the new fund for the period between July 1 1994 and June 30 1997. The Trust Fund of the Pilot Phase (GET) will be terminated on the effective date of the establishment of the new GEF Trust Fund, and all funds, receipts, assets and liabilities held in the GET will be transferred to the GEF Trust Fund. In addition to contributing to the Core Fund, some donors have set aside funds to co-finance GEF project activities and programs. This co-financing can be in the form of grants or highly concessional loans.

What costs does the GEF cover?

The GEF covers the difference (or "increment") between the costs of a project undertaken with global environmental objectives in mind, and the costs of an alternative project that the country would have implemented in the absence of global environmental concerns. This difference is referred to as the "incremental costs". To further develop the concept of incremental cost and its practical implementation, a research program – the Program for Measuring Incremental Costs for the Environment (PRINCE) – was launched in early 1993. This explores the measurement of incremental costs in the focal areas of the GEF. Analytical rigor mixed with good sense will be needed to estimate the incremental costs in each particular case.

Global criteria applicable to all four areas of global environment facility (GEF) interventions

For a project to become eligible for consideration for GEF selection it should satisfy the following criteria:

The project should:

- contribute to human welfare and sustainable development;
- be replicable (in an international context);
- contain an incentive design to secure sustainability;
- be unlikely to be included in the country's development portfolio without GEF funding, even though it has significant global and national benefits. In general, GEF should fund projects when domestic costs are greater than domestic benefits, but global benefits are greater than domestic costs;

- develop human capability (through education, training and research) and institutional capability;
- have a firm scientific and technical basis;
- have a good chance of succeeding through a strong interaction of technological and scientific knowledge and social and economic issues;
- be placed in the context of comprehensive existing or evolving national and regional environmental programs, which should provide favorable political, economic, legal and administrative conditions for the effective implementation of the GEF investment;
- include plans for evaluation and dissemination of results and knowledge;
- include plans, as appropriate, for post-GEF project continuation of the activity within the national context;
- be participatory in nature, involving close collaboration with local communities wherever possible; and
- satisfy an environmental impact assessment that examines all potential adverse consequences.

In addition to providing agreed incremental costs of achieving global environmental benefits, GEF projects will be designed to ensure cost effectiveness, be country-driven and based on national priorities to support sustainable development. In focal areas where GEF is the interim funding mechanism, projects must be directly responsive to implementation of the Convention. An emphasis will be placed on capacity building, on enabling activities and leveraging GEF funding and technology transfer.

THE GEF AFTER THE PILOT PHASE

The lessons of the pilot phase - a crucial ongoing learning experience for the three implementing agencies - also provide a cornerstone for the future GEF. For example almost US$ 800 million has been programmed; operational and programming procedures have been tested, modified and improved; high quality project documentation has been introduced; guidelines within agencies have been developed; and operational modalities between the agencies have been refined. The "new" GEF will build upon the best practices of the pilot phase and ensure that the lessons learned during the past three years (many of which were also documented in the Independent Evaluation) are implemented.

Compelling arguments could be made for implementing a first year (January - December 1995) transitional operational strategy which acted as a bridge between the pilot phase and the structured GEF:

a) The conventions (Biodiversity and Climate Change) indicated the need to begin implementing a number of activities in support of convention objectives. These activities -often described as "enabling activities" - were critically important in assisting developing countries to undertake preparatory work under the convention(s), create a policy framework consistent with wise environmental management, and to meet reporting requirements. Following ratification of a convention, many developing countries were likely to seek immediate assistance for "enabling activities". Such assistance clearly would be part of any future GEF operational strategy;

b) Associated with "enabling activities" was the need for capacity building, research and training in some key areas. Financing technical assistance in a number of fields (e.g., energy planning and biodiversity inventory) helped lay the foundation for future operations. Basic training programs and inventory and stock-taking exercises ran little risk of being counter to long term strategic concerns for the GEF. Furthermore, while some of these activities were funded during the pilot phase, with potentially more than 100 eligible recipient countries, the demand for extending such assistance was likely to grow;

c) Project preparatory work in the past led to the development of a small pipeline of high priority projects. Pilot Phase Participants were informed of preparatory work on a number of potential projects under development. It seemed reasonable to advance a limited number of these projects which:

- were urgently required (e.g., threatened biodiversity);
- were considered very high priority by the country concerned (e.g., where a country has explicitly included the activities within the context of a national program) and were well advanced in terms of preparation;
- were linked to existing pilot phase activities and for which lack of funding could significantly impair their continuity (e.g., the Small Grants Programme or country studies and/or strategies); and/or
- fit within the criteria for demonstration and innovation (e.g., private sector projects, some specific renewable technologies, or energy efficiency demonstration projects);

a) Where high priority potential GEF activities were closely related to associated projects which are under advanced stages of preparation and had defined approval schedules within 1995, it would have been undesirable to delay GEF funding and thus risk losing the opportunity to leverage program resources to advance GEF objectives;

b) Leveraging GEF funding, especially through private sector investment flows, remained essential to maximize the effectiveness of GEF-funded activities. Given the potential importance of the private sector, both with respect to finance as well as technology transfers, GEF involvement with the private sector would play an important role in the future. To explore further this potential a limited number of private sector investment projects were supported during 1995.

c) One focal area of the GEF - the reduction of ozone depleting substances (ODS) - already had a clearly defined policy framework in place, so in this case there was no reason to delay the development of high quality project proposals. GEF funding for ODS phase out as complementary to the activities of the Multilateral Fund of the Montreal Protocol;

d) Careful project preparation is absolutely essential for the GEF. The Secretariat recommended the establishment in 1995 of a Project Development and Preparation Facility (PDF) within the GEF (see Proposed GEF Project Cycle, GEF/C.2/3). The PDF would fund the preparatory stages of promising GEF project cycle requirements, including attention to project design, consultation and participation. The PDF, when approved, required initial funding in 1995; and

e) Experience elsewhere in operational programming suggested that transitional planning was critical to institutional performance. A hiatus of one year in programming could have a deleterious impact upon staffing patterns within the Implementing Agencies and recipient country institutions, could reduce the number of trained staff currently working on GEF concepts and projects, and would disrupt potentially important projects currently under review. A hiatus would result in high "start-up" costs in 1996.

Thus 1995 was a pivotal year in establishing the operational modalities and program frameworks; in ensuring implementation of pilot phase projects; and in providing activities that set the stage for future expansion. The key objectives for GEF operations in 1995 could be summarized as:

(a) establishing the key operational modalities and operational strategy for the GEF;
(b) establishing a Project Development and Preparation Facility (PDF) to ensure the development of a high quality portfolio of GEF projects that reflects this operational strategy; and
(c) providing funding to high priority and urgently needed activities.

Cooperation With Other Organizations

The implementing agencies may make arrangements for GEF project and execution by multilateral development banks, specialized agencies and programs of the United Nations, other international organizations, bilateral development agencies, national institutions, NGOs, private sector entities, and academic institutions, taking into account their comparative advantages in efficient and cost-effective project execution.

Conventions: The Council is ensuring the effective operation of the Facility as a source of funding for both the Climate Change and Biological Diversity Conventions. The use of GEF resources to fund convention activities

is in conformity with the policies, program priorities, and eligibility criteria decided by the Conference of the Parties (COPs) of each convention.

The GEF seeks to complement the Montreal Protocol for the protection of the ozone layer. The Protocol has its own Multilateral Fund to cover developing country costs in phasing out the production and consumption of ozone-depleting substances (ODS). However, there are a number of GEF-eligible countries that are Parties to the Protocol, where the production or consumption of ODS is too high to qualify for support under the Multilateral Fund. These are mainly countries in Central and Eastern Europe, and the former Soviet Union, whose current consumption of ODS is greater than the combined total of countries eligible under Multilateral Fund. These countries may receive funding for ozone-related projects from GEF. Countries receiving funding for ozone projects through the GEF have to otherwise meet the same criteria as those receiving funding through the Multilateral Fund.

NGOs and Community Groups: The GEF is committed to working in a spirit of partnership with NGOs and community groups around the world. There is a continuing effort to involve them in GEF project work as implementing agencies. NGOs have also been involved in the broader policy and program issues, such as those linked to the restructuring of the Facility. NGOs have recently been given observer status at the Council meetings. NGOs that wish to be accredited to the GEF should contact the GEF Secretariat in Washington, D.C.

Small Grant Programme: The Small Grants Programme is available for projects in the four focal areas proposed by grassroots organizations and NGOs in developing countries. The Programme was operational in 33 countries by January 1995. There is a ceiling of US$ 50,000 for national projects and US$ 250,000 for regional projects. The extension of the program to additional countries is expected to be a priority for the restructured GEF.

In considering applications for awards, committees give priority to projects that:

1. provide for community participation in their design, implementation and evaluation;
2. involve local organizations;
3. focus on women and indigenous peoples and practices;
4. draw on local scientific and technical resources; and/or
5. include provision for capacity-building and evaluation, including both participatory self evaluation and external evaluation. Each selection committee also draws up a country strategy and may establish special criteria, within the framework of the GEF criteria, for in-country awards.

CONCLUSION

The GEF goal is to achieve global environmental benefits in four focal areas (climate change, biological diversity, international waters, and ozone depletion, as well as land degradation associated with those focal areas) through international cooperation, partnership and collaboration across many diverse institutions. Related and instrumental to the achievement of that goal, which involves addressing a number of scientific, technical and managerial challenges, is the ability to: learn from GEF experiences over time; build capacity across stakeholders and participants in the program; and influence attitudes *vis-à-vis* the global environment within recipient countries and involved organizations. Indeed, learning, capacity-building and enhanced global environmental awareness can be viewed as prerequisites for achieving and sustaining the global environmental benefits sought.

The GEF's Monitoring and Evaluation program task is to produce strong evaluative information obtained in monitoring, review and supervising projects, that tells whether, and in what important respects, the initiative is working well or poorly. Such information is needed not only to improve the effectiveness of the initiative's performance as it proceeds, and to account for its success and failure over time, but also and especially to create widening ripples of impact by increasing global environmental awareness and knowledge world-wide.

Exercises on the Global Environment Facility

1. What is the rationale for the GEF?
2. How is the GEF managed?
3. Which countries qualify for assistance?
4. What conditionalities, if any, exist for countries wishing to benefit from the facility?
5. What are the criteria for participation?
6. What are the procedures to access the Fund?
7. The criteria for funding for four areas in the GEF makes it hard to qualify for regional funding by the developing countries. How will UNEP assist developing countries to get an adequate share in the GEF areas of funding?
8. How are GEF projects related to overall policies in implementing countries?
9. How can a developing country best benefit from GEF?
10. Why was the Facility restricted?
11. Who contributed to the replenishment?
12. Who will manage the new GEF Trust Fund and when did the Trust Fund or the Pilot Phase (GEF) come to a close?
13. How does co-financing complement the Core Fund?
15. Are GEF Funds additional to traditional development assistance?
16. Can the GEF-financed projects be put forward by other organizations?
17. What role do the other intergovernmental agencies play?
18. Which countries and what projects are eligible/qualify for funding?
19. How does the GEF distinguish among investment projects that have both domestic and global environmental benefits?
20. How can criteria on cost-effectiveness be applied to the global environment?
21. How are the lessons evaluated and the lessons learned?
22. Who implements GEF projects?
23. Can the GEF support private sector ventures?
24. Is there a cap on individual GEF grants?

PART III

NATIONAL LEGAL REGIMES

CHAPTER 11

ENVIRONMENTAL LAW AT THE NATIONAL LEVEL

THE NATIONAL IMPLEMENTATION OF INTERNATIONAL LAW

Domestic implementation of international legal obligations can be achieved in a number of ways. In conformity with international legal obligations or norms, policy instruments can be introduced by government to require administrators to put into place procedures and programmes to achieve environmental protection.

The most common way for a State to demonstrate that it is conforming with international legal obligations is by the enactment of legislation. Often, in areas such as EIA and pollution control, in both developing and developed countries, legislation is introduced some years after the administrative guidelines have been written and followed. Sometimes, an international convention will require State parties to enact legislation specifically to implement the convention. It may also impose compulsory reporting requirements on State parties. In other conventions, legislation is merely suggested as desirable. For example, the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage states that, to ensure that effective and active measures are taken to protect its heritage, a State:

> *shall endeavour, in so far as possible and appropriate for each country:*
>
> *to take the appropriate legal, scientific technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage.* [1]

On the other hand, in many developed countries, legislation was enacted several decades ago to address specific environmental problems, without any particular influence of international or policy documents. Now, however, most countries, developed and developing, are responding to the need to meet the international environmental obligations of the global and regional conventions of which they have become members.

The call for national action on sustainable development

In the past two decades, a number of documents have recognised that international imperatives for sustainability must be addressed at both the international and domestic levels. These documents include: the World Conservation Strategy, the World Charter for Nature, the Brundtland report, Caring for the Earth, the Rio Declaration and Agenda 21.

The World Conservation Strategy

The World Conservation Strategy (WCS) was introduced by the World Conservation Union (IUCN), UNEP and WWF in 1980. Although the WCS cannot be regarded as a binding international instrument, it nevertheless initiated a whole new generation of environmental action plans, policies and programmes in many countries. Commonly called National Conservation Strategies or National Environmental Action Plans/Strategies, these instruments and their related appendices and reports usually incorporate a good deal of information about a country's environmental problems. In recent years, State of the Environment Reports have become more common, with comprehensive research methodologies being developed to assist in the systematic collection and analysis of data, and to form the basis for further strategies.

Caring for the Earth: The minimum content of sustainability law

In the next few years there will be an increasing concentration by many countries on the enactment of adequate environmental laws to fulfil the obligations of Agenda 21 and the various other instruments agreed

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1 Article 5

at the UNCED Conference. Caring for the Earth, the successor to the World Conservation Strategy, spelled out the minimum content of environmental law, which, for all intents and purposes, encompasses what might be regarded as the minimum content of "sustainability law"[2]:

Governments should ensure that their nations are provided with comprehensive systems of environmental law, covering as a minimum:

- land use planning and development control;
- sustainable use of renewable resources, and non-wasteful use of non-renewable resources;
- prevention of pollution, through imposition of emission, environmental quality, process and product standards designed to safeguard human health and ecosystems;
- efficient use of energy, through the establishment of energy efficient standards for processes, buildings, vehicles and other energy-consuming products;
- control of hazardous substances, including measures to prevent accidents during transportation;
- waste disposal, including standards for minimisation of waste and measures to promote recycling; and
- conservation of species and ecosystems, through land-use management, specific measures to safeguard vulnerable species and the establishment of a comprehensive network of protected areas.

Caring for the Earth went on to state that the national legal system should provide for the:

- application of the precautionary principle and the use of best available technology, when standards for pollution are set;
- use of economic incentives and disincentives, based on appropriate taxes, charges and other instruments;
- requirement that all proposed new developments and new policies should be subject to environmental impact assessment;
- requirement that industries and government departments and agencies be subject to periodic environmental auditing;
- effective monitoring, permitting detection of infringements and adjustment of regulations where necessary;
- granting public access to EIA (environmental impact assessment), environmental audit data and monitoring results, and to information about the production, use and disposal of hazardous substances.

In order to enforce these laws, Caring for the Earth states that penalties must be severe enough to deter non-compliance, and that liability systems should provide for economic, ecological and "intangible" losses. There was also a requirement that damaged ecosystems should be restored where possible. Further, the imposition of strict liability for accidents involving hazardous substances, and a requirement that insurance or other financial provisions be made, was also included.

Importantly, the minimum content of this law also includes the need to provide for citizen access to the courts, in order to assist in the enforcement of these laws and to seek remedies for environmental damage. Finally, Caring for the Earth also states that government agencies responsible for the implementation and enforcement of environmental law should be made accountable for their actions.[3]

To this list might be added the requirement for directors and officials of corporations to be held legally accountable for all activities of their organisations, with very limited, if any, exceptions.

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2 **Caring for the Earth, IUCN, UNEP and WWF, at 68.**

3 **Note 2, at 69.**

The broad changes required clearly need to be introduced in legislation and administrative policy within a coherent philosophical and practical framework. An Australian example of such an attempt is the New South Wales *Protection of the Environment Administration Act 1991*. That legislation specifically incorporates ecologically sustainable development into its provisions, and sets out the basic principles by which it is to be achieved. The Act recognises that for the purposes of maintaining ecologically sustainable development, the effective integration of economic and environmental considerations in decision making processes is required. The Act states that this can be achieved through the following principles and programmes:

- the precautionary principle
- inter-generational equity
- the conservation of biological diversity and ecological integrity
- the improved valuation and pricing of environmental resources.[4]

Constitutional Aspects of Environmental Management

Many older constitutions around the world do not incorporate provisions covering environmental matters. Such powers are exercised as part of the plenary power inherent in national governments. In some federally organised countries, a division of powers is recognised between state or provincial government, and the central or federal government. The division of powers can be dependent on political agreements between the different spheres of government.

In countries with more recently drafted constitutions, provisions exist which attempt to guarantee some kind of environmental quality or a right to a clean and healthy environment. However, in many of these countries, such guarantees or rights seem often to be honoured in the breach, because the urge to meet basic human needs of food and shelter takes precedence over the human need for a clean and healthy environment, combined with the tendency to favour development interests over the need to protect the environment. There is however a growing realization that sustainable development means that basic needs include a clean and healthy environment, without which, in the longer term, other human needs cannot be met, and that economic development cannot continue unless the natural resources on which that development depends are safeguarded.

Caring for the Earth prescribes a commitment to the principles of a sustainable society in the constitutional or other fundamental statements of national policy. It states:

The commitment should lay down the obligation of the state to safeguard the human rights of its citizens, protect the interests of future generations, conserve the country's life-support systems and biological diversity, ensure that all uses of renewable resources are sustainable, and provide effective participation of communities and interest groups in the decisions that most affect them. It should grant individuals and citizens' groups enforceable rights corresponding to these obligations.[5]

While the exhortation to insert such provisions into national constitutions and policies is highly desirable, it can be noted that many countries which have included them have not given them substance, either by the enactment of implementing legislation or by policy initiatives. Few examples exist where constitutional guarantees have been litigated in order to achieve substantive environmental protection objectives. This is an area where innovative lawyers can sometimes use the legal system (i.e. where the political, human rights and legal situation allows it) to ensure that fundamental matters are properly addressed. One instructive case was heard in the Philippines in 1992.

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4 *Protection of the Environment Administration Act*, s 6; these elements are derived from the Australian Intergovernmental Agreement on the Environment.

5 Note 2 at 67.

Philippines logging case on constitutional rights

The Philippines Supreme Court, in an historic judgment captioned *Oposa et al. v. Factoran (Secretary of the Department of Environment and Natural Resources)*,[6] declared that logging licences issued by the relevant government department were invalid. The case involved 43 child plaintiffs represented by their parents who brought an action to safeguard their interests and those of future generations of children. The plaintiffs relied in part on the provision in the Philippines Constitution which guarantees to the people "a balanced and healthful ecology based on the concepts of "intergenerational responsibility" and "intergenerational justice".

Specifically, the case touched on the issue of whether the said petitioners had a cause of action to "prevent the misappropriation or impairment" of Philippine rainforests and "arrest the unabated hemorrhage of the country's vital life-support systems and continued rape of Mother Earth."

The complaint was instituted as a taxpayers class suit alleging that the plaintiffs "are all citizens of the Republic of the Philippines, taxpayers, and entitled to the full benefit, use and enjoyment of the natural resource treasure that is the country's virgin tropical rainforests." The complaint was filed for themselves and others who are equally concerned about the preservation of those resources but are "so numerous that it is impracticable to bring them all before the court." The plaintiff minors further stated that they "represent their generation as well as generations yet unborn." The plaintiffs thus asked the court for a judgment that the defendant:

- cancel all existing timber licence agreements in the country; and
- cease and desist from receiving, accepting, processing, renewing or approving new timber licence agreements.

The court held that the allegations and cause of action put forward by the plaintiffs, on the basis of the rights of present and future generations, were enough to show that prima facie there was a claimed violation of the plaintiff's rights. The case was remitted to the lower court so that the timber companies could be impleaded and the case heard on its merits. Conceivably, the lower court could have ordered that the timber licences granted by the Department of Environment were invalid, and that it could not renew or approve new timber licences in the Philippines, on the basis of the Supreme Court's finding. However, the Timber Licence Agreements were subsequently phased out and replaced with Timber Processing Sharing Agreements. Meanwhile, logging continues. The victory was thus merely a technical one in relation to standing. Nevertheless, the case has already been used as a basis for standing in further actions by non-government organisations in the Philippines.

In terms of the international environmental debate and the role of law within it, the significance of this case cannot be underestimated. It underlines the gravity with which the concept of sustainable development and the principles on which it relies might be regarded in the future in courts and by governments around the world. This case is potentially applicable in all countries. At the least, the case teaches us that the concept of intergenerational equity can now be seen as a legal concept with practical and potentially far-reaching implications. It may also give the lead for further cases on the question of intergenerational equity, as this principle gains further recognition through legislative enactments at domestic level. Already some States are incorporating the principle into environmental law, partly as a result of the implementation by States of the 1992 Rio Declaration on Environment and Development, the 1992 United Nations Framework Convention on Climate Change and the 1992 Convention on Biological Diversity.

Environmental Protection Agency Models

Most countries now have an agency, department or unit responsible for the administration of environmental protection laws and policies. The structure, scope of functions and independence of such bodies vary considerably. Some are part of a natural resource ministry, some are constituted under separate environment

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6 Supreme Court, Republic of the Philippines G.R. No 101083 July 1993

ministries and some operate as agencies with a degree of independence from the government of the day. Whatever structure is adopted, other line ministries and departments tend to be given particular environmental responsibilities for their own sector. For example, a ministry of industry can be given responsibility for industrial pollution, with little or no interaction with the environment ministry or agency. On the other hand, devolved environmental responsibilities in many countries are nevertheless supervised by the environment ministry or department, through processes such as environmental impact assessment.

The Role of Customary Practices in Environmental Management

In many less developed countries, customary practices still play a major role at local level in the allocation, conservation and exploitation of natural resources and in the control of pollution. This is sometimes done by the use of taboos on certain activities, for religious or spiritual purposes, or merely for the conservation of the resource. An important question which confronts some countries is how far customary practices can or should be taken into account when devising modern environmental management regimes or when drafting environmental legislation.

Both the Rio Declaration and Agenda 21 deal with this issue. The Rio Declaration states in Principle 22:

> ***Indigenous people and their communities and other local communities have a vital role to play in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.***

Chapter 26 of Agenda 21 is devoted to "recognizing and strengthening the role of indigenous people and their communities. It states that some indigenous communities may need greater control over their lands, self-management of their resources, participation in development decisions affecting them, including, where appropriate, participation in the establishment or management of protected areas.[7]

The specific measures suggested include ratification and application of relevant international conventions, and the adoption or strengthening of appropriate policies or legal instruments to protect indigenous intellectual and cultural property and the right to preserve customary and administrative systems and practices.[8]

Environmental Legislative Models

There is a wide variation in the models of environmental legislation from one country to another. Some industrialised countries have adopted comprehensive legislative schemes, but have enacted the statutes individually, without any coherent philosophical basis or any consciously similar approach. This lack of coherence can be the result of legislation being enacted over a long period of time, sometimes by governments of quite different outlooks. Sometimes it may be because there is a rivalry between government departments and line ministries, or simply a lack of communication between them.

In recent years there has been a growing tendency to enact more coherent and integrated legislation, which recognizes the interconnectedness of many environmental questions. Some countries, such as New Zealand, have enacted or are drafting comprehensive statutes covering pollution, environmental planning, environmental impact assessment and development control, as well as management of cultural and natural heritage. Other countries are moving to consolidate legislation relating to particular aspects of environmental protection, such as placing all pollution control regulation under one legislative umbrella. The elements of framework legislation are dealt with in Chapter 12.

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7 Agenda 21, chapter 26.4.

8 Agenda 21, Chapter 26,4 (a) and (b)

This section introduces issues of environmental management which span a range of sectors. Perhaps the broadest of these issues are public participation, access to information and environmental education. Such cross-sectoral issues are often dealt with through the generation and application of government policy to influence community behaviour, for example to change to more environmentally-friendly consumption patterns, such as the use of public transport. There may be little need for precise legislation to provide for these things in many countries, although in some countries, these matters are indeed dealt with legislatively. It certainly remains the case that legislative backing can be important to enforce environmental behaviour, especially in relation to land use. Statutorily based environmental planning has for this reason become more prevalent.

Environmental planning

The term environmental planning is relatively new. It can simply mean forward physical planning of a town or rural area, through the making of planning instruments to delineate zones for particular kinds of development and conservation purposes. However, in the light of sustainability strategies, environmental planning can take on a more ecosystemic orientation. In other words, the planning of the use of land should be placed within precisely delineated constraints of relevant ecosystems. This type of planning means that the assessment of the natural and other resources of a particular area should be carefully carried out, so that a "baseline" of information is present before forward planning takes place. This type of planning calls for the use of baseline studies, to investigate the constraints of an area before final plans are made. Apart from scientific studies of the ecosystem, it is also often seen to be important to study the traditional land use and practices of local communities. The baseline studies should thus include appropriate input from relevant communities.

Environmental planning can also have a broader meaning. The development of strategies for sustainability, as urged by the World Conservation Union and Agenda 21 requires an integrated approach to the generation of national policies. Such integration requires that institutions within and outside government communicate closely, with a view to cooperating in the implementation of mutually agreed policies. Caring for the Earth captures these sentiments as follows:

> *Governments should develop national and sub-national strategies for sustainability that integrate conservation and development. [...] They should broaden the scope of planning to include decisions on long-term ideals and desired future international interactions, institutional structures, allocation of resources and priorities. Development strategies for sustainability should replace national development plans..... National plans should be extended by regional and local land-use plans enabling a society to translate the goal of sustainability into specific objectives and to integrate a wide range of decisions.... Each plan should be a joint project of government and the people who live in the region. The plans should integrate urban and rural policies. Urban centres and rural areas are tightly linked, the former providing economic services, the latter natural resources and life-support services. Urban policies need to be assessed for their impact on rural areas. [...] Policies on agriculture, forestry and other rural activities need to be assessed for their assumptions about urban change.*[9]

The implications of this broadening of environmental planning, to include national, regional and local planning of both land use and policies and programs, calls for the integration of formerly disparate governmental functions and processes, and the provision of access for relevant communities to obtain information and to give adequate input into the decision making process. In some societies, such integration and information access is very difficult to achieve, because of historical, cultural and political factors.[10]

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9 Caring for the Earth, 66.

10 Perhaps the most successful national initiative for environmental planning is found in the Netherlands; see The Netherlands' National Environmental Policy Plan No 2, 1995, Ministry of Housing, Spatial Planning and the Environment, The Hague.

Environmental impact assessment

Environmental impact assessment is quintessentially a cross-sectoral matter. Because of its central importance to the achievement of environmental goals, it is dealt with in Chapter 14.

Environmental monitoring

Environmental monitoring is a process that is meant to be applied after the decision to go ahead with a development is made. It is meant to ascertain whether the environmental controls that have been put in place are adequate, and whether the predictions made in the Environmental Impact Statement (EIS) or equivalent document are correct. As stated by O'Riordan, "Much of the learning required to improve scientific knowledge and the effectiveness of impact management measures is associated with post-decision evaluations....such evaluations require adequate monitoring before, during and after project construction."[11]

Agenda 21 and Caring for the Earth both regard environmental monitoring as an essential part of an environmental management program. Caring for the Earth states that an environmental management programme should be drafted for all projects that go ahead, providing for monitoring to compare reality with prediction, and allowing for adjustment of the development if necessary.[12]

Environmental education

Documents such as the Brundtland Report, Caring for the Earth and Agenda 21 emphasise the importance of environmental education in changing attitudes and practices in order to achieve sustainable societies.

A number of environmental statutes now provide specifically for environmental education programmes to be provided through the environmental agency.

Compliance regimes and enforcement mechanisms

One of the most problematic areas of domestic environmental legislation is that of enforcement. The basic approaches employed are criminal enforcement and civil enforcement. Criminal enforcement is beginning to be used less in many countries, with increasing emphasis being placed on various forms of civil enforcement. In some developing countries, customary management controls are still in place, or are being incorporated into legislative enactments.

A further issue relates to enforcement agencies. In countries where no central environment agency exists, it is commonly the case that enforcement is the responsibility of a variety of government agencies or line ministries. In countries where a central environment agency exists, enforcement mechanisms are still shared with other government departments. Departments of industry, transport, agriculture, fisheries, planning, local government, etc can all have separate responsibilities under their own sectoral legislation. These and further issues are spelt out in Chapter 16.

EXERCISES ON ENVIRONMENTAL LAW AT THE NATIONAL LEVEL

General Policy, Legislation and Institutions

1. Examine the World Conservation Strategy, and determine what obligations might arise from it in terms of the enactment of legislation.
2. If your country has a National Conservation Strategy or its equivalent, has it been used as basis for the drafting of environmental legislation? Give details.

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11 O'Riordan, J, "Environmental Assessment in British Columbia" (1986) 2 Northwest Environmental Journal 63 at 71.

12 Note 2, 67.

3. In what ways do international and national law of the environment interact? Discuss in relation to civil and criminal liability regimes. (Birnie and Boyle, International Law and the Environment Ch 5)
4. What has your country done in terms of carrying out the programmes detailed in Agenda 21? Give details.
5. Is it desirable for national constitutions to include provisions for the protection of the environment and for healthy human environments?
6. What specific provisions has your country enacted for the protection of the environment?
7. Is it necessary for there to be an environment protection agency in order to achieve adequate environmental policies and mechanisms?
8. Detail the administrative arrangements that your national government has put in place for implementation of international conventions. In your view, are the arrangements satisfactory? If not, how would you improve them?
9. Should national environmental law recognise a right to a clean and healthy environment? If so, should such a right be introduced within a country's constitution? What are the obstacles to establishing such a right?
10. What links does a right to a clean and healthy environment have with human rights law?
12. What role can environmental legislation play in the achievement of sustainable development?
13. Apart from the imposition of sanctions, what other roles does environmental law play?

Discussion points for small groups

14. The Rio Declaration and Agenda 21 place definite obligations on signatory countries for the protection of the environment through law. Discuss, with reference to the specific sections on which you rely.
15. Environmental law should reflect both the environmental policy and the development policy of a country: Discuss.
16. Without a strong central environmental agency, implementation of international conventions and national environmental law is very difficult: Discuss.
17. The main problem with environmental legislation, especially in developing countries is the difficulty of enforcement; discuss the reasons why this might be so.
18. Enforcement is the weakest link of the regulatory chain: Discuss.
19. The use of customary practices as part of environmental management is outdated and ineffective: Discuss.
20. Discuss how environmental legislation can incorporate economic instruments; give examples.
21. What extra-legal mechanisms can be used to achieve environmental ends? Discuss the limitations of any examples chosen.
22. Environmental lawyers should recognise the importance of science in environmental management: Discuss.
23. Public participation is an essential aspect of environmental decision making; discuss the reasons for this.
24. The drafters of environmental legislation must take into account the political, economic and cultural context of the relevant jurisdiction. Discuss.
25. State of the Environment Reporting is a vital aspect of national environmental management: Discuss.
26. Environmental legislation cannot achieve reduction in consumption levels; discuss, with reasons for your agreement or disagreement with this statement.

27. Set out the essential elements of a comprehensive environmental protection statute.

28. Regulatory agencies should be separated from resource allocation agencies. Discuss.

Environmental planning

29. What is the distinction between traditional land use planning and modern environmental planning?

30. Does environmental planning need to be backed by legislation?

31. To what extent can strategies for sustainability be incorporated into land use planning?

32. In considering the sectoral and integrated approaches, which do you think is better, and why? Give examples.

33. What role should customary practices play in environmental management?

Discussion point

34. Environmental planning, incorporating sustainability principles, can be applied in any country, regardless of cultural, political or economic factors." Discuss, with reasons for your agreement or disagreement.

Country studies

35. Describe the planning regime in your country. Analyse the extent to which it conforms with principles of sustainability; outline the barriers to achieving environmental planning in your country.

36. In examining the environmental management legislation in your country, would you categorise it as mainly sectoral, or integrated?

Drafting Exercise on National Legislation

Instructions

This is a group exercise; participants should split into groups of six and approximately two hours should be allocated for this exercise.

You are asked to write drafting instructions for a detailed statute for environmental management, including the administration of an independent environment protection agency, for a country with the following characteristics:

- 50 million people
- 60% of the population is engaged in agricultural activities
- Per capita annual income of US$5000
- Foreign investment is increasing rapidly, contributing to an increasing section of the economy devoted to manufacturing industry;
- Tropical, forested, with a sea coast
- A high incidence of endangered species of flora and fauna, with no specifically protected areas designated by legislation
- Central government with 8 provincial governments
- There is at present no environment agency in existence; all environmental protection functions are carried out by the line Ministries and departments

Each group should first discuss the resource implications of the setting up of such an agency, and make a list of assumptions which will govern the scope and capacities of the Agency, both in terms of availability of funds, expertise, problems that the Agency should address. The group should consider any precedents they have brought with them or which have been supplied.

Simulation exercise on National Legislation

Consider the following fact situation and answer the questions below.

A large mining company based in Europe has obtained an exploration licence from the government of Aspasia, a country on the Pacific rim, to search for copper, gold and platinum. The exploration area is a mountainous region near the coast of Aspasia, on both sides of a river. The river banks are dotted with a series of villages, in which several thousand people live. The people fish in the river and on the sea coast. The river is only navigable by small craft. The rainforest along the river is still largely intact; it is home to three rare species of birds and the only two colonies horse-nosed bats known to exist anywhere in the Asia Pacific region. The villagers use many of the products of the rainforest, for food, medicine and building materials. Their use of these products is governed by a complex system of unwritten customary laws.

The exploration work began three months ago. This involved the building of a 25 kilometre road along the river from coastline, with several hectares of trees being cut. Excavation by bulldozers in connection with the exploration has resulted in the siltation of the river, so that the people cannot fish on a regular basis. One of the bat colonies is under threat of annihilation as a result of the excavation work.

Preliminary results of the exploration indicate that there is a substantial copper deposit beneath two of the villages, in which a total of 400 people live. There is a gold deposit in the centre of a large area of rainforest. The villagers do not wish to move, as the area has been the traditional home of their tribe since time immemorial.

a) What international conventions might be relevant to deal with the environmental and social issues which may arise in the fact situation?

b) Refer to legislative precedents, or the drafting instructions that you have written in the previous exercise (or both, if necessary).

   1. What obligations would the developer have?
   2. What action can the tribe take if it wants to stop the development?
   3. How should the potential social impact of the development be ascertained?
   4. How would you take into account the customary land management of the tribe?

c) After answering the above questions, would you want to alter the drafting instructions you have written in the previous exercise? If so, in what ways?

CHAPTER 12

ELEMENTS OF FRAMEWORK ENVIRONMENTAL LEGISLATION

INTRODUCTION

The most significant legal development in the field of environmental management at the national level since the mid-1970s is the emergence of the framework/umbrella environmental statute. (For ease of reference, the word "framework" will be employed in this chapter, to describe laws which are drafted as overarching, umbrella-type legislation.) Legislative responses to environmental problems in both developing and developed countries have been characterized by fragmented and uncoordinated sectoral legal regimes, developed to facilitate resource allocation and to deal with the environmentally adverse consequences of resource exploitation. Gradually, these regimes were supplemented by anti-pollution laws, as the process of industrialization created new environmental risks. However, as appreciation of the inter-relationships within the ecosystem and the linkages in environmental stresses has increased in recent years, there has been a growing realization that not even a combination of sector-specific resource legislation and anti-pollution laws is sufficient to safeguard the quality of the environment or to guarantee sustainable development. The framework environmental statute is a response to the deficiencies inherent in the sectoral approach to environmental management. It represents an integrated, ecosystem-oriented legal regime that permits a holistic view of the ecosystem, of the inter-relationships and interactions within it, and of the linkages in environmental stresses. It provides a broad and flexible legal framework for addressing environmental issues and for responding to changes in socio-economic and ecological parameters. The flexibility is achieved through investing relevant authorities with wide regulatory powers to promulgate subsidiary legislation addressing specific environmental issues and completing the generality of the framework statute. In addition, however, the framework law provides a basis and a reference point for the coordination of sectoral activities and the rationalization and harmonization of sectoral legal regimes.

Over seventy developing countries and countries with economies in transition have adopted framework environmental laws. Although these laws address environmental problems unique to each country and reflect specific socio-economic situations and legal traditions, some common elements can be discerned. These may be termed the basic elements of a framework environmental statute and should be used as a general guide for purposes of legislative drafting. This chapter explores a variety of examples from developing countries of the basic elements of framework statutes, under the following categories:

- Definitions
- General Objectives and Principles
- Institutional Arrangements
- Environmental Policy Formulation and Planning
- Environmental Impact Assessment and Audits
- Environmental Quality Criteria and Standards
- Integrated Pollution Control
- Environmental Management
- Public Participation
- Environmental Inspectorates
- Dispute Settlement Procedures

DEFINITIONS

Most of the laws contain sections defining the important terms used in the statute. Such a definition of terms is essential not only for the purposes of interpretation but also for law enforcement. Care must, therefore, be

taken to define such terms as "environment", "pollution", "effluent", "biological diversity", "hazardous substance", "activity", etc, because these terms delineate the scope of the statute.

General Objectives and Principles

In some countries, the framework legislation sets out the broad objectives and the basic principles of environmental management and sustainable development. Such objectives and principles provide guidance and inform the actions of environmental management authorities. Some of these principles are:

1. the integration of environment and development in the decision-making processes of Government and the private sector;
2. sustainable utilization of natural resources;
3. maintenance of biological diversity and ecosystem integrity;
4. public participation in environmental decision-making;
5. the polluter pays principle;
6. inter-generational equity;
7. the precautionary principle; and
8. environmental impact assessment of development projects.

The Uganda *National Environment Statute 1995*, for example, sets out detailed principles of environmental management in its Article 3. These include public participation; conservation and equitable use of the environment and natural resources for the benefit of present and future generations; conservation of biological diversity and maintenance of the stable functioning of biological processes; and, environmental impact assessment. The South African *Environment Conservation Act, 1989*, includes the following principles to guide policy formulation: protection of ecological processes and natural systems and the preservation of biotic diversity; sustained utilization of species and ecosystems; and environmental protection and improvement for a better quality of life for the inhabitants of the country. The principle of inter-generational equity is expressly provided for under Section 2 of the *Philippine Environmental Policy Act 1977*.

Institutional Arrangements

The effective implementation of environmental legislation presupposes the existence of appropriate institutional arrangements and processes. The sectoral approach to environmental management has had the effect of defusing power and responsibility in diverse government departments (and in certain cases in local authorities) without any institutional mechanisms for coordination. Jurisdictional overlaps and conflicts have inevitably arisen, thereby inhibiting not only the effective implementation of sustainable development policies but also law enforcement. The framework environmental statutes have, therefore, made deliberate efforts at institutional innovation. The objectives have been to:

1. facilitate overall environmental policy formulation and planning;
2. ensure co-ordination of the various sectors and the harmonization of sectoral policies;
3. facilitate public participation in environmental decision-making processes of government;
4. provide a forum for inter-sectoral conflict resolution; and
5. provide technical advice to government departments and agencies.

Examples of institutional arrangements

In the Philippines, Presidential Decree No. 1121 of 18 April 1977 establishes an inter-ministerial National Environmental Protection Council chaired by the President and responsible for, among other things: rationalising the functions of government agencies charged with environmental protection and enforcing environment-related laws; formulating policies and issuing guidelines; undertaking research; promoting education and training programmes; and reviewing environmental impact assessments.

In Sri Lanka, the *National Environmental Act* (No. 47 of 1980 as amended by No. 56 of 1989) establishes both a Central Environmental Authority and an Environmental Council. The Authority is a corporate entity with executive functions in the field of environmental management. The Council is inter-ministerial with representation from non-governmental organizations and professionals with expertise in environmental protection and management. The Council is advisory to the Authority.

In Nigeria, the *Federal Environmental Protection Agency Decree 1988*, (No. 58 of 1988 as amended by No. 59 of 1992) establishes an inter-ministerial Council as the governing body of the Agency. An intersectoral Technical Committee, chaired by the Director General of the Agency, assists and advises the Council and the Agency. Both the Council and the Technical Committee have representatives from the private and/or non-governmental sectors with expertise in environmental matters. The functions of the Agency include: advising the Federal Government on national environmental policies and priorities; promoting international co-operation; and coordinating the activities of Federal and State Ministries, Local Government Authorities and Statutory Bodies. It should be noted, however, that the Agency is both an advisory and executing body. In this latter respect, it is responsible for establishing environmental criteria and standards, environmental impact assessment, pollution control, etc.

In Zambia, the *Environmental Protection and Pollution Control Act, 1990*, (No. 12 of 1990) establishes the Environmental Council of Zambia. This is an inter-ministerial Council but also has private sector and non-governmental representation. The functions of the Council are, *inter alia*, to: advise the Government on environmental and natural resources policies; recommend pollution control measures; coordinate the activities of all ministries and other bodies concerned with the protection of the environment; identify projects plans and policies for which environmental impact assessment is necessary and carry out EIA; and monitor trends in the use of natural resources and their impact on the environment.

In Honduras, the *General Law on Environment 1993* establishes a State Secretariat in the Department of the Environment with general duties of monitoring compliance with and enforcing environmental legislation, formulating and coordinating national policies on the environment, supervising the implementation of such policies and coordinating the activities of public and private institutions dealing with the environment. The Secretariat is assisted by the National Environmental Consulting Council, a Technical Advisory Committee and the Environmental Public Prosecutor's Office, which are also created by the general law.

Other countries with inter-ministerial coordinating bodies include Malaysia, Egypt, Uganda and St. Kitts and Nevis. Elsewhere, environmental ministries and departments co-exist with inter-ministerial/private sector/NGO advisory councils, committees or commissions. In such cases, the environmental ministries or departments are responsible for policy and management. Examples include Tanzania, Burkina Faso, Congo and South Africa.

Environmental Policy Formulation and Planning

Sectoral policy formulation and planning has necessarily resulted in conflicts and the absence of a general policy framework for environmental management. There has been a felt need to establish general policy frameworks and environmental plans and to harmonise policies across sectors. Most framework laws, therefore, make provision for policy formulation and planning. The South African *Environment Conservation Act 1989*, for example, gives the Minister power to determine overall environmental policy binding on all sectoral agencies (Sections 2 and 3). The Uganda *National Environment Statute 1995*, provides for environmental planning at both national and district levels (Sections 18 and 19). The Sri Lankan, Egyptian, Malaysian, Filippino and Nigerian statutes all provide for general policy formulation and planning. Sectoral policy formulation and planning continues to exist but within the framework of cross-sectoral plans and policies which provide an important reference point.

Environmental Impact Assessment and Audits

The EIA process should be established as an anticipatory and preventive mechanism for environmental management. Essentially, EIA is a process or procedure whereby information on likely environmental impacts and,

in some countries, possible alternatives and mitigating measures, becomes a prerequisite to development decision-making. The common denominator is the submission of an environmental impact statement or study (EIS) to the relevant government agencies describing the future environmental impact of a proposed activity or process. The underlying assumption is that such a statement will help decision-makers arrive at informed choices so that development projects cause minimal degradation of environmental resources and do not reduce the productivity of natural systems. In the context of a developing country a legally binding EIA process is of critical importance. This is because given the existing socio-economic problems, an EIA process predicated on administrative discretion is likely to be set aside in the desire to attract capital investments essential for economic growth.

Examples of EIA provisions

Most framework environmental statutes merely establish the principle of EIA and leave the detailed provisions on its content and procedure to be dealt with in regulations. The Philippine *Environmental Policy Decree 1977* for example, lays down the principle in its Section 4 and requires the different agencies charged with environmental protection to issue "guidelines, rules and regulations" to give effect to the provision. The Zambian *Environmental Protection and Pollution Control Act 1990* simply requires the Environmental Council to "identify projects or types of projects, plans and policies for which environmental impact assessment are necessary and undertake or request others to undertake such assessments for consideration by the Council". The Nigerian *Federal Environmental Protection Agency Decree 1992* empowers the Agency to "establish such procedures for industrial or agricultural activities in order to minimise damage to the environment and natural resources from such activities".

Detailed EIA requirements have been promulgated under the enabling provisions of the Zambian and Nigerian laws. In Zambia, this has been in the form of regulations, whereas, in Nigeria, a separate EIA Decree has been passed. In both instances, the legal instruments lay down the general principles which are to inform EIA, define the minimum content of the environmental impact study, establish the procedures of EIA, and provide a list of the activities for which an environmental impact study is mandatory. In other countries, for example, Uganda and Sri Lanka, the framework laws themselves make detailed provisions regarding environmental impact assessment. The whole of Part V of the Ugandan statute deals with environmental impact assessment, environmental impact statement, environmental audit and environmental monitoring.

Environmental Quality Criteria and Standards

Most framework environmental laws are increasingly establishing centralised systems for the definition of environmental quality criteria, and effluent discharge and emission standards for environmental media and pollutants. This is a marked departure from pre-existing sectoral legal regimes which either did not establish any standards or restricted themselves to their sectoral mandates. The definition of standards not only facilitates the effective enforcement of environmental requirements, but also provides guidance to industry with respect to compliance.

Examples of environmental quality criteria and standards

Under the Malaysian *Environmental Quality Act 1974*, which is predominantly a pollution control statute, the Director General of Environmental Quality is required to recommend to the Minister standards and criteria for the protection and maintenance of the quality of the environment. The Philippine *Environment Code* (Decree No. 1152 of 1977) makes provision for the definition of standards relating to air quality, noise, and water quality. Part VI of the Uganda *National Environment Statute 1995*, gives the National Environment Management Authority power to establish, in consultation with relevant "lead agencies", standards for air and water quality, effluent discharge, noise, vibrations and radiation. Similar provisions are to be found in the Sri Lankan, Nigerian and Zambian statutes.

Integrated Pollution Control

A few pioneering states have adopted a multi-media approach to pollution control. A composite licensing/permitting system for polluting activities is essential to underline linkages in environmental stresses and to

avoid the transfer of an environmental problem from one sector to another. The "polluter pays" principle is the underlying principle of pollution control measures. Provision is also often made for clean-up of pollution, and for precautions and measures for dealing with pollution accidents. The Director General of Environmental Quality under the Malaysian legislation is charged with the control of pollution of all environmental media and administers a licensing system for pollution activities. In the Philippines, under the *Environment Code 1977*, the National Pollution Control Commission has powers not only to define criteria and standards but also to implement measures for pollution control. The Uganda *National Environment Statute 1995*, establishes a Technical Committee on the Licensing of Pollution which is responsible for issuing pollution licences for all environmental media.

Environmental Management

An increasing number of framework environmental statutes make provision for addressing specific environmental issues. These issues are, for the most part, cross-sectoral in nature. In effect, they are issues that cannot be addressed through sectoral legal regimes. For example, Part VII of the Uganda *National Environment Statute 1995*, provides for the management of wetlands and fragile ecosystems, the conservation of biological diversity, protection of the ozone layer, waste management and the management of toxic and hazardous chemicals and materials, and regulates access to genetic resources. The Sri Lankan legislation, besides addressing cross-sectoral issues, also makes specific provision for policy development for the management of such issues as land use management, natural resources management and conservation, the management of fisheries and aquatic resources, wildlife, forestry and soil conservation. The Zambian legislation deals with pollution control, waste management, pesticides and toxic substances, ionizing radiation, and natural resources management. The St. Kitts and Nevis *National Conservation and Environment Protection Act 1987* makes provision for the management of protected areas, pollution control, forestry, soil and water conservation, and the protection of antiquities.

Public Participation

The environment is an important, if not the most important, public resource. The manner of its current use affects the welfare of both present and future generations. The public should, therefore, have a right not only to participate in decisions affecting the management and status of the environment (whether they concern its exploitation or conservation) but also to institute legal proceedings in vindication of the public interest. There are four basic elements to the principle of public participation:

1. access to information held by public authorities;
2. participation in decision-making processes;
3. the creation of public awareness on environmental issues; and
4. access to judicial and administrative proceedings, including redress and remedy.

Examples of public participation provisions

Many developing countries are now making legal provisions either in their framework laws or environmental impact assessment laws/regulations for public participation in environmental decision-making. The Nigerian *Environment Impact Assessment Decree 1992*, provides for public comments and public hearings with regard to environmental impact studies. The Nepal *National Environment Impact Assessment Guidelines 1993*, provide that a draft environmental impact assessment report must be released for public review and comments. Provisions for public input in the EIA process are also to be found in the Chilean and Indonesian EIA statutes.

Attempts have also been made in framework laws to associate the public in environmental policy formulation and planning. The St. Kitts and Nevis *National Conservation and Environment Protection Act 1987*, provides for NGO representation in the National Conservation Commission, a high level environmental policy institution. In Zambia, the *Environmental Protection and Pollution Control Act 1990*, provides for the representation of an environmental NGO in the Environmental Council. In Uganda, the *National Environment Statute 1995*, pro-

vides for: the representation of research and academic institutions and environmental NGOs in the Board of Directors of the National Environment Management Authority; the promotion of public awareness; and public participation in decision making and implementation at the local level through established local level institutions. In addition, recent framework laws are granting citizens the right to bring public interest actions to protect the environment. This is the case under the Gambian *National Environment Management Act, 1994*, and the Ugandan *National Environment Statute 1995*. In the Philippines, the courts have held that citizens' and non-governmental organizations' standing to sue for the protection of the environment is an inter-generational right (See *Oposa et al. v. Factoran (Secretary of the Department of Environment and Natural Resources)*, Supreme Court, Republic of the Philippines G.R. No. 101083, July 1993).

Environmental Inspectorates

Most framework environmental laws are now establishing environmental inspectorates for monitoring compliance with environmental requirements and enforcing legislation. The inspectorates have power to issue enforcement notices to close down operations in cases of actual or imminent danger, to enter and inspect establishments, to take and analyse samples, and to prosecute offenders. For example, the framework laws of Malaysia, Nigeria, Sri Lanka, St. Kitts and Nevis, Uganda, and Zambia contain such provisions.

Dispute Settlement Procedures

In a growing number of countries, framework laws have established administrative machineries or quasi-judicial bodies to handle appeals from the various decisions of administrative authorities concerning licences, project approvals, environmental protection orders, enforcement notices and closing orders. The main objective has been to avoid the delays, technicalities of procedure and expense inherent in normal judicial proceedings and to facilitate prompt decision-making as regards development projects. Other legal proceedings, for example, citizen suits and criminal prosecutions are, however, handled through the normal judicial machinery.

Examples of dispute settlement provisions

The Sri Lankan *National Environment Act 1989* provides for appeals to the Secretary of the Ministry against decisions by empowered authorities regarding licences and project approvals. The decisions of the Secretary are expressed to be final. The Draft Sri Lankan *National Environmental Protection Act 1995*, expressly establishes an Environmental Tribunal. The jurisdiction of the Tribunal is, however, limited to appeals from decisions of government authorities regarding environmental standards, licences, waste management, environmental impact assessment, environmental restoration orders, analyses, access to environmental information and the imposition of administrative penalties. The decisions of the Tribunal are expressed to be final and conclusive. An important innovation under this draft law is the power given to the Tribunal to arbitrate or mediate between parties to an environmental dispute. It should be noted, however, that the draft still follows the classical model and citizen suits and criminal prosecutions are still to be handled through the normal judicial process.

Under the Ugandan statute, the decisions of the National Environment Management Authority or any of its organs are appealable to administrative instances established for such purpose. The decisions of such a body shall not be questioned by any court. However, the provision is expressed not to impair the supervisory jurisdiction of the High Court. The Malaysian *Environmental Quality Act 1974*, establishes an Appeal Board to handle disputes regarding the decisions of the Director General of Environmental Quality and his officers.

Exercises on Framework Environmental Legislation

1. Identify the various functions that should be performed by environmental authorities. Describe and represent in an organogram (a diagram of an organizational structure) effective institutional framework for the discharge of the various functions.

2. Propose appropriate legal provisions in a framework environmental statute to facilitate effective public participation in decision-making and implementation.
3. Should separate environmental tribunals be created for dispute resolution or should jurisdiction lie in established judicial machineries? Give reasons for your answer.
4. Is it appropriate for a framework environmental statute to address purely sectoral issues in a system where sectoral legal regimes already exist? Give reasons for your answer.
5. Propose incentives to facilitate compliance with environmental requirements.

CHAPTER 13

ENVIRONMENTAL MANAGEMENT OF LAND AND HUMAN SETTLEMENTS

An attachment to the land is one of the deepest and most profound elements of humanity's relationship with the earth. We use land to define our national boundaries, we have fought over land from time immemorial, we lure visitors with promises of great natural beauty, and we mortgage our futures for a small piece of it. Yet, despite this, we have allowed the land on which we rely so absolutely to be degraded to the point where our very existence is threatened. We must re-examine our relationship to the land and adopt a more sustainable approach to land use and human settlements.

Property as a tradeable commodity is the philosophical backbone of the market system, and land is one of the most valuable of all commodities. Property rights are therefore considered, in many countries, to be one of the most inviolate of laws. (Although this was generally not the case in communist countries, many are currently dismantling the system of State ownership of land.) Furthermore, many of the penal laws of any given country are devoted to the protection of property and the punishment of those who would try to deprive others of theirs. Yet most States have laws which temper this right. For example, the State may appropriate land for developments for the benefit of the general public (although, most States provide for "fair" or "just" or "market value" compensation for the land acquired), or there may be laws which control the uses to which land may be put such as zoning by-laws. A trade-off is often made between the common good and individual rights.

In redefining our relationship with the earth, the fundamental question to be addressed is to what degree will the communal right to a healthy environment override individual property rights. A secondary but equally important issue is to what degree will the public be allowed to question, on environmental grounds, the State's use of property?

Environmental management for sustainable development can be defined as the administration of human activities as they reflect upon and relate to the entire range of living and non-living factors that influence life on the earth and their interactions, for the purpose of ensuring development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Managing land-based resources for sustainable development requires the rational allocation of land for a variety of uses including recreation, agriculture, industry and habitation.

Human settlements must be managed to ensure that they and their environs are capable of sustaining life. Chapter 7 of Agenda 21 addresses Human Settlements and lists a number of areas where there must be concerted effort in order to provide for sustainable use of land and livable cities. These include:

- the promotion among policy makers of an **awareness** of the adverse consequences of unplanned settlements in environmentally vulnerable areas and of the appropriate national and local land-use and settlement policies required for this purpose;
- the promotion of sustainable land-use planning, development, and management, with the objective of providing for the land requirements of human settlements development through environmentally sound physical planning and land-use;
- that all countries, as appropriate, and in accordance with their national plans, objectives and priorities... adopt innovative city planning strategies to address environmental and social issues;
- the creation of national legislation to guide the implementation of public policies for environmentally sound urban development, land utilization, housing and for the improved management of urban expansion;
- the development of fiscal incentives and land use control measures, including land use planning solutions for a more rational and environmentally sound use of limited land resources; and

- the development and support of the implementation of improved land management practices which deal comprehensively with potentially competing land requirements for agriculture, industry, transport, urban development, open spaces, preserves and other vital needs.

It is proposed that the equitable distribution of land and its fruits is an element of sustainable development, as is the eradication of urban poverty. Many of the suggestions that follow are dedicated to these issues. This chapter examines critical issues of land use, ownership of land, protection of land rights, and access to land, and makes suggestions about crafting law and developing institutions to achieve the objectives of sustainable development of land resources and human settlements as adopted in Agenda 21. Of course, the degree to which these issues are addressed in legislation is solely the decision of individual governments.

A couple of points are worth making at this juncture. First, it is important to recall that law already exists in abundance to control land use and human settlements. In fact, there are not only many laws, but these laws often reflect different systems and/or philosophies or ideologies of law piled on top of the other or all mixed up together. This jumble may contain parts of laws which may have been repealed with other parts grafted on later, court decisions which interpret the statutes and regulations in particular ways, or customary or informal rules operating in the real world. When revising the law in this area, the history of the development of the laws must be considered and reviewed carefully to ensure that one is not simply adding on another confusing piece to an already complicated jigsaw of regulation. Obviously a thorough review of the current state of legislation, and, equally important, a complete understanding of the ways in which the allocation of land resources works in reality will be a critical beginning to tackling reform.

Second, in addition to understanding the current legal situation, it will also be important to undertake a careful reckoning of the land stock of the nation. This must include not only an understanding of what resources are currently available to the nation, but also a realistic acknowledgment of future needs. The ability of the nation to supply its needs for energy, water, and food, and development in the short term and into the future must be considered. Short term economic gain can no longer be the single yardstick by which development is measured. Crafting law and institutions for the sustainable development of land resources and human settlements must reflect the practical reality and plan for the foreseeable future.

Third, it is important to acknowledge that the intellectual exercise of reforming the law in this area will almost certainly be complicated by the political process. Ownership of land has formed the power base for the wealthy in society, and tampering with land laws is viewed with deep suspicion. The vested interests of powerful people may well lie contrary to the road of reform. The degree to which a State can overcome this resistance will be indicative of its commitment to the environmental agenda.

The whole of land use and human settlement law would fill many volumes, making it impossible to make anything more than general comments of the subject in this Training Manual. What follows is a attempt to highlight some of the means by which law can influence and regulate land use and human settlements as a framework for action, as an enabler of action, as a regulator of activity, and as a mediator between and protector of actors.

Law as a Framework for Action

Law as a framework for action draws attention to the role of law in setting out fundamental principles, policies, and rights, and establishing the basic institutions and structures of society. One obvious example of "framework" law at the national level is a constitution. Constitutions are increasingly dealing with issues of the environment, including shelter and human settlement issues.

Most countries provide for property rights in their constitutions. In fact, in many countries this is one of the strongest and most championed private rights of an individual. Where the State proposes to relieve individuals of their property, for development projects or for town and country planning, provision is made for "fair" or "market value" compensation. Over the years, there have been many disputes in the courts and in the political arenas in

many countries over these provisions. In some countries, many judicial and constitutional battles have been fought over compensation with the trend being to reduce the constitutional protection given to property.

A right to housing is beginning to appear in some constitutions. The 1992 *Constitution of the Seychelles* makes specific reference to the State's duty to house the citizenry, although the various conditions attached to the right make it difficult to actually implement. There are other examples of countries that provide a right of housing for their citizens, but there are few instances where the homeless have mounted a successful challenge to government housing policies or practices.

Environmental rights and duties are also becoming common features in national Constitutions. Examples of such provisions in new national constitutions can be found throughout the world. The *Constitution of Mali* (1992) provides:

> ***Every person has a right to a healthy environment. The protection and defence of the environment and the promotion of the quality of life are a duty for all and for the State.***

In the 1980 *Constitution of Vanuatu*, Article 7(d) states:

> ***Every person has the following fundamental duties to himself and his descendants and to others: to protect Vanuatu and to safeguard national wealth, resources and environment in the interests of the present generation and of future generations.***

Environmental concerns have been and are increasingly being used as a justification to temper the use of private property. In Mexico, for example, Article 27 of the Constitution provides that the nation shall, at all times, have the right to impose on private property the measures required for the public welfare, as well as to regulate it in the interest of society, to achieve equitable distribution of public wealth and safeguard its conservation. A rational allocation of land resources and the development of human settlements capable of sustaining life must be pursued in order to achieve sustainable development.

This provision and others like it have rarely been put to the test in court or the political arena, and there is still considerable debate about the scope of such provisions and the degree to which they will be enforced. It will be interesting to see how courts will interpret such rights and whether these rights will be given precedence over other, specifically individual, rights. In India in *M.C Mehta v. Union of India*, the court accepted a petition for a writ of *mandamus* to restrain a series of tanneries from disposing of effluent into the River Ganges. The Court ordered the closure of the tanneries until such time as primary waste treatment systems were installed, despite the fact that the Court was aware that the order would cause economic hardship. The Court noted Article 48-A of the Constitution which provides that the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country and Article 51-A which imposes as one of the fundamental duties of every citizen the requirement to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures. It is interesting to note that the Court also quotes from the proclamation adopted by the United Nations Conference on the Human Environment held at Stockholm in 1972.[1] In *D.D. Vyas v Ghaziabad Development Authority* the court declared that petitioners' standing could not be challenged because they were "public spirited citizens who were rightly reminding the authorities of their duties enshrined in the Constitution".[2]

There are other examples of law as a framework for action that should be mentioned in the context of land use and human settlements. These might include land registration systems. The law establishing such a system may itself be quite short, setting out the nature of the rights which will be created by registration of the title, the way other interests can be protected, such as mortgages, and the way any faults in the registration process can be rectified and/or compensation paid for errors. The details of the operation of the system, including forms, procedures for application, and fees are usually contained in lengthy regulations under the law.

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1 **M.C. Mehta v. Union of India, AIR 1988 SC 1037**

2 **Handl, G. Editor-in-Chief, Yearbook of International Environmental Law, Volume 4, 1993 (Clarendon Press, Oxford, 1994) 418.**

These types of legislation define the authority of the State and the rights and duties of individuals. They can be invoked to challenge administrative actions or procedural interpretations. When crafting such legislation, as many of you may be asked to do, it is important to recognize their value and to consider the uses to which they may be put. Definitions for example, such as a definition of environment or sustainable development in these sections can become critical. These types of laws are an important element of any legal system as they often contain the basic philosophical elements of the society. Such legislation is the cornerstone of developing national legislation to guide the implementation of public policies for environmentally sound urban development, land utilization, housing and for the improved management of urban expansion as called for under Agenda 21.

Law as an Enabler of Action

Law as an enabler draws attention to all those areas of law which can be used or could be structured to assist activity. There are several ways that laws of this nature can and are being used.

Law could, for example, be used to further the decentralization of power from central to local government and from local governments at the city-wide level to smaller units. The advantage of such a system provides legal backing to processes which have developed on an informal basis, and allows smaller units, often more intimately connected to the community to develop their own solutions to land management problems. This harnesses local enthusiasm and energy to positive ends rather than oppressing them in the name of centralized conformity. This might be particularly appropriate in countries where traditional authorities continue to hold considerable weight.

Law as an enabler can also be used to facilitate access of the urban poor to land and to security of tenure in the land on which squatter settlements are established. Opportunities to regularize and secure rights in squatter settlements is one of the most perplexing issues in human settlements and land use. The rejection of lasting solutions other than eviction by many governments is more indicative of currying favour with the landed class than trying to come to grips with the environmental and social problems these settlements represent. As the world economy changes from an agricultural base to an industrial base and as more people from the countryside flood into cities, the requirement for housing for the poorer classes will grow. Few countries have developed legal frameworks to enable the poor to acquire land more easily or hold on to it once they have acquired it. Zambia and Botswana in Africa, Thailand in Asia and Peru in Latin America have made an attempt to address this issue, but there are too few countries who have followed their lead. An international seminar, partly sponsored by UNCHS (Habitat) and the Urban Management Programme in Mexico City in 1993, specifically came out in favour of introducing changes in the legal framework that would facilitate regularizing squatters' rights to land, strengthening legal powers at the local level and the rights of local populations to define the planning and consumption of urban space as full citizens. This emphasis on empowering the urban poor to make their own decisions about the land they occupy will also feature in the land management component of Habitat II's Global Plan of Action.

Added to the general need to recognize that disenfranchisement of the poor from land is the specific need to address the difficulties women often face in gaining access to land. There are many policies and practices that specifically bar women from owing land or playing a role in land management. At the moment there are many countries in the world where the law hinders women's access to and ownership of land including tenure rights, inheritance, matrimonial property, rights to land in settlement schemes, credit, and land use planning. The majority of the poor are women, and these laws contribute to this state of affairs.

Although perhaps a little tangential to land, another example of an enabling law are laws which assist the urban poor to obtain credit for housing and business purposes. Some well known examples can be pointed to such as the Grameen Bank in Bangladesh and reforms in housing finance systems in Mexico and India, which have attempted to make it possible for the urban poor to obtain credit without having to rely on land or housing as security for the loan. The traditional mortgage makes it impossible for the landless poor to obtain access to credit. There are innovative alternatives, often well known and used in the informal sector which need to be developed into new low income credit laws to enable the poor to acquire land.

Another area of land law that requires examination is urban agriculture, which can be an important source of income for the urban poor and a potentially important contributor to sustainable land management in cities. Many poor people in cities rely on produce grown on roof tops or in vacant lots or a chicken or pig kept in the back room to supplement their meagre diet. Many cities have banned such activities because of public health concerns, but there are options that reduce this threat and that allow everyone to benefit.

It is also important to consider law as an enabler from the other side of the coin. It would be an enlightening exercise to examine a legal system to discover instances where law hinders rather than enables action. For example, highly technical systems that require skilled professionals at high cost to interpret and manage can prove a barrier to some groups. This is often a criticism levelled at many court systems. There are many ways of scaling down such systems to make them understandable and accessible to a wider portion of the population. This will in addition circumvent informal systems that may have been developed in the face of such difficulties.

Law as a Regulator of Activity

There is a role for law as a regulator. Criticism of law as a regulator has focused on two matters – over-regulation on paper and under-enforcement in practice. This leads to a general disregard for and disrespect of the law and concentration on the wrong targets – usually the activities of the urban poor. Two areas of concern to land management may be highlighted.

The first is the regulation of the activities of the professions involved in land management. All the emphasis in this area is on deregulation and allowing the land market freedom to work efficiently. A little thought might have been given to ensuring that the private professions too are subject both to competition and to regulation to ensure they do not abuse their powers. Do any land-related professionals have a statutory monopoly over any part of the land management process in your country? If so, can it be justified and in whose interest does it operate? What mechanisms exist to police professional conduct and do they work satisfactorily; if not, how could they be improved? What avenues of complaint exist against public officials that misuse their authority? In countries where a free market in land is leading to an increasing number of fraudulent transactions, there is a need to direct regulatory attention to both the personnel and the procedures of the land market. The concern then should be to restructure regulatory processes to ensure that they are focused on the new land management arrangements rather than to dispense with them altogether.

The second area of regulation which needs to be focused on is environmental impact assessment which brings together environmental management and land development. This tool of environmental management is specifically referred to in Principle 17 of the Rio Declaration on Environment and Development, but its use is still not fully understood. At the moment, EIA is too often incorporated in legislation for political reasons, but not seriously implemented. The full use of EIA as a regulatory mechanism has several advantages: it brings to the fore the environmental impact of the decisions by focusing attention on the policy and long-term implications of what is proposed and it permits the involvement of the community at large in the decision-making process. This is the best form of regulation – guiding the decision-makers to a determination which will optimise the use of natural research that have the support of the citizenry. EIA should be seen as a major aspect of sustainable land management. Please see the chapter on EIA in this manual for a full discussion of the issues.

Law as a Mediator Between Actors

This and the next sub-category require us to look at the role of law in a different way than it is normally perceived in the land sector. The first three sub-categories concentrated on the public dimension of law – for the most part how governments structure or could restructure their own powers and outlook or the power and outlook of public and private sector institutions. These next two sub-categories focus on the private dimension of law – how citizens use or could use the law and how the law could be made more "user-friendly".

In any society, conflicts and tensions between individuals, groups and organizations arise over land. Structures and processes need to be in place which will allow disputes to be resolved peacefully. Law serves as a valuable tool to mediate between parties to a conflict.

Many urban societies are composed of people drawn from different religious, ethnic and cultural backgrounds and communities. There are many examples where tensions derived from these different backgrounds have spilled over or have been fanned into violence. Structures and processes for mediating these communal tensions need to be in place to provide peaceful alternatives to the violent resolution of conflicts. This is of direct concern to the provision of shelter as inter-communal violence almost invariably leads to the loss of homes, and wreaks havoc on the environment. Wally N'Dow, Secretary General of the Second United Nations Conference on Human Settlements stated at the preparatory committee meeting for the conference that "We must recognize that no single factor today has such a cruelly negative impact on human settlements and shelter than war and civil strife. In...many parts of the world we are destroying faster than we are building."[3] The Brazzaville Declaration issued in May 1992 by the housing ministers of Central Africa, Comoros, Uganda, and Senegal stated that war caused "a massive destruction of infrastructure, equipment, housing, cities and other settlements which represent the national heritage, and the fruits of the labour of several generations."[4] Alternative dispute resolutions must be explored.

Disputes about land between neighbours are common the world over. There may be allegations that one person is engaging in conduct on his or her land which inconveniences neighbours through unpleasant smells, loud noise, or other anti-social behaviour. There need to be means for neighbours to resolve such disputes. Good planning can circumvent such disputes from arising by grouping like activities together. However, where disputes do arise a system should be available for resolving them. This could be a formal legal system comprised of court hearings, lawyers and usually great expense, or a less formal tribunal system with the litigants representing themselves, or it could be a citizen forum without State involvement. There are many examples of the latter in informal urban settlements. Disputes very often arise between landowners and squatters over whether the latter may remain on the property. A good deal of evidence exists that in seemingly disorganized urban settlements, residents have developed their own institutions and processes of mediation and dispute settlement. It may be advisable to acknowledge and legitimize these systems, though care must be taken when doing so to ensure that the fundamentals of the process that allow it to work effectively are not lost.

Disputes between citizens and the State over land is another critical area where law can play a role to mediate disputes. Protests over State confiscation of land for major developments such as dams or roadways are a common occurrence around the world. While the law may set out provisions for settling compensation, these are rarely followed in practice. In some cases, land is seized and no compensation is paid. In other cases, years go by between the taking of the land and the payment of compensation which rarely approximates the value of the land taken. In yet other instances, the process is manipulated by those in power acquiring and selling the land to be used by the State at inflated values. Furthermore, compensation rarely includes assistance to relocate or training to develop new skills or to replace lost income. In addition, although insufficient compensation is at issue, increasingly people are protesting the impact of the project on the environment. All too often these protests turn violent. A proper and functioning dispute settlement mechanisms in connection with the compulsory acquisition of land is essential. EIA is one means for providing public input into government development schemes, and thereby circumventing public protest for lack of consultation. Further, a means to recognize the true value of land and to end the cynical manipulation of land should be investigated and applied.

Another area of conflict between government and citizens is over resource use in land set aside for conservation, wildlife protection and national parks. The most common approach has tended to be that the central government determines what land and resources are to be set aside for these purposes and the people on the land are required to conform to central rules, even to the point of losing their rights to traditional lands. In many cases hinterland areas, often the last refugee of beleaguered indigenous persons, are set aside for such

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3 Freeman, J., "Habitat PrepCom turns up themes" in *The Earth Times*, (2 May 1995).

4 Freeman, Note 3.

purposes with the intent of assimilating the population. This approach must be challenged; let the local people be involved in the policy-making about and management of the land, wildlife and natural resources; let them benefit financially from conservation and develop a mediating approach to conflicts between different land uses. Rather than stigmatising the traditional land use as illegal, the role of the government should be to develop institutions and processes for traditional land users, for example pastoralists, and modern land users, such as tourist operators or conservationists, to cooperate together in working out how their land uses can be made compatible. It must be acknowledged, however, that traditional land use does not necessarily equal sustainable land use.

Mediation also has a role to play in relationships among public agencies within the land management system. Whatever might be the relationships set down in law among all the different agencies which have a role in land management such as the central government, local governments, parastatal agencies, and NGOs, in practice, in many countries, conflicts and confusion about roles and responsibilities leads to a failure to develop and implement coherent sustainable development strategies. Mediation, perhaps in the form of a national forum bringing together all the actors on a regular basis, could be a step towards resolving conflicts and ending confusion. The development of a National Environmental Action Plan which requires coordination among the diverse agencies which play a role in land management may be a viable means for resolving these types of conflicts.

The role of law in developing civic harmony and hence more efficient and equitable provision and utilization of land resources should not be undervalued. Fundamentally, legal processes that provide an opportunity for dialogue between citizens, between citizens and the State, and between government agencies, though threatening to the status quo, are essential for environmental management for sustainable development of land resources and human settlements.

Law as a Protector of Actors

This role of law has been touched on briefly in the previous sections. Where law is used to defend rights, it serves to protect those who are claiming the rights. All too often the rights being defended are those which serve the interests of the rich and powerful in society. However, rights to clean air, potable water, and a clean and healthy environment are increasingly being promoted and must continue to be developed to guarantee sustainable development. Much work remains to be done before these rather general rights can be turned into enforceable claims on State agencies or as a foil to individual rights of land use. Convincing the general population that the protection of the environment is in everyone's best interest will be elemental to achieving success in this area.

In the role of protector, law can serve to provide an adequate system for the redress of grievances and provide access to justice. In the first capacity, an operative system of administrative justice may include impartial tribunals dealing with such matters as rent control, security of tenure, compensation for the deprivation of property, a local Ombudsman to investigate and remedy grievances, and opportunities to challenge government decisions in the courts. The Constitutions of Malawi and Uganda both have clauses dealing with administrative justice, imparting a duty on State officials to treat people fairly and justly, and requiring that a means of appeal against administrative decisions be provided. The increasing interest in good governance as a necessary precondition to efficient and equitable social and economic development is also putting the spotlight on fair systems of administrative justice. In the second capacity – access to justice – law can provide a means for the disadvantaged, generally the poor, to assert their rights. A point often made is that the environment of the poor tends to be the worse affected by major urban and industrial land developments. If opportunities were available for the poor to have the same access to decision makers as the rich and powerful, their voices would be heard and their concerns at least reflected upon if not incorporated in decisions.

In a sense these two aspects of law as protector fit together. One must have access to justice in order to assert rights and seek redress for grievances. There are many examples of these types of developments. In Colombia, several city authorities have established a House of Justice where the urban poor can obtain legal

assistance to enable them to assert their rights in both the public and private sectors. In many countries in Africa, Kenya, Nigeria, and Zimbabwe for instance, there are either State funded or privately funded legal aid systems in operation used by citizens in shelter disputes. In Asia – Malaysia, The Philippines and Indonesia – private sector organizations promote programmes of popular legal education and community mobilisation amongst the poor to assist them to assert their rights which are often related to land issues. One can mention in particular the Consumers Association of Penang which has done valiant work on behalf of the poor in Penang State, Malaysia, in challenging public decisions to deprive villagers of their land for up-market residential development. Perhaps the best example comes from India where the Indian Supreme Court has lent its immense prestige and authority to assisting the urban poor to fight local authorities on housing and urban development issues. In *Olga Tellis v Bombay Municipal Corporation*, the court upheld the argument that the right to life includes the right to a livelihood and following on from that, fair procedures and suitable alternative sites had to be provided where evictions of pavement and slum dwellers were scheduled. In *Ratlam Municipality v Vardhichand*, the Court permitted one person to bring a representative action on behalf of many other residents in a low-income area of the municipality and issued orders to the municipality to provide basic sanitation facilities in the area and clean up open drains and cesspools which harmed the environment. Such facilities were, said the Court, a basic right of all citizens and could not be denied on grounds of cost.

Conclusion

The Rio Declaration re-emphasised the importance of law as a tool of sustainable management. Habitat II is emphasising a rights-based approach to land issues – people have a right to land and governments have a duty to facilitate their access to it – and this too will inevitably move the role of the law as a tool of sustainable land management to a central position. The creative use of law in relation to sustainable land management must embrace more than the traditional topics and include a discussion of land tenure, land use, EIA, and public powers over land, for just as the policy approach to sustainable development must be holistic, so too must the legal approach. An additional reason for adopting such an approach to the role of law is that it will direct the attention of policy-makers and lawyers to the many and necessary functions which the law has, even in an era when the market is seen as the solution to virtually all the problems in developing and transitional countries. For marketeers, the law's role is to smooth the way of the market and law reform should be directed to that end. However, the market does not speak for the environment or for those who are marginalised by the market. For those concerned with sustainable development the law has many other functions, not the least of which is to curb the excesses of the market.

Exercises on Environmental Management of Land and Human Settlements

1. Why is an attachment to land regarded as one of "the deepest and most profound elements of humanity's relationship with the earth?"
2. What role does the ownership of land play in environmental protection?
3. Why is the equitable distribution of land and its fruits an element of sustainable development?
4. What is the relationship, if any, between land ownership and poverty? Is there any difference in this respect between rural and urban communities?
5. What connections are there between land ownership and responsibilities for environment protection?
6. What limits, if any, are placed on ownership of land by environmental planning and protection legislation?
7. Is there a human right to housing/shelter? Give reasons.
8. Should a right to housing be embodied in the constitutions of States?

9. Should disputes between landowners always be regulated by legislation? Give examples of other means of dispute resolution.
10. What right should government have to regulate the management of endangered fauna and flora on private land?
11. What systems can be established to ensure that the management of endangered fauna and flora is protected on private land?
12. Under what circumstances should government acquire land for conservation purposes?
13. What role should law have in curbing the "excesses of the market" in relation to the exploitation of land? Give examples.
14. What role do NGOs have in protecting the natural resources of public and private land? Give examples.
15. What restrictions are there on private citizens and groups in bringing actions to protect the environment?

Discussion point for groups

16. Discuss the processes of land reform (if any) in the countries represented in the group.

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CHAPTER 14

ENVIRONMENTAL IMPACT ASSESSMENT

The process of environmental impact assessment (EIA) has become popular in many countries since the early 1970s, following the introduction of the United States *National Environmental Policy Act of 1969*. The technique is capable of broad and narrow application. In its narrower manifestation, it is often confined to examining physical impacts. At its broadest, it can assess the impacts on the environment of physical development, policies, programmes and financial measures, as well as the effects of these things on the socio-cultural environment and economic systems. The area of social impact assessment has now become something of a discipline in its own right, although most jurisdictions still see it as part of a broader EIA process. Recent analyses of the broader type of EIA argue that EIA should more properly be called "development impact assessment", thus placing more emphasis on the social and economic aspects.

Most jurisdictions limit EIA to specific development proposals or policies. However, there is now a tendency to broaden its application through strategic environmental assessment and cumulative environmental assessment. The application of EIA can vary markedly from one country to another. In most jurisidictions, it is characterised by a series of studies of the impacts of a proposed development or policy, with or without public hearings, concluding in an environmental impact statement (EIS) which is made available for public comment, before a final decision is made. In some countries, the EIA and the EIS can be subject to legal challenge regarding its procedural or substantive adequacy.

In an increasing number of countries, EIA is now mandatory for certain kinds of development proposals. These can be identified by being included on lists according to the nature and size of a development activity. In addition, many jurisdictions now require various levels of EIA, ranging from: (1) a review of environmental factors relating to the proposal, which is assessed internally by the relevant government agency, to (2) a preliminary impact assessment, comprising a publicly reviewable but brief statement of the environmental effects, through to (3) a comprehensive EIS, with or without a public hearing process.

The legal framework for EIA can differ widely. In some jurisdictions, the legislative framework is minimal or non-existent, with the process being implemented through detailed regulations or guidelines. In many countries for example, the environmental impact assessment process has been introduced by guidelines, without any particular legislative backing. Such guidelines can be quite effective in forcing development interests to consider the environmental impact of development proposals, simply by providing by administrative means for approvals to be granted only when the guidelines are followed. However, use of guidelines suffers from a number of defects, including vagueness. inconsistent application and lack of legal enforceability.

In other countries, the legislative provisions for EIA are very detailed and are strictly applied.

The opportunity for public participation is now seen by many as a vital element of EIA, without which the process is less legitimate. Some jurisdictions have very detailed requirements for public input into the process from the earliest possible stages (e.g., the regulations under the *National Environmental Policy Act of 1969* (US).

EIA is now also seen in some countries as an important instrument for the achievement of sustainable development. The technique is seen to be a direct application of the precautionary approach now advocated broadly and found as a principle in the Rio Declaration. Some jurisdictions require sustainable development matters to be taken directly into account in carrying out EIA, for example, under the *Canadian Environmental Assessment Act* 1994. In Australia, the federal public environmental inquiry process has recently included sustainable development principles as a necessary matter to be taken into account in both environmental impact assessment and the assessment of resource development.

Caring for the Earth offers the following prescriptions for EIA:

EIA should:

- be applied to development projects that are shown by a preliminary screening as likely to have significant environmental, social or economic impacts;
- go beyond assessing the physical impacts of projects, and include social and economic benefits and costs;
- also go beyond assessing and mitigating impacts of projects to assessing alternatives – including that of not proceeding with the project;
- always be undertaken early in the project cycle, beginning at the pre-feasibility and feasibility stages;
- provide for full public participation, involving all groups that might be affected;
- be applied to new technologies, policies and laws that are likely to have a significant impact on the environment;
- also be applied to regional and sectoral programmes;
- include an environmental management programme for all projects that go ahead, providing for monitoring to compare reality with prediction, and allowing for adjustment of the development if necessary; and
- be subject to independent review.

Rationale for EIA

The concept of environmental impact assessment developed in response to the pollution and natural resource depletion caused by rapid population growth, urbanization, industrialization, agricultural development and technological progress. EIA reflects the realization that natural resources are finite and incapable of absorbing the ever-increasing demands of human society. The EIA process requires that potential environmental consequences of a proposed development activity be identified and considered before the activity is undertaken. This requires development to proceed in a more thoughtful and deliberate way, taking into account the need to preserve environmental quality, natural resources and biological diversity for future generations.

Since EIA came into being with the enactment of the United States' *National Environmental Policy Act of 1969* (NEPA), more than 90 developed and developing countries have enacted some form of EIA legislation. Moreover, legislative activity related to EIA remains high as countries strengthen existing laws/regulations and create new ones. EIA requirements also are contained in general or sectoral guidelines, international agreements and the lending practices of various banks or development aid agencies.

It can be said that EIA serves three main functions:

- the integration of environmental considerations into development planning/decisionmaking (as a complement to traditional economic or technical factors);
- the anticipation and prevention/minimization of damage to the environment which might be caused by new activities or modifications in existing ones; and
- the participation of the public and other sectors in environmental management.

These functions make EIA a critical tool in national planning, particularly as countries seek to achieve sustainable development.

Problems encountered in the application of EIA

Although EIA has been in existence for 25 years, evaluations of its effectiveness have only recently been undertaken. Initial results of these effectiveness studies indicate that EIA has not yet fulfilled its potential as a sustainable development tool for one or more of the following reasons:

- perception of EIA as anti-development because of complex and time-consuming procedures which are costly and which delay project approval;
- separation of the EIA process from established economic or land-use planning;

- unsatisfactory participation of/coordination among levels of government as well as different sectors which should be involved in EIA (e.g., local community and public);
- lack of the technical skills/procedures/criteria needed for efficient EIA implementation (e.g., preparation and review of EIA reports);
- inability of EIA to affect development planning and decisionmaking because it occurs too late in the project cycle and is not taken into consideration; and
- weak monitoring of/follow-up to EIA findings and recommendations during project implementation and operation.

New or revised EIA legislation tries to address these identified weaknesses. For example, in 1993 Indonesia revised its original 1986 EIA regulation to:

- make the process simpler (e.g., by shortening the time periods in which certain EIA decisions must be taken by government, removing the preliminary EIA requirement and allowing industrial estates to fulfil one EIA process);
- improve integration of EIA and planning (e.g., by including representatives from Economic Investment Board and planning offices on central and regional EIA commissions; applying EIA to regional development/spatial planning);
- strengthen coordination between sectors and government levels (e.g., by providing for participation of non-governmental organizations on EIA commissions);
- develop the technical knowledge needed to implement EIA (e.g., by issuing a series of EIA guidelines and providing for EIA training/education/research); and
- ensure EIA is more closely linked to decisionmaking and follow up (e.g., by prohibiting the issuance of operating permits until monitoring and management plans are implemented).

These and other amendments should improve the useability and effectiveness of Indonesia's EIA process.

Major Elements of EIA Legislation

EIA requirement

In most countries, legislation establishes the EIA requirement. However, some countries have proceeded for the moment with EIA Guidelines which achieve the same purpose. The requirement generally is for EIA be performed and approved before a proposed activity can be undertaken. The purpose of the requirement is to ensure that: (1) an EIA occurs in advance of any significant decision or action being taken on the activity and (2) the EIA is taken into account during the decisionmaking process and afterward.

The earlier an EIA is done in the planning process, the more likely it will affect the design of an activity. Accordingly, recent legislative provisions require that EIA take place during the pre-feasibility or feasibility stage of project development. EIA is made more effective by strongly linking it to the decisionmaking process. To this end, legislation often makes the issuance of final governmental authorization for an activity (e.g., a construction or operation license/permit) dependent on an initial environmental approval/clearance (e.g., acceptance of the EIA findings and recommendations).

Institutional structure

Another purpose of EIA legislation is to designate the government institution(s) responsible for determining, applying and supervising the EIA process. The multi-sectoral nature of EIA means a number of government agencies and levels usually are involved in its implementation. Nevertheless, responsibility for EIA often is centralized in a national ministry or agency for the environment.

This central EIA authority usually:

- guides/monitors the overall application of EIA (e.g., through the issuance of regulations or general guidelines);

- coordinates other bodies' participation in the EIA process;
- ensures standardized treatment of all proposed activities;
- provides a repository for EIA information; and
- resolves disputes between different agencies or sectors.

Its effectiveness often depends on its political strength vis-a-vis other government bodies as well as the extent of its technical expertise.

Activities subject to EIA

It is critical that EIA legislation identify which activities are subject to EIA or authorize a government body to make this determination. Ordinarily, this is done in one or more of the following ways:

- listing (e.g., specific activities or sensitive areas or modifications of existing activities which require EIA as well as activities which are exempted from EIA);
- "screening" (e.g., using a preliminary EIA step or applying criteria to determine whether potential environmental impacts are likely to be significant and therefore in need of EIA); and
- giving the EIA authority the broad power to determine whether EIA should apply to a certain kind of activity.

Listing is the most common way of determining the applicability of EIA. Threshold values sometimes are used to distinguish those activities likely to cause significant effects because of their size, cost or nature (e.g., power stations of 300kw). A procedure commonly called "screening" might be applied to determine whether a particular activity should undergo EIA and, if so, the degree or type of EIA which is needed.

How the EIA will be done

Legislation generally addresses the way in which an EIA will be conducted. This can include:

- assigning responsibility for doing the EIA and for paying its costs to the private or public proponent (this may include the possibility of government assistance as well as a procedure for certifying third party experts who can do EIAs);
- explaining the general or minimum content of a required EIA report (e.g., diagnosis of existing environment, nature of proposed activity, possible alternatives, likely environmental impacts of proposal and alternatives, mitigation measures, management/monitoring plans, non-technical summary); and
- providing for a "scoping" procedure and the preparation of terms of reference (TOR) in order to focus the EIA process on the key environmental impacts of a particular activity.

Some legislation requires that EIAs be done by the government rather than the proponent. Although most EIA laws/regulations set forth the minimum content of an EIA report, fewer provide for the scoping and TOR procedures which can tailor the generic EIA process to a particular proposed activity.

Public participation

The success of the EIA process often depends on the extent to which local, affected communities and the public are involved in planning and decisionmaking activities. Accordingly, EIA legislation usually requires one or more of the following:

- public notification of EIA-related actions or decisions (e.g., submission of proposed activities, screening or scoping results and EIA reports);
- public access to EIA information (with some protection for confidential business information where appropriate);
- opportunity for public comment, either written or oral (including public hearings);
- participation of the public on EIA commissions; and
- consideration of public comments in taking an EIA decision.

Despite these provisions, public participation in the EIA process remains underdeveloped, in part because of

logistical (e.g., large distances between capitals and local communities as well as illiteracy) and financial constraints (e.g., travel and translation or other costs).

Transboundary implications

In addition to considering the environmental impacts within a country's borders, some legislation requires the consideration of the potential for certain impacts to affect other countries. There also may be provision for the notification of and consultation with affected countries. In Central and Eastern European countries, such provisions seek to implement the 1991 Convention on Environmental Impact Assessment in a Transboundary Context developed under the auspices of the United Nations Economic Commission for Europe.

Review of the EIA, decisionmaking and appeal

Upon completion of an EIA report, there must be some provision for a government body to evaluate its completeness and soundness. The reviewing agency might be authorized to seek the advice of technical experts.

As a consequence of this review, EIA legislation generally empowers the decisionmaking body to:

- approve the EIA (often with conditions), thereby enabling the proponent to obtain other necessary licenses/permits;
- require the submission of additional information; or
- determine that the EIA shows the proposed activity should be refused environmental approval/clearance.

EIA decisions may be written and notified to the proponent as well as other interested parties. The decisionmaking body also may be required to give its reasons for the decision taken.

Appeals of adverse decisions to a higher governmental agency or a tribunal often are permitted.

Post-EIA monitoring/management

Legislative provisions for regular follow-up help to ensure the implementation of monitoring/management plans outlined in the EIA report and help to evaluate the effectiveness of the overall EIA process. They often require self-monitoring and periodic reporting by the proponent as well as verification inspections by the government. Follow-up activities might be linked to an environmental audit programme for existing facilities.

Direct/indirect costs and benefits of applying EIA

It would seem the primary cost of EIA is the delay it can create in the development planning process. Comprehensive EIAs on major projects can take several months or years to complete. Time-consuming procedures also have resulted in substantial financial costs being associated with EIA. These time and monetary commitments have caused many developing countries to express concern about EIA being a hindrance to the socio-economic development they wish to encourage. Accordingly, there is a great need to streamline the EIA process wherever possible so it contributes to rather than hampers development.

On the part of government, EIA requires additional institutional arrangements and resources in order to ensure coordination among government agencies/levels as well as other sectors, harmonization of EIA procedures and criteria, access to needed technical expertise and dispute resolution.

The primary benefit of EIA, environmental protection, is difficult to quantify. EIA also improves development planning and decisionmaking by making the process more informed and thoughtful. Better planned and implemented activities bring long-term savings in terms of reduced costs arising from improved efficiency, waste minimization, less environmental damage and more sustainable use of natural resources.

At the institutional level, EIA introduces a holistic or integrated approach to national planning which involves different disciplines, sectors and levels of government. Such integration ensures more effective and efficient management of development processes and environmental assets.

Obligations of EIA actors

GOVERNMENT

In most legal systems, government oversees the EIA process. This involves establishing standard procedures and criteria for implementing EIA, deciding which activities will be subject to EIA (e.g., through lists and screening) and determining the nature and degree of EIA which will be applied (e.g., through scoping, TOR and required contents of EIA reports).

It also is government which must ensure public participation in the EIA process and see that public input is taken into account in project decisions.

Whether or not government prepares the EIA report, it has responsibility for reviewing it and deciding whether to grant environmental approval. It also is the role of government to resolve any resulting disputes and monitor implementation of any EIA recommendations or approval conditions.

In the exercise of its functions, government may be assisted by one or more technical advisory bodies, which could have representation from the private sector and the public.

PROPONENT

The proponent of a proposed development activity must decide initially whether the activity requires an EIA (e.g., based on legislative lists). Legislation also may require the proponent to submit a written notification and summary description of the proposed activity.

Screening and scoping procedures generally involve the proponent, even though the government retains the power to take final decisions on these matters.

Most EIA laws place the burden of preparing the EIA report on the proponent. Third-party consultants often are hired for this purpose, though sometimes they must be certified or otherwise approved by government. Within the EIA report, the proponent should provide government with the information needed to grant or reject environmental approval. This includes an analysis of possible alternatives or mitigation measures which could reduce the environmental impact of the proposed activity.

If environmental approval is given, the proponent bears responsibility for implementing the activity in accordance with any established conditions and monitoring/reporting on the fulfilment and effectiveness of those conditions.

PUBLIC

Assuming legislation provides for public participation in the EIA process, it is the public's obligation to contribute wherever possible (e.g., reading available information, participating in the screening/scoping procedures, reviewing and providing comments on EIA reports, taking a role in post-EIA monitoring). In short, the public should express interest in and provide input to the EIA process.

National measures to implement EIA

Countries have taken a number of measures to implement EIA. Most importantly, they have made a formal commitment to the EIA process through binding legislation (as noted above, framework or specialized laws, decrees, orders and regulations have been introduced in some 90 countries) as well as non-binding national policies and administrative procedures.

Some countries also have made a political commitment to EIA at the international level through ratification of certain agreements (e.g., Convention on Biological Diversity, regional seas conventions or protocols and the Convention on Environmental Impact Assessment in a Transboundary Context).

More attention has been given in recent years to technical training in order to develop national capacity to implement the EIA process effectively.

Africa

Over 20 African countries have legislative provisions related to EIA. The majority of these are contained in framework legislation (e.g., Algeria, Burkina Faso, Cameroon, Cape Verde, Comoros, Congo, Egypt, Gabon, Ghana, Guinea, Libya, Madagascar, Malawi, Mali, Mauritius, Nigeria, Senegal, Seychelles, South Africa, The Gambia, Togo, Tunisia, Uganda and Zambia), but specific EIA decrees/regulations exist in Algeria, Congo, Gabon, Guinea, Nigeria, Tunisia and Zambia. In addition, fairly detailed policies and administrative guidelines have been developed by Ghana, Namibia, Nigeria and Zimbabwe. A number of countries are in the process of developing EIA regulations or general and sectoral guidelines for EIA implementation.

Algeria and Congo have had EIA legislation since the 1980s. Among countries in the region, the degree of legislative detail varies greatly as indicated by the decrees from Algeria, Congo and Tunisia which contain only 3-7 pages compared to Nigeria's decree which contains 33 pages.

Most African countries seem to have opted for a centralized EIA process in which the proponent performs the EIA. Activities subject to EIA are listed in decree annexes. Tunisia's decree also contains a second list of activities which require a summary description before government decides whether a full EIA is needed. Congo's decree provides a list of indicative criteria which should be taken into consideration during an EIA (e.g., site aspects, risk of natural disaster, risk of nuisance to surrounding area, impact on climate, impact on surface water and groundwater, impact on soil, impact on flora/fauna, protection of natural resources, protection of historic resources, socio-economic impacts.) Nigeria provides for consideration of transboundary impacts on another state within Nigeria as well as another country. It further provides for mediation and review panels.

Asia and the Pacific

EIA provisions in framework environmental laws exist in Australia, Bangladesh, China, Cook Islands, Democratic People's Republic of Korea, India, Indonesia, Iran, Malaysia, Marshall Islands, New Zealand, Pakistan, Palau, Papua New Guinea, Philippines, Republic of Korea, Sri Lanka, Thailand and Vietnam. Specific EIA regulations have been further developed by Australia, India, Indonesia, Malaysia, Palau, the Philippines, Sri Lanka and Thailand. Japan recently enacted comprehensive EIA legislation, after relying for many years on an administrative scheme. In addition, Nepal has issued fairly extensive administrative guidelines.

The Philippines enacted EIA legislation in 1977, which it modelled after the US *National Environmental Policy Act of 1969*. Although their legislation came later, China and India also have applied EIA procedures for a number of years.

Indonesia revised its original 1986 EIA regulation in 1993. It is designed to streamline the process and improve its effectiveness. During the same period, the government reissued a number of guidelines to assist EIA implementation. Indonesia's institutional structure for EIA has been decentralized to sectoral agencies and provincial governments, with the central Environmental Assessment Management Agency playing an oversight role.

Nepal's guidelines include substantial discussions of screening and scoping procedures as well as methods for ensuring public participation.

Europe

Although some European countries like France have had EIA legislation since the 1970s, the adoption of European Council Directive 85/337 in 1985 prompted additional legislative activity in the region. In particular, the Directive has provided useful guidance for Central and Eastern European countries. Today fairly detailed EIA legislation exists in Albania, Austria, Belgium (regions), Bulgaria, Czech Republic, Denmark, Estonia, France, Finland, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakstan, Kyrgyzstan, Latvia, Lithuania, Malta, Moldova, Mongolia, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Slovak Re-

public, Spain, Sweden, Switzerland, Tajikistan, Turkey, Turkmenistan, the United Kingdom and Uzbekistan.

Newer EIA legislation in Central and Eastern Europe, in particular, is notable for its coverage of transbour dary impacts and public participation.

EC Directive 85/337 serves as an EIA framework which must be elaborated by member countries. It cor tains two lists of activities subject to EIA (e.g., a mandatory list and a discretionary list).

Interestingly, Israel, Norway and the United Kingdom address EIA in the context of their planning legislation.

Latin America and the Caribbean

EIA provisions can be found in the legislation of the following Latin American and Caribbean countries: Argentina (provinces), Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guatemala, Honduras, Jamaica, Mexico, Paraguay, Peru, St. Kitts & Nevis, Trinidad and Tobago, Uruguay and Venezuela. Brazil and Mexico have had detailed EIA legislation since the 1980s. Other examples of specific EIA schemes now can be found in the Argentine provinces, Colombia, Costa Rica, Paraguay, Uruguay and Venezuela.

EIA in the region is strongly linked to environmental licensing and to increased legal support for public participation. Colombia requires a Diagnosis of Environmental Alternatives as a preliminary EIA step.

North America

As mentioned earlier, the United States has had EIA legislation since 1970. Canada, on the other hand, implemented EIA under an administrative scheme for almost twenty years before enacting the *Environmental Assessment Act* in 1994.

Both countries have strong provisions for public participation. Interestingly, it is federal agencies in the United States which perform EIA on legislative proposals and other major actions significantly affecting the environment. Oversight is provided by the national Council on Environmental Quality and the Environmental Protection Agency. Although there is no list of activities subject to EIA, US law applies EIA to policies/programmes as well as projects. Private activities, as such, are not subject to federal EIA but may be subject to EIA legislation in various states.

Canada's legislation covers EIA in a very comprehensive manner and reflects many of the current trends in EIA implementation.

West Asia

Within the West Asian countries, EIA provisions can be found in the framework legislation of Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. Several countries in the region are in the process of developing detailed legislation.

Future Challenges

EIA's future effectiveness depends on its being viewed more positively as a tool for good development planning. To this end, efforts must be made to streamline and focus the EIA process itself. Shorter time periods for taking required actions or decisions can speed up the EIA process. Screening and scoping procedures can target EIA on the most important impacts of a particular activity. To simplify EIA reporting, proponents can be required to submit shorter, less technical reports with more graphic presentations of information.

In addition to making the EIA process more efficient, it should be better integrated with land-use and economic planning procedures. The inclusion of planning agency representatives on EIA review bodies or the incorporation of EIA into planning legislation can ensure that EIA becomes an integral part of the planning process. Extension of the EIA concept to cover policies, programmes and plans (i.e., strategic EIA) also can assist the early integration of EIA into longer-term, comprehensive development strategies. Consideration of the cumulative impact of related activities also will give the EIA process a broader perspective.

To make EIA more than a last-minute, procedural requirement which has little impact on project decisionmaking, it needs to be performed earlier in the project cycle and to be linked more strongly with the actual licensing/permitting of an activity. EIA's impact on actual project implementation also can be assured through post-EIA monitoring or management and reporting. Strengthened ties between EIA and environmental audit requirements for existing facilities can help to ensure the incorporation of environmental factors into all stages of the project cycle from design to decommissioning.

Effective use of EIA requires trained, technical experts and decisionmakers who can function in an objective manner. Accordingly, more effort needs to be put into training participants in the EIA process and developing standard criteria/procedures which they can use easily.

EXERCISES ON EIA

1. Draft a simple legislative definition of EIA.
2. Why is EIA necessary?
3. How can EIA be used to achieve sustainable development?
4. What are the key components of EIA? Put together a practical checklist of legislative provisions.
5. Who are the main actors in the EIA process and what are their respective roles?
6. Why is EIA perceived by some as anti-development? How can EIA be structured so as to encourage development while protecting health/environment?
7. What are the advantages/disadvantages of EIA as an element of (a) environmental legislation and (b) planning legislation? What other legislative options might be possible?
8. Should EIA vary according to the **type** of activity under review? Why?
9. Should EIA be applied to **existing** as well as **proposed** activities? Give reasons for your answer.
10. Are foreign investment and official development assistance legitimate targets for environmental impact assessment? Give reasons.
11. Should environmental impact assessment legislation specify the type and capacity of proposals that must be subject to assessment, or should there simply be a threshold test of "significant impact on the environment"?
12. What is the importance of public participation in environmental impact assessment?
13. Is the timing of EIA important? When should EIA begin?
14. How does EIA legislation provide for potential transboundary impacts?
15. What institutional structure would you recommend be used for EIA?
16. Who should be responsible for performing and assuming the costs of an EIA? What might be the characteristics of a certification procedure for third-party consultants who wish to do EIAs?
17. Make a list of what should be required in the EIA report.
18. Who reviews the EIA report and what criteria are used in this process? How might disputes about the approval/rejection of an EIA report resolved?
19. Is EIA linked to the issuance of licenses/permits?
20. What are the best ways to ensure public participation and local involvement in EIA?
21. How can compliance with EIA be promoted, monitored and compelled?
22. What is the difference between EIA and an environmental audit?
23. Outline the EIA procedures presently required in your country and assess their limitations.

Discussion points for small groups

24. Environmental impact assessment need not be imposed by legislation: Discuss, and give reasons for and against.

25. Make a list of all necessary elements of EIA legislation.

26. Make a list of what should be required in the EIA report (i.e., in an Environmental Impact Statement, or EIS).

27. Should some degree of EIA be applied to all proposed development activities? Or should it apply only to selected activities? For example, should EIA only be applied to major projects and proposals?

28. What criteria might be used to "screen" activities to determine which ones should be subjected to EIA? Should certain activities (e.g., military-related activities) be exempt from EIA? Give reasons for your answer.

29. How is environmental monitoring different from environmental auditing?

Case study

30. The government of Country X wishes to develop a shipping canal within a large river basin. Although some financing for the project already has been obtained, work has not yet begun. Environmental groups oppose the canal because the proposed site is a well-known preserve for many different species of flora and fauna, some which are endangered. Very few people, however, know many details about the scale of the project or its implications. The government has said the canal would improve access to natural resources in the interior of Country X, which are of interest to various foreign companies. The canal also would permit faster, cheaper movement of goods from one point to another and should raise the living standards of nearby communities. During construction of the canal, however, it is likely that some indigenous people would have to be relocated.

    Country X has a provision in its framework environmental law which requires that an EIA be performed on public and private activities that could significantly affect the environment. The government has commissioned a third-party consultant to do the EIA.

    You are a government attorney responsible for preparing guidelines for the consultant to use in conducting the EIA. What issues would you consider and what would be your final recommendations?

31. Consider the following fact situation:

    Transglobal, a multinational company with its head office in New York, wishes to develop a copper mine in Aspasia, a country on the Pacific rim. It proposes to process in excess of 20,000 tonnes of ore over the life of the mine, which is estimated to be about ten years. The copper is likely to be worth approximately 50 million US dollars. The mine site is in an area that has been placed on the world heritage list. Most of the area is mountainous and is covered by tropical rainforest. The area is inhabited by five separate indigenous tribes, who use the forest as a means of subsistence. They also derive traditional medicines from various rainforest species.

    A river runs alongside the edge of the proposed mine site. The people in the area derive a good deal of their protein from river fish. The company plans a tailings dam near the river. During heavy rainfall, it appears likely that the tailings dam will flood into the river.

    Aspasia is not a rich country; its natural resources include forests, various minerals, including copper, and an extensive coastal fishery.

    Aspasia has recently enacted comprehensive environmental legislation.

    Answer the following questions:

(i) Is the copper mine subject to an EIA process? If so, under what category or categories?

(ii) What obligations does Transglobal have under the legislation?

(iii) Assume that the mine has been approved. What obligations, if any, does the company have under the legislation once the mine is operational?

CHAPTER 15

TRADE IN HAZARDOUS CHEMICALS

RATIONALE FOR PUBLIC CONCERN AND ACTION

Since the early 1960s, the production and use of chemicals have accelerated rapidly in order to meet countries' social and economic goals. Chemical fertilizers and pesticides have been used to produce more food. Chemicals have also been used in various industrial production processes. More consumer products have been manufactured by using chemicals. For improving public health, chemical pesticides have been used to combat vectors causing human diseases such as malaria. The chemical industry has become one of the fastest growing sectors, and international trade in chemicals likewise has multiplied to meet the increasing worldwide demand for chemicals.

Chemicals have become essential to support modern society. As scientific knowledge and understanding of chemicals have grown, however, so have concerns about the impact of certain hazardous chemicals on human health and the environment. Massive chemical contamination in industrial areas in countries have demonstrated that chemicals may cause significant damage to human health and the environment. Governments with advanced chemical management systems have started to take strict national regulatory actions, including the ban or severe restriction of the production or use of certain hazardous chemicals.

International trade in domestically banned or severely restricted chemicals has continued, however; becoming a matter of international concern. Although hazardous chemicals are produced worldwide, with both developing and developed countries exporting such chemicals, the export of domestically controlled chemicals to countries with less advanced chemical management schemes has raised grave concerns. In particular, developing countries are concerned, as they import hazardous chemicals often without adequate information on the chemicals being imported and infrastructure to manage such chemicals in an environmentally sound manner.

Addressing the problems associated with international trade in hazardous chemicals is complicated by the multi-faceted characteristics of the issue. First, chemicals banned in developed countries, such as certain pesticides like DDT, are still in demand in many developing countries. Such chemicals have some advantages, such as their effectiveness in controlling important pests and vectors of human disease. The cost of such chemicals is also often a factor, as many developing countries cannot avail themselves of affordable alternatives. Further, information about the hazards of certain chemicals and appropriate alternatives is often not available in many countries, thereby encouraging continued use of chemicals at hand.

Second, a chemical can be used for multiple purposes, and government regulations may not address all of those purposes. A chemical may be banned for use in agriculture but not for use in industrial processing or consumer products. For example, certain pesticides may be prohibited for use in agriculture, but may still be allowed for essential public health purposes, such as controlling malaria mosquitos.

Finally, there are differences among countries in the control measures they impose with respect to chemicals. A chemical may be banned for use in one country but not necessarily in other countries. Each State should, and has the right to, considering its own needs, analyze the risks and benefits from the use of certain chemicals, and decide on its own policies for chemicals management and the trade in chemicals.

National action

Measures to reduce chemical risks may be taken before chemicals are distributed (e.g. manufacturing and import), during their distribution (e.g. trade, transport and storage), during their use or when they are disposed of. At all stages of a chemical's "life cycle", information on the chemical, in particular its health and environmental impacts and requirements for its safe handling, has critical importance for decision-makers to decide how the chemical should be controlled, according to their country's unique circumstances.

Steps towards the establishment of realistic national action for the management of hazardous chemicals in international trade may start with collecting "prevailing facts", i.e. identifying existing chemicals in the country, either domestically manufactured or imported. A compiled list of such chemicals may become an initial national inventory of chemicals. This will be the basis for considering immediate response to deal with potential risks from the existing chemicals and for identifying national strategies for "new chemicals" which are yet to be manufactured or imported. This may be followed by evaluation of potential benefits and risks from chemicals both for the short- and long-term.

The identification of the availability of means to reduce chemical risks and the cost-effectiveness of such means would form part of such an evaluation. Consideration may then be given to options for practical responsive measures and policy tools for environmentally sound management of hazardous chemicals in international trade. The availability of human, financial and other resources necessary for the implementation of such measures and policy tools would need to be taken into account.

In the various steps described above, a series of consultations among all relevant parties (such as relevant ministries and other government offices, industry, consumers groups, non-governmental environmental organization, academia) is likely to be a most cost-efficient and effective means for establishing a national policy for environmentally sound management of hazardous chemicals in international trade.

The development or strengthening of legislation may be necessary to implement the national policy on chemicals. On the basis of an assessment of the adequacy of existing national legislation and institutional arrangements, a government might decide to prepare new legislation and/or institutional arrangements, or to amend the existing legislation and/or enhance institutional arrangements. Available means and resources for enforcing such legislation should be also considered. As an alternative or complementary measure, a government might utilize other types of instruments, such as voluntary agreements with industry or economic incentive measures.

International action

The above national actions, however, require access to available information on chemicals as well as the expertise and infrastructure, supported by adequate resources, for risk assessment and decision-making utilizing the available information. Lack of capacity and capabilities in those aspects have been major problems in developing or other countries without adequate chemical management schemes and resources.

As a means for addressing such problems as they relate to the international trade in hazardous chemicals, several international legal instruments have been developed which are aimed at making existing information concerning hazardous chemicals more widely available, enabling relevant government authorities in countries to assess the risks associated with use of chemicals and take their own decisions on those chemicals.

The London Guidelines for the Exchange of Information on Chemicals in International Trade are a set of guidelines adopted by the Governing Council of UNEP in 1987 for use by governments with a view to increasing chemical safety in all countries through the exchange of scientific, technical, economic and legal information on chemicals. Special provisions have been included in the Guidelines with regard to the exchange of information on banned and severely restricted chemicals, which call for cooperation between exporting and importing countries in the light of their joint responsibility for the protection of human health and the environment at the global level. In 1989, the Guidelines were amended to incorporate provisions for the operation of a prior informed consent (PIC) procedure as well as technical assistance to enhance decision-making and training in the safe use of chemicals.

The International Code of Conduct on the Distribution and Use of Pesticides was adopted in 1985 by the Conference of the Food and Agriculture Organization of the United Nations (FAO), with the objective of setting forth responsibilities and establishing voluntary standards of conduct for all public and private entities engaged in or affecting the distribution and use of pesticides. The Code of Conduct also addresses the need for a cooperative effort between governments of exporting and importing countries to promote practices

which ensure efficient and safe use of pesticides while minimizing health and environmental concerns due to improper handling or use. The Code of Conduct was amended in 1989 to also incorporate provisions for a PIC procedure.

As a complement to the Amended London Guidelines, the Code of Ethics on the International Trade in Chemicals was concluded in April 1994, following a series of consultative meetings convened by UNEP for private sector parties, governments and intergovernmental organizations concerned. The Code of Ethics is general in nature and is addressed to private sector parties. By implementing the Code of Ethics, private sector parties commit themselves to help achieve the objectives of the amended London Guidelines and to enhance the sound management of chemicals through the exchange of information on chemicals in international trade.

Furthermore, an international legally binding instrument for the application of the PIC procedure for certain hazardous chemicals in international trade is currently being negotiated under the auspices of UNEP and FAO. There will be further developments in international arrangements for reducing chemicals risks when the negotiation for a international legally binding instrument on persistent organic pollutants starts in the biennium of 1998-1999.

Within the International Labour Organization, the Convention Concerning Safety in the Use of Chemicals at Work (Convention 170) and the Convention Concerning the Prevention of Major Industrial Accidents (Convention 174) were concluded in 1990 and 1993 respectively. They call for, inter alia, communication between exporting and importing countries when hazardous chemicals have been prohibited for reasons of safety and health at work.

With regard to specific chemicals that deplete the stratospheric ozone layer, the Vienna Convention for the Protection of the Ozone Layer (1985) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) provide control mechanisms for those chemicals. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989) covers chemical wastes defined as "hazardous wastes" under the convention.

In addition to the international legal instruments above, a Consolidated List of Products Whose Consumption and/or Sale Have been Banned, Withdrawn, Severely Restricted or Not Approved by Governments has been regularly published by the United Nations, upon the request from the General Assembly since 1982, on the basis of information provided by UNEP's International Register of Potentially Toxic Chemicals and the World Health Organization. The List is designed to help governments to keep abreast of regulatory decisions taken by other governments and assist them in considering products which may require eventual regulation. The List covers agricultural chemicals, industrial chemicals, pharmaceuticals and consumer products. UNEP has regularly published an International Register of Potentially Toxic Chemicals Legal File (IRPTC Legal File) since 1980. The IRPTC Legal File 1992/93 contains regulatory information on some 700 chemical substances, and its 1994 edition includes international environmental guidelines and global conventions related to control of chemicals substances in various environmental media, such as air, water, drinking water, as well as wastes.

International Information Exchange and the Voluntary Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals in International Trade

Both the UNEP Amended London Guidelines and FAO Code of Conduct provide for international procedures and institutional arrangements for (1) information exchange on hazardous chemicals in international trade and (2) the PIC procedure for such chemicals. Governments may participate in the PIC procedure and information exchange procedures by nominating a designated national authority to act as a responsible body at the national level for the operation of the PIC and information exchange procedures. Its tasks include collecting and providing national information to UNEP/FAO and other participating countries and ensuring that the information received is transmitted to all relevant authorities and organizations within the country.

The designated national authority is generally a government department or office responsible for broad policy decisions, with the authority to decide which chemicals may be used in the country. In the case of pesticides, the registration authority or equivalent is generally nominated to serve as the designated national authority. The need to designate one or more authorities depends on the administrative and legislative organization in each country. As at January 1997, over 140 countries were participating in the PIC and information exchange procedures through the nomination of designated national authorities.

The following is a summary of the information exchange and the PIC procedures.

Notification of control actions to ban or severely restrict chemicals

The government of any country that takes action to ban or severely restrict a chemical in order to protect health or the environment should notify UNEP and FAO as soon as possible of the action. Having received this information, UNEP/FAO compile the information and circulate it to designated national authorities of countries participating in the amended London Guidelines and the FAO Code of Conduct. The purpose of circulating a compilation of notified control actions is to make competent authorities aware of the regulatory actions in other participating countries and to provide information on the reasoning behind the control actions taken. The notification of control actions provided by participating countries under the information exchange procedure also represent the primary means for identifying banned and severely restricted chemicals to be included in the PIC procedure. When countries join the information exchange and PIC procedures, the designated national authority of a country is requested to provide a national inventory of all control actions taken to ban or severely restrict chemicals (pesticides, industrial and consumer chemicals) in the country and to notify UNEP/FAO of all subsequent control actions taken. National inventories for a total of 28 countries were circulated to designated national authorities in January 1996.

The PIC procedure

The voluntary PIC procedure is designed to (1) help participating countries obtain information about the characteristics of potentially hazardous chemicals that may be shipped to them and (2) assist them in initiating a decision-making process on the future import of these chemicals and (3) disseminate import decisions to other participating countries. The PIC procedure is aimed at promoting a shared responsibility between exporting and importing countries in protecting human health and the environment from the harmful effects of certain hazardous chemicals being traded internationally. PIC is not a recommendation to ban or severely restrict the use of chemicals.

UNEP and FAO share joint responsibility for the operation of the voluntary PIC procedure. The FAO/UNEP Joint Group of Experts on PIC was established to provide guidance and advice to the UNEP/FAO on the operation of the PIC procedure.

Pesticides, industrial and consumer chemicals that have been banned or severely restricted for health or environmental reasons by governments can be included in the PIC procedure. In addition, acutely toxic pesticide formulations which present a hazard under conditions of use in developing countries may also be included. The PIC procedure specifically applies to chemicals as such and **not** to products/articles which may contain such chemicals. Certain specific groups of chemicals such as pharmaceuticals, radioactive materials and food additives are excluded from the PIC procedure. There is also an exclusion for small quantities of chemicals used for research purposes and some other small-volume uses.

Any chemical banned or severely restricted in at least one country after 1 January 1992 is eligible for inclusion in the voluntary PIC procedure. In the case of chemicals banned or severely restricted prior to that date, those for which control actions have been taken in five or more countries are also eligible. As part of the information exchange procedure, participating countries notify UNEP/FAO of regulatory control actions taken to ban or severely restrict chemicals at the national level. This information is used as a basis to identify the banned or severely restricted chemicals which are eligible for inclusion in the PIC procedure.

However, it was recognized by Governments when developing the PIC procedure that the above criteria would not necessarily identify pesticides which present a hazard under conditions of use in developing coun-

tries, e.g. acutely toxic pesticides which have been classified as Ia (extremely hazardous) under the World Health Organization (WHO) Recommended Classification of Pesticides by Hazard. Therefore it was also agreed that, where there is evidence of risk to human health, such pesticide formulations should be included in the PIC procedure.

For each chemical subject to the PIC procedure a Decision Guidance Document (DGD) is developed. The DGD contains information on the main uses of the chemical, its chemical and physical properties, toxicological and environmental characteristics, including effects on fish and wildlife, exposure potential from use, control actions taken in various countries, protective measures to reduce exposure, packaging and labelling requirements, storage recommendations and references to relevant scientific literature. The DGD is intended to provide information as a basis for Governments to assess the risks associated with the handling and use of the chemical under conditions at the national level. Governments may seek further advice if necessary and consider national needs in order to make informed decisions about the future import and use of the chemical.

By December 1995, DGDs for the following chemicals had been distributed to designated national authorities: pesticides such as Aldrin, DDT, Dieldrin, Dinoseb, Fluoroacetamide, HCH (mixed isomers), Chlordane, Cyhexatin, EDB, Heptachlor, Chlordimeform and mercury compounds, (as mercuric oxide, mercurous chloride, Calomel, other inorganic mercury compounds, alkyl mercury compounds and alkoxyalkyl and aryl mercury compounds) and industrial chemicals such as Crocidolite, Polybrominated Biphenyls (PBB), Polychlorinated Biphenyls (PCB), except mono- & dichlorinated, Polychlorinated Terphenyls (PCT), and Tris (2,3 dibromopropyl) phosphate. The DGDs for the additional six chemicals to be subject to the PIC procedure (captafol, chlorobenzilate, hexachlorobenzene, lindane, pentachlorophenol and 2,4,5-T) were to be circulated to designated national authorities in 1996.

Once a DGD has been distributed, designated national authorities are requested to review the information, prepare an Importing Country Response form and forward it to UNEP/FAO. In completing that form, countries report their decision on whether to accept future import, refuse import or allow import under certain conditions. Alternatively, a country may make an interim decision regarding import combined with a request for additional time, technical assistance or further information.

These import decisions are compiled by the UNEP/FAO and distributed to all designated national authorities in participating countries every six months, in conjunction with a "PIC Circular". The Circular provides summary information concerning recent activities at the international level, the deliberations of the FAO/UNEP Joint Group of Experts, regional workshops and information on possible alternatives to chemicals which are subject to the PIC procedure as reported by participating countries. The compilation and distribution of importing country responses are intended to ensure that exporting countries are aware of decisions regarding the import of chemicals subject to the PIC procedure.

Importing countries are responsible for the following action:

- Having received a DGD on a chemical, make a response (either final or interim) as to whether or not future import of the chemical in question will be permitted. Such a response should be made within 90 days of receiving the DGD.
- Ensure that national import control authorities (customs departments), importers and, as far as possible, users are informed on a regular basis of all notifications and responses received under the PIC procedure.
- Apply import decisions uniformly to imports from all exporting countries and to any domestic manufacture of the chemicals.

Exporting countries are responsible for the following action:

- Ensure that PIC decisions made by participating importing countries are communicated to their exporters, industry and any other relevant authorities, such as the customs.
- Take appropriate measures, within their authority and legislative competence, to ensure that exports do not occur contrary to the decision of participating importing countries. If

no decision has been reported under the PIC procedure the *status quo* applies, i.e. export should not proceed without the consent of the importing country unless the chemical has been shipped to the country in the past, is currently registered for use in the country or has been officially requested by the country.

Information exchange on the export of domestically banned or severely restricted chemicals

When a country exports a chemical which is banned or severely restricted for domestic use, the designated national authority of that exporting country should ensure that the designated national authority in the importing country is aware that the export of such a chemical is to be expected or is about to occur. The exporting country should also ensure that the designated national authority in the importing country is provided with relevant information on the chemical. This information should be provided prior to the first export following the control action.

The designated national authority in the importing country should also be informed by the designated national authority of the exporting country of the development of any significant new information relevant to the initial control action in the exporting country. Several countries have regulatory schemes where export notification is required by law and they have therefore developed their own modalities to supply this information. The exchange of information on the export of chemicals that have been banned or severely restricted nationally is a bilateral activity between the exporting and importing countries, and in principle it does not involve UNEP/FAO.

Classification and labelling of chemicals for export

Information on classification, packaging and labelling of chemicals is an important element of the information exchange procedure. In the absence of other standards or requirements in the country of import, the exporting country should ensure that the classification, packaging and labelling of the exported chemical conform to recognized international standards. Examples may be found in the Code of Conduct and its relevant Guidelines and in the ILO Convention Concerning Safety in the Use of Chemicals at Work, the United Nations Recommendations on the Transport of Dangerous Goods and the International Maritime Organization (IMO) International Maritime Dangerous Goods Code. It is also desirable that countries exporting chemicals ensure that these chemicals are subject to the same stringent requirements for classification, packaging and labelling as comparable products intended for domestic use.

National Action for the Implementation of the PIC Procedure

Adequate legislation is one of the basic elements for the sound management of chemicals. The effective operation of the PIC procedure requires participating countries to consider the adequacy of their national chemical control legislation. For countries with no or insufficient chemical legislation, the implementation of the PIC procedure may provide a first step towards developing a chemical management scheme, including legislation and regulations on the management of chemicals.

Even though the PIC procedure emphasizes the control of a small group of chemicals in international trade, its implementation relies on the existence of a broader legal and technical infrastructure for chemicals management. In order to fully participate in the PIC procedure, and to fully draw benefits from participation in the PIC procedure, such a national regulatory framework will be essential. In turn, implementation of the PIC procedure will provide the countries with no or an insufficient chemical regulatory framework an opportunity to develop such a framework through the experiences gained in the implementation of the procedure.

Those countries with existing legislation on pesticides, industrial chemicals or consumer chemicals might evaluate the need to amend or supplement those laws with PIC related provisions. In particular, countries might assess the adequacy of their organizational structures with respect to inter-agency co-ordination, scientific or technical support for chemical decision-making, import and export controls and overall enforcement.

In order to highlight the legislative elements for the implementation of the PIC procedure, taking into account countries' unique needs, it might be useful to place such elements within the context of a chemical management scheme. The following items are functional components of a comprehensive scheme for chemicals management irrespective of their use category (such as agricultural or industrial use):

(a) information collection and exchange;
(b) hazard assessment and risk evaluation;
(c) import and export controls;
(d) classification, packaging and labelling;
(e) transportation and storage rules;
(f) use controls, including use restrictions;
(g) advertising and sales control;
(h) production control;
(i) distribution control;
(j) control of emissions into the environment;
(k) emergency preparedness and response;
(l) disposal control;
(m) training; and
(n) enforcement.

For chemicals subject to the PIC procedure, information collection and exchange, hazard assessment and risk evaluation, and import control are basic functional components of the elements required for chemical legislation.

Legislative consideration for the implementation of the PIC procedure may be divided into (i) elements directly related to the operation of the PIC procedure (PIC elements) and (ii) basic elements of chemical control legislation on which the implementation of PIC relies (basic elements).

Basic elements for chemical legislation which enable countries to implement the PIC procedure may be generally categorized as follows:

(a) Organizational structure:

provisions for establishing a framework for the implementation of the legislation, including a policy statement, establishment or designation of responsible government bodies, and co-ordination among relevant government bodies;

(b) Knowledge base:

provisions for the collection of information on chemicals, including, a notification scheme for new chemicals, hazard assessment and risk evaluation, and the management of the information collected such as a centralized chemicals database;

(c) Regulatory scheme:

provisions on the control of chemicals; including prohibition and restriction of chemicals, notification requirements, and compliance with importing countries decisions; and

(d) Enforcement strategy:

provisions to ensure that chemical-related legislation as a whole is observed and implemented, through monitoring, compelling, and promoting compliance.

PIC elements are variations of basic elements which directly contribute to the operation of the PIC procedure. To identify appropriate regulatory measures to implement the PIC procedure, it would be necessary to consider the existing legal frameworks and institutional arrangements in a country, including arrangements for international trade control. Overall, the unique situation and needs of each country should guide the elaboration of legal frameworks and institutional arrangements for the implementation of the PIC procedure.

Development of an International Legally Binding Instrument for the Application of the PIC Procedure

In May 1995, the Governing Council of UNEP, in its decision 18/12, decided to initiate a process for the preparation of an international legally binding instrument for the application of the PIC procedure for certain hazardous chemicals in international trade, through an intergovernmental negotiating committee to be convened by UNEP and FAO. The need for developing such instrument has been identified in chapter 19 of Agenda 21. With a view to the development of such an instrument, a preparatory work was done during 1993-1994 by the UNEP Ad Hoc Working Group of Experts on the Implementation of the Amended London Guidelines and its task force, including the preparation of a set of possible elements for such instrument.

The Intergovernmental Negotiating Committee for an International Legally Binding Instrument for the Application of the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (INC/PIC) commenced its work in March 1996 at Brussels and identified a set of elements for the future instrument. At its second session, held in Nairobi in September 1996, the INC/PIC started to negotiate and identify draft provisions. Further negotiations on provisions took place at its third session in Geneva in May 1997. Though they are still open for negotiations, the draft provisions cover aspects of an international information exchange procedure for certain hazardous chemicals in international trade, similar to the prior informed consent procedure being operated, on voluntary basis, under the UNEP London Guidelines for the Exchange of Information on Chemicals in International Trade and the FAO International Code of Conduct on the Distribution and Use of Pesticides. Chemicals which are likely to be covered by the future instrument include those banned or severely restricted (for health or environmental reasons) by national legislation. Also, certain hazardous pesticides formulations causing health problems in developing countries might be included in the instrument's scope. The possible chemical risks addressed here are of local nature, but within the context of worldwide trade, as such chemical risks move across borders. A diplomatic conference for adopting and signing the instrument is currently planned for the end of 1997.

With the mandatory application of the prior informed consent procedure for such hazardous chemicals, the future instrument is expected to help reduce chemical risks in importing countries by providing them with opportunities for informed choice concerning the importation of such chemicals. Exporting countries would be expected to ensure that export of such chemicals does not occur contrary to the decisions of importing countries. The primary beneficiaries of the PIC instrument would be countries without an adequate chemical management scheme, in particular developing countries. In order to ensure the effective implementation of the legally binding instrument on PIC after its adoption, in particular in developing countries, there have been proposals at the INC/PIC to set out provisions concerning technical assistance, although discussions have not been conclusive. As the future instrument would set out international trade measures in the form of information exchange related to chemicals, consideration has been given to its relationship to internationally agreed trade rules.

Measures for Further Reduction of Risks from Chemicals in International Trade

FAO Code of Conduct

In addition to provisions relating to information exchange and the PIC procedure, the FAO Code of Conduct offers government, industry and relevant organizations guidance on how to reduce risks from pesticides which are manufactured, traded and used. Such provisions cover general pesticide management as well as specific aspects like testing, reducing health hazards, regulatory and technical requirements, control in availability and use, distribution and trade, advertising, labelling/packaging and storage and disposal.

For example, with regard to the testing of pesticides, industry is advised, among other things, to ensure that each pesticide is adequately and effectively tested, verify that the tests are conducted in accordance with

sound scientific procedures, make copies of the testing reports available, and take care to ensure that the proposed use pattern, label claims and directions, packages, literature and advertising truly reflect the results of the tests. Each country is advised to possess or have access to facilities to verify and control the quality of pesticides offered for sale and governments are encouraged to collaborate with industry to conduct field tests to determine the fate and environmental effect of pesticides. International organizations are encouraged to assist in the establishment of analytical laboratories in pesticide importing countries, and such organizations and exporting governments are encouraged to play an active role in assisting developing countries in training personnel in the interpretation and evaluation of test results.

Governments are encouraged in the Code to take the necessary regulatory and technical steps to better control pesticides. Governments should take action to introduce the necessary legislation for the regulation of pesticides and ensure its effective enforcement. This includes making provision for appropriate educational, advisory and health care services. A registration scheme that allows for registration of the product prior to domestic use should be established, which will allow the government to determine if the pesticide is registered under the laws of the producing country prior to local sale. This will assist with the full and effective implementation of the PIC procedure.

UNEP Code of Ethics

The Code of Ethics on the International Trade in Chemicals sets forth principles and guidance for private sector parties, in particular industry, governing standards of conduct in the production and management of chemicals in international trade, taking into account their entire life cycle, in order to reduce risks to human health and the environment which might be posed by such chemicals. In addition to provisions related to private sectors commitment related the PIC procedure contained in the amended London Guidelines, it sets out also provisions aimed at enhancing safety and environmental protection related to the international trade in chemicals. Besides a series of general principles and guidance on the implementation of the Code of Ethics, specific areas of attention are set out which chemical producers, traders, formulators, transporters and professional users should address, including: reducing risks; testing and assessment; quality assurance; classification, packaging and labelling; provision of information, education and training; and advertising and marketing. The Code of Ethics also sets forth provisions concerning the monitoring and follow-up to the Code. As of May 1997. four chemical industry associations representing hundreds of companies in Europe and Japan and two non-governmental organizations had informed UNEP of their intentions to comply with the Code of the Ethics.

International action to reduce risks from hazardous chemicals of global significance – the development of an international legally binding instrument on persistent organic pollutants

While the PIC procedure addresses those hazardous chemicals which pose environmental and health risks beyond domestic borders because of international trade, concern also has been growing with respect to certain hazardous chemicals which could pose a significant threat to the global environment because of their characteristics. The chemicals concerned are called "persistent organic pollutants", or POPs, which are organic compounds that are toxic, persistent and liable to bioaccumulate. POPs are prone to long-range transport and deposition and can result in adverse environmental and human health effects at locations near and far from their source. The need for reducing risks from POPs is recognized in chapters 17 and 19 of Agenda 21.

In May 1995, during the eighteenth session of UNEP's Governing Council, governments recognized that persistent organic pollutants pose major and increasing threats to human health and the environment, and that many persistent organic pollutants are transported over long distances by air and sea and therefore exist in measurable and increasing concentrations far from the original site of origin. They noted the urgent need to improve scientific understanding of persistent organic pollutants, their sources, transport, and pathways as well as their effects on human health, environment and their socio-economic effects as a basis for the development and adoption of effective and realistic response strategies, policies, and measures at the national, regional and global levels. On this basis, the Governing Council, in its decision 18/32, invited the Inter-Organization Pro-

gramme for the Sound Management of Chemicals (IOMC), whose members are UNEP, ILO, FAO, WHO, UNIDO, OECD, to initiate an expeditious assessment process, initially beginning with the short-list of persistent organic pollutants that is currently being discussed by the United Nations Economic Commission for Europe in the context of the 1979 Convention on Long-range Transboundary Air Pollution. Those chemicals are DDT, aldrin, dieldrin, endrin, chlordane, heptachlor, hexachlorobenzene, mirex, toxaphene, polychlorinated biphenyls, dioxins and furans.

The value of an international legal instrument on persistent organic pollutants was first recognized in the field of marine environmental protection. The Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities, adopted by an intergovernmental conference convened by UNEP in Washington, D.C. from 23 October - 3 November 1995, identified the need for developing a global, legally binding instrument for the reduction and/or elimination of emissions and discharges, and where appropriate, the elimination of the manufacture and the use of, and illegal traffic in, the persistent organic pollutants identified in UNEP Governing Council decision 18/32. In the Washington Declaration on the Protection of the Marine Environment from Land-based Activities, adopted at that conference, Governments committed themselves to developing such a global, legally binding instrument.

The assessment process, envisaged in UNEP Governing Council decision 18/32, was carried out in the framework of the IOMC from October 1995 to March 1996 by UNEP and other relevant organizations, and within the framework of the Intergovernmental Forum on Chemical Safety (IFCS), a global, inter-governmental standing arrangement in the field of chemicals established in April 1994, from March 1996 to June 1996. In concluding this process, the IFCS Ad Hoc Working Group on Persistent Organic Pollutants, at a meeting held in Manila in June 1996, recommended, among other things, that UNEP initiate an negotiating process for the preparation of an international legally binding instrument for implementing international action on persistent organic pollutants, beginning with the 12 chemicals identified in UNEP Governing Council decision 18/32.

On the basis of the above assessment process, the Governing Council of UNEP, at its nineteenth session, adopted a decision concerning international action on persistent organic pollutants, including the development of an international legally binding instrument (Governing Council decision 19/13, section C of 7 February 1997). In the decision, the Governing Council concluded that international action, including a global legally binding instrument, is required to reduce the risks to human health and the environment arising from the release of the twelve specified persistent organic pollutants. It also concluded that action programmes must take into account that the twelve specified persistent organic pollutants include pesticides, industrial chemicals, and unintentionally produced by-products and contaminants, and that, in the framework of overarching objectives to be negotiated by an intergovernmental negotiating committee, different approaches are needed for each category of persistent organic pollutants.

Given the above, the Governing Council decided that immediate international action should be initiated to protect human health and the environment through measures which will reduce and/or eliminate the emissions and discharges of the twelve persistent organic pollutants specified in Governing Council decision 18/32 and, where appropriate, eliminate production and subsequently the remaining use of those persistent organic pollutants that are intentionally produced. Such international action should incorporate such practical measures as: the expeditious development of a global, legally binding instrument; voluntary measures, which may be implemented as a complement to, or independently of, a legally binding instrument; coordination among different regional and international initiatives on persistent organic pollutants to ensure harmonized environmental and health outcomes from mutually supportive and effective programmes; and input of scientific, technical and economic expertise and consideration of the ability of existing institutions and organizations to provide this input. Socio-economic factors should be addressed in developing and implementing international action, including: possible impacts on food production; possible impacts on human health (for example, for vector control agents); need for capacity-building in countries and regions; financing concerns and opportunities; and possible trade impacts.

In the decision, the Governing Council requested the Executive Director of UNEP to prepare for and convene, together with the World Health Organization and other relevant international organizations, an intergovernmental negotiating committee, with a mandate to prepare an international legally binding instrument

for implementing international action beginning with the twelve specified persistent organic pollutants and taking into account the conclusions and recommendations of the IFCS Ad Hoc Working Group on Persistent Organic Pollutants. It was recommended that during the development of a global legally-binding instrument, due consideration be given to the work currently under way within the United Nations Economic Commission for Europe to develop a regional protocol on persistent organic pollutants under the Convention on Long-range Transboundary Air Pollution. The Governing Council requested that the Intergovernmental Negotiating Committee commence its work by early 1998, and that the Executive Director convene a diplomatic conference for the purpose of adopting and signing an international legally binding instrument to reduce/eliminate releases of persistent organic pollutants preferably by the year 2000.

Exercises on Trade in Hazardous Chemicals

Steps for the preparation of a national legal framework governing the importation of hazardous chemicals

STEP 1:

1. List existing laws and regulations and government offices governing:

   Manufacturing of chemicals.

   Domestic trade and distribution in chemicals.

   Export and import of chemicals.

   Use of chemicals in:

   - Industry;
   - Agriculture;
   - Public health;
   - Consumer products.

   Health effect of chemicals.

   Occupational safety in using chemicals.

   Environmental effects of chemicals.

   Transport/storage of chemicals.

   Enforcement of relevant laws and regulations.

2. Identify whether there is a means of coordination among those government offices.
3. Identify how relevant existing laws and regulations in different sectoral areas relate each other to deal with importation of chemicals (e.g. pesticides control and customs control).

STEP 2:

1. Identify stake-holders in the importation and manufacturing of chemicals.
2. Identify who should provide information on existing chemicals imported to or manufactured in the country.
3. Identify those who could assist the government in evaluating potential benefits in using the existing chemicals for economic and social development as well as potential risks of those chemicals to human health (both short- and long-term effects) and to the environment.
4. Identify those who are responsible for communicating with other Governments and international organizations on matters related to the international trade in chemicals.

5. Identify the availability of means to reduce chemical risks and the cost-effectiveness of such means.

STEP 3:

1. List all parties to be involved in formulating a national policy for the importation and manufacturing of chemicals.
2. Identify desirable modalities of consultations among those parties.
3. Identify responsibilities of government offices and other parties concerned.
4. Identify options for practical responsive measures and policy tools.
5. Identify availability of necessary human, financial and other resources.

STEP 4:

1. Identify a national policy for the import and manufacturing of hazardous chemicals.
2. Identify policy tools designed to ensure the implementation of the national policy.
3. Assess the adequacy of existing national legislation and institutional arrangements in achieving the national policy.
4. Identify the relationship between the national policy and existing international legal instruments in relevant fields.
5. Evaluate the need for the preparation of a new legal framework or enhancement of existing legal frame work.

STEP 5:

Identify an outline for a legal framework for the implementation of the national policy with respect to the importation of chemicals.

CHAPTER 16

INDUSTRIAL COMPLIANCE AND ENFORCEMENT

Many countries lament that, despite environmental legislation, environmental degradation and pollution continue unabated. But, increasingly, States are beginning to realize that environmental legislation is only the first step in a programme of environmental management for sustainable development. The law is only as effective as the will of the State to enforce the law and to ensure that it is obeyed. A system to follow up on the implementation of the law is critical if the environment is actually going to improve.

This section deals with the implementation of law once drafted and approved by the Government. Although there is legislation that will have to be prepared and passed to fully implement a effective scheme of compliance and enforcement, the focus in this chapter is on the necessary institutions, systems and capacity to implement legislation. Although the chapter primarily focuses on industrial compliance and enforcement, the elements discussed could easily be adapted to other sectors of society such as agriculture, housing, or protection of natural resources. The fundamental elements of promotion, follow up, and deterrence remain the same.

DEFINITIONS

An individual or company is said to be in compliance with the law when he, she or it meets the requirements of the law. Enforcement is the use of legal tools to assist with and compel compliance with the law, and in some contexts, to establish liability or responsibility for harm. In this introduction individuals and companies that are required to comply with a particular set of environmental regulations will be called the "regulated community". Finally, deterrence is a tool provided by legislation to encourage the population to comply. Fines or prison terms deter people from breaking the law. However, States are increasingly investigating the use of rewards, rather than just penalties, to encourage compliance.

ELEMENTS OF A SUCCESSFUL COMPLIANCE AND ENFORCEMENT PROGRAMME

An effective compliance and enforcement programme involves several elements. These include:

- creating enforceable requirements;
- knowing the applicability of the requirements and setting programme priorities;
- promoting compliance;
- monitoring compliance;
- responding to violations;
- creating clear roles and responsibilities;
- holding personnel responsible for implementing the system; and
- evaluating the success of the programme and making adjustments where necessary.

Each of these elements is important to the success of the programme as a whole. Without enforceable legislation it will be impossible to promote compliance, without clear roles and responsibilities it will be difficult to hold personnel responsible for implementing the programme.

Creating enforceable environmental laws and regulations

Without a clear definition of who is required to do what and when, and how both the regulated community and enforcement officials will be able to detect violations and determine whether someone or something is in compliance with the law, it is unlikely that widespread compliance can be achieved. For example, ambient water quality standards and discharge limits establish specific standards which can be easily measured. Such a

law is easier to ensure compliance with and enforce than a law which stipulates simply "thou shall not pollute". The latter is more difficult to comply with and enforce, because the term "pollution" is not defined at all, so no one is sure whether his actions constitute "pollution".

Governments are well advised to investigate the current state of affairs before passing and implementing laws. Typically Governments should be aware of the common types of environmental problems that exist, what are the consequences, who are the actors, and what are the activities that are taking place within the country. Once this background information is established, it will be easier to tailor the legislation to the actual circumstances. 'In many countries, for example Thailand and the Philippines, there is often a delay in implementation of the legislation, which allows companies or individuals time to purchase or install the necessary equipment to comply. Legislation that takes account of such practical concerns is more likely to be greeted with respect.

Knowing the regulated community and setting priorities

No programme can detect violations everywhere or respond to each and every violation. Therefore, it is essential to establish priorities based on the environmental consequences of the violation, the level of sophistication of the source, and the barriers to and incentives for compliance. Information must be gathered to allow the enforcement team to make decisions about who to pursue for non-compliance, and how, in order to use the limited resources to the best advantage. For example, it may cost as much to bring a case for non-compliance against a small family company that employs five people as against a large multinational company that employs hundreds. Yet if the pollution from the larger company has a greater negative impact on the environment, then logically it would be better to bring a case against it rather than the family company.

Promoting compliance

Most compliance strategies involve both activities intended to promote compliance and those intended to enforce requirements. Experience has shown that enforcement measures alone are not sufficient to guarantee compliance, as pollution is often a result of ignorance of the law or of the damage which it causes. Furthermore, the size of the regulated community may exceed the programme's limited enforcement resources. The community may be willing to comply or there may be cultural resistance to enforcement. These are all valuable reasons for combining enforcement with education. A successful education programme can go a long way to encouraging compliance by building public support, encouraging emulation by publishing success stories, and building the capacity for environmental management within the community. Education can also be combined with other incentives such as financial incentives like tax refunds or technical assistance.

Monitoring compliance

Monitoring compliance is an important element of an enforcement programme. Monitoring is essential to detect and correct violations, provide evidence to support enforcement cases, and evaluate the progress of the programme by establishing the compliance status. It also demonstrates that the Government is serious about cleaning up pollution. Monitoring can be conducted through inspections by Government officials of the source, inspection of environmental conditions within the vicinity of a source, self-monitoring by those regulated, or complaints from citizens. Inspections are the backbone of most enforcement programmes. Inspections are conducted by government officials or by independent parties who are hired by and report to the government. By standardizing inspection procedures, enforcement officials can ensure that all facilities are treated equally and that all appropriate information is gathered.

Self-monitoring, record keeping and reporting by a facility are three methods of requiring facilities to track their own compliance, and record or report the results for review by the government. These methods can provide much more extensive information on compliance than can be obtained through periodic inspections. Further, as these methods involve the facility in the process it may be accepted more readily than what may seem to be an unwarranted intrusion by the government. However, self-monitoring requires that reliable and affordable monitoring equipment be available. The success of the system also depends on the integrity of the facility and the ability to operate the equipment and provide accurate data.

Complaints from citizens are an important means of detecting violations. The community should be made to feel a part of the enforcement system and that their complaints will be taken seriously.

Enforcement responses to violations

In any society, there are people who will not comply with the law unless there are clear consequences for failure to do so. The community needs to see that the Government is serious about enforcing the law and often one well published prosecution can motivate others who would otherwise not bother.

Generally the enforcement capabilities of governments will be most effective if they are already in place and applied as soon as requirements become effective. But it is also important to remain diligent and to continue to enforce the legislation to ensure that compliance is maintained. Enforcement mechanisms may be designed to:

- return violators to compliance;
- impose a sanction;
- remove the economic benefit of non-compliance;
- correct environmental damage; and/or
- correct internal management problems at a facility.

Enforcement mechanisms are always formal. They are applied in the civil, criminal, or administrative systems.

Clarifying roles and responsibilities

Enforcement frequently involves many different groups, including government agencies, citizens' groups, NGOs, the regulated community, and industry associations. The key element in any strategy is defining the roles and responsibilities of the various national, regional, provincial, and local groups. A detailed evaluation has to be made to decide whether responsibility for enforcement should be centralised or decentralised, which government agency or agencies will be responsible for enforcement, and whether there will be separate or integrated enforcement programmes.

Of course, good communication among all the key parties is essential to make the programme work.

Evaluating the success of the programme and establishing accountability

Periodic evaluations of the programme to gather information about the programme activities are an important element of a enforcement strategy. The evaluation should consider the following elements:

- environmental results;
- compliance rates;
- success in bringing violators into compliance;
- compliance monitoring;
- number of enforcement actions;
- timeliness of enforcement actions;
- monetary penalties assessed; and
- amount and success of technical assistance.

Negotiation can be a valuable tool in promoting compliance. It can often be a less expensive, less confrontational process that can result in successfully bringing violators into compliance. Negotiation provides an opportunity to obtain additional information, correct misinterpretations, and consider alternative responses. In addition, negotiation provides an opportunity to reach a solution that satisfies all parties. Negotiation can enhance compliance by sending a signal to the regulated community that the government is willing to be responsive to the concerns of the regulated community and the difficulties it faces in its efforts to achieve compliance. Governments must be careful to make it clear that a cooperative effort to develop a satisfactory solution is not intended to alter basic requirements for compliance.

The major institutional objectives of a compliance and enforcement programme

No institutional programme can function effectively without a clear mandate and a set of realistic objectives. Generally the mandate of governments is to set programme policies and provide a regulatory framework for implementation of sound environmental practices. The goal is to create an atmosphere that encourages and enhances behavioral changes in industry related to compliance with environmental norms. Programmes focused on creating or enhancing environmental awareness are generally the most effective means of influencing a sustainable change in behaviour and understanding of the need to protect the environment. Long-term and systemic environmental education programmes for the public and for industries do change behaviour. In addition, programmes that include economic incentives are often the best tools for fostering compliance.

Educational and Promotional Objectives

A compliance and enforcement programme should include measures and policies that foster voluntary compliance. Promotional measures can include:

- providing technical assistance and education;
- increasing public awareness;
- disseminating information to educate industries about new technologies;
- demonstrating cleaner production methods; and
- introducing economic or other incentives.

Atmosphere of Deterrence and Enforcement

Changes in behaviour may take place when industries find such changes necessary to avoid the imposition of sanctions. In other words, where a company finds it cheaper to change than to fight, will choose to change. Deterrence takes aim at potential violators by sending a clear message that those who fail to fall in line with the new regulations will face the full weight of the law. The government should demonstrate that it is willing to enforce the law and apply the sanctions, and that it will do so consistently and fairly. If a government does not ensure equal compliance with the policies and laws it enacts, it jeopardizes its own credibility, as well as the validity and integrity of the law and of the entire programme. Of course, in all fairness, a public awareness programme should precede enactment of the law. Once enacted, the law will attract greater compliance f the results of actions taken against violators are also made public knowledge.

Responsibilities for establishing the programme objectives

Policy makers should ensure that both promotion and deterrence aspects are integrated into the compliance and enforcement programme. This task typically requires close cooperation among various government agencies including the departments of finance, economic planning, taxation, industry and the judiciary. A special interagency committee composed of upper-level representatives of those agencies can be established to coordinate the response.

Organizational options and programme approaches

In almost all countries, environmental organizations are relatively young and are still developing. They face difficulties related to the position of their environmental management organizations within the government. These difficulties include:

- overlapping responsibilities;
- budget constraints;
- unclear and confusing relationships among organizations;
- overly centralized, or contrarily, overly dispersed functions;

- imbalances in the separation between legislative, executive and judicial institutions; and
- confused priorities.

Categories of organizations and institutions

In general all environmental functions of a compliance and enforcement programme fall within the responsibilities of three types of institutions. Legislative institutions are charged with the development and review of laws, policies, and regulations, and for interpreting government policies and developing those policies into a legislative framework. Executive institutions are responsible for implementing laws by developing regulations and policies and carrying out specific functions under the programme. The executive institutions are also responsible for issuing permits and carrying out monitoring and inspection. The judicial institutions include both national and local entities responsible for interpretation of the rules and issuing and implementing judicial decisions.

There are generally three options for the organization of the various functions of a compliance and enforcement programme. In most countries, a department of the environment serves as the executive institution and is responsible for such functions as developing quality standards, permits, monitoring, inspections, and planning and support services. In some countries the authorities of this agency or department overlap with those of legislative or judicial institutions and the agency assumes some of the functions of those institutions. In other countries, such functions are completely the responsibility of agencies and institutions other than the agency responsible for environmental management. In most countries, the environmental management functions, such as issuing permits, monitoring, and issuing administrative notices are carried out by one agency and legal actions and sanctions are carried out by another. The fact that environmental issues overlap in reality should be reflected in the organizational structure adopted to deal with environmental issues. An organizing body, or at least meetings between various agencies involved in environmental issues, should be developed to allow all the parties involved to coordinate their actions.

Priorities

It is clear that governments should establish mechanisms to ensure that their environmental requirements and standards are met. The institutional framework developed to serve that purpose requires continuous evaluation and modification. The compliance and enforcement programme is compelled to consider approaches that maximize use of the resources available. It is important to set priorities in environmental management to assist the national environmental agency to address issues of concern to the national legislature and the general public, to develop policies that address priority issues and concerns, and to enlist public support and participation. Priorities will change over time, and so it will be important to review and re-establish priorities on a regular basis. Priorities should be set not only for specific types of environmental problems such as addressing concerns about air pollution or water pollution, but also priority target groups such as a specific type of industry and priority geographic areas such as a polluted river basin.

Phasing in a Compliance and Enforcement Programme

It may be necessary, given budget and personnel constraints, to implement a compliance and enforcement programme in phases. Listed below in order of progression are a series of steps for phasing in such a programme:

- performing an environmental inventory;
- planning the compliance and enforcement programme;
- establishing priorities;
- establishing an agency charged with the implementation;
- establishing a proper balance between the functions of the new agency and those of regional and municipal authorities;
- establishing a set of requirements and standards for highly polluting industries;
- registering priority industries and establishing facility files in collaboration with the appropriate ministries and municipalities;

- developing general and facility-specific schedules for compliance, self-monitoring and reporting for priority industries;
- defining the role of inspectors and prosecuting authorities in implementation of sanctions against violators in negotiation with the ministry of justice and police; and
- planning a large-scale public education campaign on priority environment issues.

Once these activities have been undertaken and after a thorough evaluation to revise priorities and to examine the success of the previous steps, it is possible to expand or improve the programme. Activities might include:

- introducing greater decentralization by providing resources to regional offices;
- developing more stringent requirements for priority sectors;
- developing requirements tailored to regional conditions; and
- initiating the process of regulating the registration, monitoring, transport, and disposal of hazardous waste.

More Effective Compliance and Enforcement Programmes

Making environmental requirements compatible

Environmental requirements are the specific set of practices, standards, and procedures established in law to reduce or prevent pollution. Included are a set of standards that a government establishes to identify acceptable levels of pollution resulting from emissions and effluent. If the requirements are not clear, precise, and consistent it will be difficult or impossible to enforce them. It has been common practice in some developing countries to adopt standards from industrialized countries and then negotiate with facilities about compliance with those standards. Because, in many cases, those standards are not consistent with technological and institutional realities in developing countries, this practice has made the success of the enforcement programme more difficult to achieve. Government should ensure that requirements are compatible, feasible and enforceable. It may be necessary to phase in tougher standards over time.

An effective method of introducing pollution control and prevention technologies is to demonstrate them at a pilot site. International funding agencies are mandated to provide technological information to developing countries through projects sponsored by these organizations. In addition, a large number of private industries and vendors might be interested in demonstrating new technologies at their own expense.

Increasing effectiveness and efficiency

A compliance and enforcement programme must be effective and efficient. Among the factors pertinent to the effectiveness of the programme are the enforceability of the environmental requirements, the flexibility of the programme that enables it to respond to organizational changes that often occur in developing countries, and the stability of the programme.

As pressure mounts within developing countries to reverse industrial decline and increase production levels and competitiveness, effective enforcement will ensure that the economic needs of those countries do not once again take precedence over their environmental needs. However, enforcement has been the weakest link in the regulatory cycle of most governments' environmental management programmes. A necessary step in fostering compliance is to ensure that the environmental requirements themselves are enforceable, clear and practical and that regulations are few and simple. The enforceability of environmental requirements has great influence on the effectiveness and cost of enforcement and on the ultimate level of compliance. Enforcement programmes that do not have adequate legal authority and that are not realistic generally will not be effective.

The programme design should allow a reasonable response to changing institutional and political arrangements in developing countries. An enforcement programme must be flexible enough to adjust to changes in

institutional emphasis, available financing, programme management, or execution. An enforcement programme must be responsive and able to accommodate change.

In many countries, during the implementation of new policies, arrangements are made between industry and government to develop an initial compliance programme. Although initial compliance arrangements between polluters and the environmental agency are necessary initial steps when new laws and policies are introduced, the design and approach of the programme must ensure that compliance is a continuous process and that adequate attention is paid to continuous compliance with requirements and permit conditions.

The conventional approach to environmental management places greater emphasis on management of end-of-pipe pollution and on total waste. In developing standards and requirements, approaches that emphasize pollution prevention and pollution control during the entire industrial process should be considered and encouraged. Greater priority should also be paid to priority waste and pollutants, such as toxic and hazardous compounds. Total waste alone should not be the only consideration.

Incentives and Sources of Programme Funding

One of the most critical issues for developing any type of environmental programme is funding. Without adequate financial resources the best intentions to improve the environment will be defeated. This is certainly true for a compliance and enforcement programme. To succeed there must be political will to actually enforce the law, and more, there must be financial resources available to further the programme.

Providing incentives to the regulated community

Enticing people to comply with the law can often be less expensive and frustrating than trying to investigate and convict those who do not comply. Financial incentives encourage the regulated community to comply with the laws thereby avoiding or reducing costs of regulation.

Tax relief is one of the primary tools available to governments to encourage compliance. Tax relief may be provided to companies that take the initiative to reduce or control the polluting or potentially polluting effects of their activities. In Thailand, for example, those required to provide for air, water, or waste treatment at an industrial facility can apply for a full or partial waiver of import duty on pollution control items that cannot be obtained within Thailand. Permission may also be obtained to bring in foreign experts to assist with the installation and supervision of environment protection facilities who will be exempt from income tax. Even those not required to install pollution prevention devices can also request assistance for the importation of items not available in the country.[1]

Sources of Programme Funding

Funding for a compliance and enforcement programme would pay for the preparation and issuance of permits, the inspection of regulated or permitted facilities, monitoring activities, and the administrative and management support necessary for compliance and enforcement functions. There are a number of funding options that can be combined to provide sufficient funding for the programme.

GENERAL REVENUE

General revenues can be used to fund an environmental compliance and enforcement programme, but it will be necessary to increase the general revenue fund either by raising taxes or cutting other government programmes. Both these options have significant political implications, because raising taxes uniformly on all citizens is not politically popular and cutting an existing programme brings about similar political jeopardy.

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1 *National Environment Quality Act*, B.E. 2535, 1992, Section 94-95

SPECIAL TAXES

Special taxes can be levied on a variety of sources of revenue, but such options are highly dependent on the burden that the target of the taxes can bear. Through special taxes, those most responsible for pollution can be targeted for funding the compliance and enforcement programme.

One method of taxing the regulated community directly is a graduated tax on revenues, so that more productive or profitable companies pay a higher portion of the costs. It is also possible to tax raw or processed materials that contribute to the need for environmental regulation, such as petroleum products or other materials used heavily in industry and manufacturing. Taxes can be applied to sequential stages of production, a levy that sometimes is referred to as a "value-added" tax (VAT). Imposition of a VAT results in the accumulation of tax revenues at specific stages in the refinement or processing of raw materials or manufactured items that contribute to environmental pollution.

EMISSION AND DISCHARGE LEVIES

These charges are those imposed for polluting air, water, or soil or for generating noise. Such charges can be determined on the basis of the quantity and the type of waste generated. Emission and discharge charges are imposed to deter facilities from conducting operations that are excessively polluting. The charges collected through this instrument can be used as an internal fund to support special environmental control and clean-up programmes. In Korea, under the *Solid Waste Management Act* revised in 1991, the government introduced a comprehensive system for the deposit of expenses for the collection and disposal of wastes. The Minister for the Environment can order manufacturers and importers of certain products and containers to deposit money for waste collection and disposal expenses to the Solid Waste Management Fund. When the manufacturers and importers collect and return wastes from their products or containers to the designated places the Fund reimburses the deposit.

PRODUCT CHARGES

Product charges are imposed to deter facilities from using or generating hazardous and toxic products. For example, charges can be imposed on the production of high sulphur coal.

USER FEES

User fees are essentially taxes that are applied to specific operations or activities of the regulated community, rather than taxes that serve wider government objectives. User fees are designed to cover the regulatory agency's costs for issuing permits for the operation of a facility, conducting inspections to identify violations or ensure compliance, or conducting other compliance or enforcement activities related to a specific facility.

A user fee system of cost recovery provides a number of benefits. Through user fees, the regulated community bears the cost of the regulation of routine operations and activities that contribute to environmental pollution. In contrast to a tax on the general public, user fees reflect more directly the principle that the polluter should pay for measures that ensure the protection of human health and the environment from risks resulting from environmental damage. User fees are attractive because they tax facilities directly for activities that require regulation. A number of options and combinations of options are available to suit different stages in the development of a compliance and enforcement programme. However, a number of issues must be considered if fees are to be established that are fair to the regulated community and adequate to cover the costs incurred by the regulatory agency.

FINES AND PENALTIES

Fines and penalties are methods of recovering costs directly related to violations of environmental regulations. The costs recovered through such enforcement responses may consist of the costs of damage to human health or cleaning up the environment and the costs incurred directly by the regulatory agency to carry through the administrative or judicial action.

Enforcement responses generally involve bringing formal legal proceedings against the violator. When and

how to respond should be defined clearly in the law and procedures should be consistent with enforcement responses for violations of other laws. Authority to conduct enforcement responses and impose punishment for violations must be provided in the law. The type of response action should depend on the severity of the violation as evidenced by the real or potential threat to human health or the environment. Jurisdiction, specific procedures, and possible penalties for such actions may be prescribed by the law and regulations already established in a particular country. In descending order of severity, any of the following actions may be considered as appropriate enforcement responses.

- Criminal: usually reserved for the most serious violations with penalties ranging from fines to imprisonment.
- Civil: a formal lawsuit filed in a court against a violator of a law or regulation.
- Administrative: a non-judicial action taken by a regulatory agency under its own authority.

Although enforcement responses are a potential means of generating funds for a compliance and enforcement programme, they generally do not generate much more income than that necessary to recover the costs of bringing the action and mitigating the damage. Furthermore, relying on these for a primary source of funding would be an unfortunate precedent, because its implies that substantial non-compliance will continue when in fact the goal is to reduce violations over time.

FOREIGN INVESTMENT AND GRANTS

Funding may also be available from international sources, including international financial organizations, such as the World Bank, the European Bank for Reconstruction and Development, and regional banks. Financial assistance can also be obtained from other countries. Such offers often take the form of grants or other initiatives that provide such incentives as expanded trade or a market niche. Such sources have limited application, however, because they usually involve focused short-term efforts and may not be available for the long term.

In Thailand the government has created an Environment Fund with money generated from, among other sources, the sale of oil and environment protection facility user fees and fines for environment offences. Money from the fund may be loaned to the private sector to assist with the capital costs of installing pollution prevention equipment.[2]

PERMITS

Many countries issue permits (or licenses) to potentially polluting facilities before those facilities are allowed to operate. The issuance of such permits significantly improves the rate of compliance with environmental laws, regulations, and policies in those countries. In addition, permits improve the government's ability to identify and successfully implement appropriate enforcement responses to incidents of non compliance among the regulated community.

An environmental permit is a document that defines the design and operating conditions that a particular facility must meet to be in compliance with one or more environmental laws. Environmental permits are issued by government authorities at the municipal, regional, provincial or national levels, depending on the legal authorities in a particular country. All environmental permits should contain certain elements designed to ensure that the government will be able to enforce the applicable environmental law or laws.

The purposes of an environmental permit are to give the government control over the environmental impact of economic activity and enable the authorities to decide whether the activity is allowed to take place under certain conditions.

The regulatory authority benefits from a permit in the time saved by inspectors in identifying the items to be inspected each time they visit a given facility. Further, the fees paid for the permit can be applied to other compliance and enforcement activities.

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2 Ibid., Section 22-31.

PERMIT PROGRAMME

The purpose of a permit programme is to coordinate the review of permit applications and issuance in a manner that ensures:

- a focus of governmental resources on facilities that present potentially high environmental risk;
- the consistent application of given laws and regulations in all geographic regions and all sectors of the regulated community;
- conditions and limits that will result in an acceptable level of environmental releases; and
- the means are described by which compliance with the permit can be assessed.

The major issues to be discussed in organizing a permit programme include:

- who should be required to have permits;
- who should issue permits;
- how should the permitting authority interact with inspection and enforcement authorities;
- what are the procedures for issuing permits;
- what are the criteria for issuing permits;
- what elements should be included in a permit application;
- how long should the permit be granted for; and
- how much should the permit cost?

Government resources should focus on those industrial activities that impose the greatest threats to the environment and human health. In setting priorities, some countries consider the industrial sector or type of activity, the processes and chemicals or resources used, the size of the facility and the location of the facility.

Permits should be written in clear, complete and precise language. The permit should contain, as a minimum, identification of the responsible parties, provisions regarding changes in operations and equipment, requirements for transfer of permits, requirements for record keeping and reporting, statement of the duty to comply, statement of the duration of the permit and duty to reapply, statement of duty to allow government inspectors access to the facility, and statement of the duty to provide regulators with information.

COMPLIANCE SELF-MONITORING, INSPECTIONS AND ENFORCEMENT ACTIONS

Compliance self-monitoring, inspections and enforcement actions are three separate, but interrelated types of activities. Taken together they provide the most visible portion of a government's efforts to implement environmental law and regulations.

Compliance Self-monitoring

Compliance self-monitoring programmes require the regulated community to perform its own compliance analyses and report the results to the government. This makes it different from inspection and enforcement programmes applied by the government. The regulations should specify the elements to be monitored, such as the amount of chemicals in waste water, procedures for record keeping and reporting, and frequency of monitoring. Inspections at regulated facilities that have self-monitoring programmes are more informative and less costly to the government.

Inspection

The basic framework of an inspection strategy must include estimates of the numbers and types of facilities that will be inspected and the items that will be inspected at those facilities. The government must also ensure that inspectors are properly trained with regard to the items to be inspected and the information to be collected, rules of conduct, sampling and equipment testing procedures, health and safety, and preparation of

the report. A schedule of inspections may be helpful in ensuring that inspections are held in a timely and consistent manner.

Enforcement

Enforcement involves a range of actions following inspection, self monitoring, verification of citizen complaints, or other means of establishing the offence. Enforcement is designed to correct non-compliance and to send a signal to the regulated community that the government is serious about its commitment to compliance. The regulated community must realise that there are consequences for violation of the law and environmental requirements must be met. To provide an effective deterrent to violations of the law, enforcement should be timely and appropriate, and carried out in a manner which enhances the awareness within the regulated community. It must be fair and credible to the regulated community as well as to the public.

Authorities can implement and impose sanctions on the basis of rules laid down in criminal, civil and administrative law. Under the rule of law, all actions must be specifically authorised and involve legal procedures to protect citizens' rights from unwarranted government activities. Success in pursuing legal actions against non compliance requires gathering evidence supported by inspection, samples, and interpretation by qualified experts. Ideally a compliance and enforcement programme will anticipate the responses to specific violations and take care that all officials working in the enforcement programme apply the laws fairly. One of the elements of such a strategy is reflected in the principle of escalation. It creates a situation where the violator knows that more severe responses will follow should non-compliance continue.

Conclusion

The government must demonstrate that it has the will to enforce the laws that it passes.

An effective compliance and enforcement scheme applied evenly and consistently can have a profound impact on improving the environment.

Exercises on Industrial Compliance

1. What role can the law play in regulating industrial pollution?
2. What are the essential elements of a programme for industrial pollution compliance and enforcement?
3. What information should a government have before devising a comprehensive scheme for industrial compliance and enforcement?
4. What is a "regulated community"?
5. What are the elements of a programme for promoting industrial compliance?
6. Define "monitoring."
7. What is the role of monitoring in compliance and enforcement?
8. What roles can an enforcement mechanism play?
9. Should NGOs have a role in enforcement? If so, what should that role be?
10. What role can public interest litigation play in promoting industrial compliance?
11. Which agencies of government should monitor and enforce compliance?
12. What role should education programmes play in promoting industrial compliance?
13. Set out the elements of an incentives strategy for industrial compliance.
14. Where should the funds for a compliance and enforcement programme come from?

15. How important is it for a government to be consistent in its compliance and enforcement programme?

16. Should there be any exceptions to a compliance and enforcement programme? If so, what should they be?

17. When is criminal enforcement of environmental management appropriate?

18. When is civil enforcement of environmental management appropriate?

19. What is "cradle to grave" environmental protection? Give examples.

Drafting exercise

20. Draft a provision requiring manufacturers to be responsible for all stages of a product's life, including its potential to pollute.

Discussion point

21. The more industrialised a country is, the greater the need for a comprehensive scheme for compliance with pollution control laws: Discuss.

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